TEST REPORT

Test Report No. GGN/H(SDS)/24/003413 A1

Dated. 2024.12.31

Applicant / Company Name	:	Techink Industries
Address	:	A-21, Sector 80, Phase 2, Noida - 201305
Attention / Contact Person	:	Onkar Joshi
Tested Sample	:	Received on 2024.12.20 at 10:12 A.M.
Test Period	:	2024.12.20 To 2024.12.30
Article / Sample Description	:	MSDS - Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]
Country of Destination	:	EU, US and UK
Model	:	-
Fiber Content	:	-
PO No.	:	-
Supplier's Code	:	-
Brand	:	-
Department Code / Buyer Name	:	-

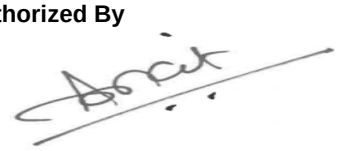
Note:
1.The submitted sample(s) is / are Not Drawn by the Laboratory
2.Unless otherwise agreed upon, PASS or FAIL verdicts are given based on the measured values without any considerations of measurement uncertainties. Every test method has a measurement uncertainty which has been evaluated by the laboratory and are available on request. By taking measurement uncertainties into account, it might happen that measured values can neither be assessed as PASS nor as FAIL"
3.The testing conditions are followed as per the reported test standard. For additional test conditions, apart from the reported test conditions, the laboratory can be contacted for details.
4.The laboratory will retain the sample(s) for 45 days except for the mandatory retention period specified by the Regulatory Bodies and unless otherwise specified by the client.

Remarks:

1. Sample(s) is / are tested as on-received basis.
2. Test(s) performed as requested by applicant.
3. SDS generation has been done at TUV SUD South Asia Pvt. Ltd. Ranipet, India.

Report Amendment Remarks: The report no GGN/H(SDS)/24/003413 dated 2024-12-30 has been superseded. The test report is amended in terms of addition of MSDS certificates for US & UK destinations as per applicant request

Authorized By



Ankit Kumar Arya
(Authorised Signatory)

Please Contact:

For any technical issues: Anuradha Dhamija at :Anuradha.Dhamija@tuvsud.com
For any complaint: Ashima Sapra at: Ashima.Sapra@tuvsud.com

Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]
Techink Industries

Version No: **3.11**
Safety Data Sheet (Conforms to Annex II of REACH (1907/2006) - Regulation 2020/878)
Country Specific: EU

Issue Date: **30/12/2024**
Print Date: **30/12/2024**
S.REACH.GB-NIR.EN

SECTION 1 Identification of the substance / mixture and of the company / undertaking

1.1. Product Identifier

Product name	Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]
Synonyms	Not Available
Other means of identification	Not Available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Marking ink; Filling in pen
Uses advised against	No specific uses advised against are identified.

1.3. Details of the manufacturer or supplier of the safety data sheet

Registered company name	**Techink Industries**
Address	A-21, Sector 80, Noida, Uttar Pradesh India
Telephone	+91-120-4582667
Fax	Not Available
Website	Not Available
Email	onkar.joshi@techink.in

1.4. Emergency telephone number

Association / Organisation	**Not Available**
Emergency telephone number(s)	Not Available
Other emergency telephone number(s)	Not Available

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments [1]	H317 - Sensitisation (Skin) Category 1A
Legend:	*1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI*

2.2. Label elements

Hazard pictogram(s)	
Signal word	**Warning**

Hazard statement(s)

Page 1 continued...

H317	May cause an allergic skin reaction.

Supplementary statement(s)

Not Applicable

Precautionary statement(s) Prevention

P280	Wear protective gloves and protective clothing.
P261	Avoid breathing mist/vapours/spray.

Precautionary statement(s) Response

P302+P352	IF ON SKIN: Wash with plenty of water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

Material contains C.I. Acid Violet 49 (sodium salt), 2-octyl-4-isothiazolin-3-one, 1,2-benzisothiazoline-3-one.

2.3. Other hazards

Ingestion may produce health damage*.

May produce discomfort of the eyes and skin*.

1,2-benzisothiazoline-3-one	Determined to have endocrine-disrupting properties according to Europe Regulation (EU) 528/2012, Europe Regulation (EU) 2017/2100, and Europe Regulation (EU) 2018/605

SECTION 3 Composition / information on ingredients

3.1.Substances

See 'Composition on ingredients' in Section 3.

3.2.Mixtures

1. CAS No 2.EC No 3.Index No 4.REACH No	**%[weight]**	**Name**	**Classification according to regulation (EC) No 1272/2008 [CLP] and amendments**	**SCL / M-Factor**	**Nanoform Particle Characteristics**
1. 7732-18-5 2.231-791-2 3.Not Available 4.Not Available	80.3335	water	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 57-55-6 2.200-338-0 3.Not Available 4.Not Available	10	propylene glycol	Non hazardous [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 56-81-5 2.200-289-5 3.Not Available 4.Not Available	1	glycerol	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor:	Not Available

Continued...

1. CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	SCL / M-Factor	Nanoform Particle Characteristics
				Not Applicable	
1. 50-70-4 2.200-061-5 3.Not Available 4.Not Available	1	D-sorbitol	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 3844-45-9 2.223-339-8 3.Not Available 4.Not Available	1	C.I. Acid Blue 9, disodium salt	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 2634-33-5 2.220-120-9 3.613-088-00-6 4.Not Available	0.0005	1,2-benzisothiazoline-3-one [e]	Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 1, Hazardous to the Aquatic Environment Acute Hazard Category 1; H302, H315, H317, H318, H400 [2]	Sensitisation (Skin) Category 1; H317: C≥0,05% Acute M factor: 10 Chronic M factor: Not Applicable	Not Available
1. 26530-20-1 2.247-761-7 3.613-112-00-5 4.Not Available	0.001	2-octyl-4-isothiazolin-3-one	Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Skin Corrosion/Irritation Category 1, Sensitisation (Skin) Category 1A, Serious Eye Damage/Eye Irritation Category 1, Acute Toxicity (Inhalation) Category 2, Hazardous to the Aquatic Environment Acute Hazard Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 1; H301, H311, H314, H317, H318, H330, H400, H410 [2]	inhalation: ATE = 0,27 mg/L (dusts or mists) | dermal: ATE = 311 mg/kg bw oral: ATE = 125 mg/kg bw | Sensitisation (Skin) Category 1A; H317: C≥0,0015%|M= 100|M=100 Acute M factor: 100 Chronic M factor: 100	Not Available
1. 3520-42-1 2.222-529-8 3.Not Available 4.Not Available	0.8	C.I. Acid Red 52, sodium salt	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 3567-69-9 2.222-657-4 3.Not Available 4.Not Available	0.4	C.I. Acid Red 14	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 2783-94-0 2.220-491-7 3.Not Available 4.Not Available	2.5	C.I. Food Yellow 3	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available

Continued...

1. CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	SCL / M-Factor	Nanoform Particle Characteristics
1. 2611-82-7 2.220-036-2 3.Not Available 4.Not Available	0.8	C.I. Acid Red 18	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 17372-87-1 2.241-409-6 3.Not Available 4.Not Available	0.3	eosin yellowish	Serious Eye Damage/Eye Irritation Category 2; H319 [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 1934-21-0 2.217-699-5 3.Not Available 4.Not Available	0.9	C.I. Acid Yellow 23	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 8004-92-0 2.Not Available 3.Not Available 4.Not Available	0.85	C.I. Acid Yellow 3	Non hazardous [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 1694-09-3 2.216-901-9 3.650-010-00-X 4.Not Available	0.015	C.I. Acid Violet 49 (sodium salt)	Carcinogenicity Category 2; H351 [2]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 18472-87-2 2.242-355-6 3.Not Available 4.Not Available	0.1	D&C RED No. 28	Serious Eye Damage/Eye Irritation Category 2; H319 [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available

Legend:	*1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 3. Classification drawn from C&L; * EU IOELVs available; [e] Substance identified as having endocrine disrupting properties*

SECTION 4 First aid measures

4.1. Description of first aid measures

Eye Contact	If this product comes in contact with eyes: ▸ Wash out immediately with water. ▸ If irritation continues, seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ Immediately remove all contaminated clothing, including footwear. ▸ Flush skin and hair with running water (and soap if available). ▸ Seek medical attention in event of irritation.
Inhalation	▸ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▸ Other measures are usually unnecessary.

Continued...

Ingestion	‣ Immediately give a glass of water. ‣ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

5.1. Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.

5.3. Advice for firefighters

Fire Fighting	‣ Alert Fire Brigade and tell them location and nature of hazard. ‣ Wear breathing apparatus plus protective gloves in the event of a fire.
Fire/Explosion Hazard	‣ Non combustible. Not considered a significant fire risk, however containers may burn. Decomposition may produce toxic fumes of: sulfur oxides (SOx) May emit corrosive fumes.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

Minor Spills	‣ Clean up all spills immediately. ‣ Avoid breathing vapours and contact with skin and eyes.
Major Spills	‣ Absorb or contain isothiazolinone liquid spills with sand, earth, inert material or vermiculite. ‣ The absorbent (and surface soil to a depth sufficient to remove all of the biocide) should be shovelled into a drum and treated with an 11% solution of sodium metabisulfite (Na2S2O5) or sodium bisulfite (NaHSO3), or 12% sodium sulfite (Na2SO3) and 8% hydrochloric acid (HCl).

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Safe handling	‣ Avoid all personal contact, including inhalation. ‣ Wear protective clothing when risk of exposure occurs. ‣ **DO NOT** allow clothing wet with material to stay in contact with skin
Fire and explosion protection	See section 5
Other information	

7.2. Conditions for safe storage, including any incompatibilities

Suitable container	‣ Polyethylene or polypropylene container.

Continued...

	‣ Packing as recommended by manufacturer.
Storage incompatibility	None known
Hazard categories in accordance with Regulation (EC) No 2012/18/EU (Seveso III)	Not Available
Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of	Not Available

7.3. Specific end use(s)

See section 1.2

SECTION 8 Exposure controls / personal protection

8.1. Control parameters

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
propylene glycol	Inhalation 168 mg/m³ (Systemic, Chronic) Inhalation 10 mg/m³ (Local, Chronic) *Inhalation 0.05 mg/m³ (Systemic, Chronic) ** *Inhalation 10 mg/m³ (Local, Chronic) **	260 mg/L (Water (Fresh)) 183 mg/L (Water - Intermittent release) 26 mg/L (Water (Marine)) 572 mg/kg sediment dw (Sediment (Fresh Water)) 57.2 mg/kg sediment dw (Sediment (Marine)) 50 mg/kg soil dw (Soil) 20000 mg/L (STP)
C.I. Acid Blue 9, disodium salt	Dermal 30 mg/kg bw/day (Systemic, Chronic) Inhalation 106 mg/m³ (Systemic, Chronic) *Dermal 10.7 mg/kg bw/day (Systemic, Chronic) ** *Inhalation 0.0187 mg/m³ (Systemic, Chronic) ** *Oral 6 mg/kg bw/day (Systemic, Chronic) **	0.1 mg/L (Water (Fresh)) 1 mg/L (Water - Intermittent release) 0.01 mg/L (Water (Marine)) 100 mg/L (STP)
1,2-benzisothiazoline-3-one	Dermal 0.966 mg/kg bw/day (Systemic, Chronic) Inhalation 6.81 mg/m³ (Systemic, Chronic) *Dermal 0.345 mg/kg bw/day (Systemic, Chronic) ** *Inhalation 0.0012 mg/m³ (Systemic, Chronic) **	0.00403 mg/L (Water (Fresh)) 0.0011 mg/L (Water - Intermittent release) 0.000403 mg/L (Water (Marine)) 0.0499 mg/kg sediment dw (Sediment (Fresh Water)) 0.00499 mg/kg sediment dw (Sediment (Marine)) 3 mg/kg soil dw (Soil) 1.03 mg/L (STP)
2-octyl-4-isothiazolin-3-one	Not Available	0.0022 mg/L (Water (Fresh)) 0.00122 mg/L (Water - Intermittent release) 0.00022 mg/L (Water (Marine)) 0.0475 mg/kg sediment dw (Sediment (Fresh Water)) 0.00475 mg/kg sediment dw (Sediment (Marine)) 0.0082 mg/kg soil dw (Soil)
C.I. Food Yellow 3	Dermal 833.333 mg/kg bw/day (Systemic, Chronic) Inhalation 1469.298 mg/m³ (Systemic, Chronic) *Dermal 416.667 mg/kg bw/day (Systemic, Chronic) ** *Inhalation 0.362319 mg/m³ (Systemic, Chronic) ** *Oral 208.333 mg/kg bw/day (Systemic, Chronic) **	0.113 mg/L (Water (Fresh)) 1.132 mg/L (Water - Intermittent release) 0.011 mg/L (Water (Marine)) 72054.279 mg/kg sediment dw (Sediment (Fresh Water)) 72054.279 mg/kg sediment dw (Sediment (Marine)) 34499.718 mg/kg soil dw (Soil) 1.76 mg/L (STP)
C.I. Acid Red 18	Dermal 7 mg/kg bw/day (Systemic, Chronic) Inhalation 24.7 mg/m³ (Systemic, Chronic) *Dermal 2.5 mg/kg bw/day (Systemic, Chronic) ** *Inhalation 0.0037 mg/m³ (Systemic, Chronic) ** *Oral 2.5 mg/kg bw/day (Systemic, Chronic) **	0.1 mg/L (Water (Fresh)) 1 mg/L (Water - Intermittent release) 0.01 mg/L (Water (Marine)) 0.392 mg/kg sediment dw (Sediment (Fresh Water)) 0.039 mg/kg sediment dw (Sediment (Marine)) 0.02 mg/kg soil dw (Soil) 10 mg/L (STP)
C.I. Acid Yellow 23	Dermal 52.82 mg/kg bw/day (Systemic, Chronic) Inhalation 372.52 mg/m³ (Systemic, Chronic) *Dermal 26.41 mg/kg bw/day (Systemic, Chronic) ** *Inhalation 0.09186 mg/m³ (Systemic, Chronic) ** *Oral 26.41 mg/kg bw/day (Systemic, Chronic) **	0.12 mg/L (Water (Fresh)) 1.2 mg/L (Water - Intermittent release) 0.012 mg/L (Water (Marine)) 0.47 mg/kg sediment dw (Sediment (Fresh Water)) 0.047 mg/kg sediment dw (Sediment (Marine)) 0.024 mg/kg soil dw (Soil)

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Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
		10 mg/L (STP)
D&C RED No. 28	Dermal 2.33 mg/kg bw/day (Systemic, Chronic) Inhalation 8.22 mg/m³ (Systemic, Chronic) *Dermal 0.833 mg/kg bw/day (Systemic, Chronic) ** *Inhalation 0.00145 mg/m³ (Systemic, Chronic) ** *Oral 0.833 mg/kg bw/day (Systemic, Chronic) **	0.0075 mg/L (Water (Fresh)) 0.075 mg/L (Water - Intermittent release) 0.00075 mg/L (Water (Marine)) 0.0535 mg/kg sediment dw (Sediment (Fresh Water)) 0.00535 mg/kg sediment dw (Sediment (Marine)) 0.00631 mg/kg soil dw (Soil)

* Values for General Population

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
UK Workplace Exposure Limits (WELs)	propylene glycol	Propane-1,2-diol: total vapour and particulates	150 ppm / 474 mg/m3	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs)	propylene glycol	Propane-1,2-diol: particulates	10 mg/m3	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs)	glycerol	Glycerol, mist	10 mg/m3	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
water	Not Available	Not Available
propylene glycol	Not Available	Not Available
glycerol	Not Available	Not Available
D-sorbitol	Not Available	Not Available
C.I. Acid Blue 9, disodium salt	Not Available	Not Available
1,2-benzisothiazoline-3-one	Not Available	Not Available
2-octyl-4-isothiazolin-3-one	Not Available	Not Available
C.I. Acid Red 52, sodium salt	Not Available	Not Available
C.I. Acid Red 14	Not Available	Not Available
C.I. Food Yellow 3	Not Available	Not Available
C.I. Acid Red 18	Not Available	Not Available
eosin yellowish	Not Available	Not Available
C.I. Acid Yellow 23	Not Available	Not Available
C.I. Acid Yellow 3	Not Available	Not Available
C.I. Acid Violet 49 (sodium salt)	Not Available	Not Available
D&C RED No. 28	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
1,2-benzisothiazoline-3-one	E	≤ 0.01 mg/m³
2-octyl-4-isothiazolin-3-one	E	≤ 0.1 ppm
C.I. Acid Red 14	E	≤ 0.01 mg/m³
C.I. Acid Red 18	D	> 0.01 to ≤ 0.1 mg/m³
C.I. Acid Yellow 23	E	≤ 0.01 mg/m³
C.I. Acid Violet 49 (sodium salt)	E	≤ 0.01 mg/m³
Notes:	*Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.*	

8.2. Exposure controls

8.2.1. Appropriate	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed

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engineering controls	engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
8.2.2. Individual protection measures, such as personal protective equipment	
Eye and face protection	‣ Safety glasses with side shields. ‣ Chemical goggles.
Skin protection	See Hand protection below
Hands/feet protection	‣ Wear chemical protective gloves, e.g. PVC. ‣ Wear safety footwear or safety gumboots, e.g. Rubber **NOTE:** ‣ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. ‣ Butyl rubber gloves ·Nitrile rubber gloves (Note: Nitric acid penetrates nitrile gloves in a few minutes.)
Body protection	See Other protection below
Other protection	‣ Overalls. ‣ P.V.C apron.

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
'Forsberg Clothing Performance Index'.
The effect(s) of the following substance(s) are taken into account in the ***computer-generated*** selection:
Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]

Material	CPI
BUTYL	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE	C
NITRILE	C
PE/EVAL/PE	C
PVA	C
PVC	C
VITON	C

и CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
B: Where the glove is to be used on a short term, casual or infrequent basis, factors such as 'feel' or convenience (e.g. disposability), may dictate a choic of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Ansell Glove Selection

Glove — *In order of recommendation*
AlphaTec® Solvex® 37-675
MICROFLEX® 93-260
AlphaTec® Solvex® 37-185
AlphaTec® 38-612
AlphaTec® 58-008

Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the 'Exposure Standard' (or ES), respiratory protection is required Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-PAPR-2 P2 ^

^ - Full-face
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

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AlphaTec® 58-530B
AlphaTec® 58-530W
AlphaTec® 58-735
AlphaTec® 79-700
DermaShield™ 73-711

The suggested gloves for use should be confirmed with the glove supplier.

8.2.3. Environmental exposure controls

See section 12

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Not Available

Physical state	Liquid	**Relative density (Water = 1)**	Not Available
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	6.5-8.5	**Decomposition temperature (°C)**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	2.2-3
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Available	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	27-30
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Water base Ink (Soluble in Water)	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available
Heat of Combustion (kJ/g)	Not Available	**Ignition Distance (cm)**	Not Available
Flame Height (cm)	Not Available	**Flame Duration (s)**	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	**Enclosed Space Ignition Deflagration Density (g/m3)**	Not Available
Nanoform Solubility	Not Available	**Nanoform Particle Characteristics**	Not Available
Particle Size	Not Available		

9.2. Other information

Not Available

SECTION 10 Stability and reactivity

10.1.Reactivity	See section 7.2
10.2. Chemical stability	▸ Unstable in the presence of incompatible materials. ▸ Product is considered stable.
10.3. Possibility of hazardous reactions	See section 7.2
10.4. Conditions to avoid	See section 7.2

Continued...

10.5. Incompatible materials	See section 7.2
10.6. Hazardous decomposition products	See section 5.3

SECTION 11 Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Not normally a hazard due to non-volatile nature of product
Ingestion	The material has **NOT** been classified by EC Directives or other classification systems as 'harmful by ingestion'. This is becaus of the lack of corroborating animal or human evidence. Taken by mouth, isothiazolinones have moderate to high toxicity. The major signs of toxicity are severe stomach irritation, lethargy, and inco-ordination.
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. A 0.5% solution of 1,2-benzisothiazoline-3-one (BIT) is irritating to the skin. Even 0.05% can cause allergy, according to patch tests, with reddening of the skin. Solutions of isothiazolinones may be irritating or even damaging to the skin, depending on concentration. A concentration of over 0.1% can irritate, and over 0.5% can cause severe irritation.
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn). Solutions containing isothiazolinones may damage the mucous membranes and cornea. Animal testing showed very low concentrations (under 0.1%) did not cause irritation, while higher levels (3-5.5%) produced severe irritation and damage to the eye.
Chronic	Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. In animal testing, 1,2-benzisothiazoline-3-one (BIT) did not cause toxicity to the embryo or birth defects. The material does not cause mutations or an increase in cancer. The isothiazolinones are known contact sensitisers. Sensitisation is more likely with the chlorinated species as opposed to the non-chlorinated species.

Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]

TOXICITY	IRRITATION
Not Available	Not Available

water

TOXICITY	IRRITATION
Oral (Rat) LD50: >90000 mg/kg[2]	Not Available

propylene glycol

TOXICITY	IRRITATION
Dermal (rabbit) LD50: 11890 mg/kg[2]	Eye (Rodent - rabbit): 100mg - Mild
Dermal (rabbit) LD50: 20800 mg/kg[2]	Eye (Rodent - rabbit): 500mg/24H - Mild
Oral (Rat) LD50: 20000 mg/kg[2]	Eye: no adverse effect observed (not irritating)[1]
	Skin (Human - child): 30%/96H(continuous) - Moderate
	Skin (Human - man): 10%/2D
	Skin (Human - woman): 30%/96H - Mild
	Skin (Human): 104mg/3D (intermittent) - Moderate
	Skin (Human): 20%
	Skin (Human): 500mg/7D - Mild
	Skin: no adverse effect observed (not irritating)[1]

glycerol

TOXICITY	IRRITATION
Dermal (Guinea Pig) LD50: 58500 mg/kg[1]	Eye (Rodent - rabbit): 500mg/24H - Mild
Inhalation (Rat) LC50: >5.85 mg/L4h[1]	Eye: no adverse effect observed (not irritating)[1]
Oral (Mouse) LD50; 4090 mg/kg[2]	Skin (Rodent - rabbit): 500mg/24H - Mild

Continued...

		Skin: no adverse effect observed (not irritating)[1]

D-sorbitol	**TOXICITY**	**IRRITATION**
	Oral (Rat) LD50: 15900 mg/kg[2]	Not Available

C.I. Acid Blue 9, disodium salt	**TOXICITY**	**IRRITATION**
	Oral (Rat) LD50: >1900 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
		Skin: no adverse effect observed (not irritating)[1]

1,2-benzisothiazoline-3-one	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >2000 mg/kg[1]	Eye: adverse effect observed (irreversible damage)[1]
	Oral (Rat) LD50: 454 mg/kg[1]	Skin (Human - man): 0.05%
		Skin (Human): 1%/1H
		Skin (Human): 5%/48H - Mild
		Skin: no adverse effect observed (not irritating)[1]

2-octyl-4-isothiazolin-3-one	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 311 mg/kg[2]	Eye (Rodent - rabbit): 100mg - Severe
	Oral (Rat) LD50: 248 mg/kg[2]	Eye: adverse effect observed (irreversible damage)[1]
		Skin (Human): 0.1%
		Skin (Rodent - rabbit): 500mg/24H
		Skin: adverse effect observed (corrosive)[1]
		Skin: adverse effect observed (irritating)[1]

C.I. Acid Red 52, sodium salt	**TOXICITY**	**IRRITATION**
	Oral (Mouse) LD50; 10300 mg/kg[2]	Not Available

C.I. Acid Red 14	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >2000 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
	Oral (Rat) LD50: 5000 mg/kg[1]	Skin: no adverse effect observed (not irritating)[1]

C.I. Food Yellow 3	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >2000 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
	Oral (Rat) LD50: >2000 mg/kg[1]	Skin: no adverse effect observed (not irritating)[1]

C.I. Acid Red 18	**TOXICITY**	**IRRITATION**
	Oral (Rat) LD50: >8000 mg/kg[2]	Eye: no adverse effect observed (not irritating)[1]
		Skin: no adverse effect observed (not irritating)[1]

eosin yellowish	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >2000 mg/kg[1]	Eye: adverse effect observed (irritating)[1]
	Oral (Rat) LD50: >2000 mg/kg[1]	Skin: no adverse effect observed (not irritating)[1]

C.I. Acid Yellow 23	**TOXICITY**	**IRRITATION**
	Oral (Rat) LD50: >2000 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
		Skin: no adverse effect observed (not irritating)[1]

C.I. Acid Yellow 3	**TOXICITY**	**IRRITATION**

Continued...

	Oral (Rat) LD50: 2000 mg/kg[2]	Not Available

C.I. Acid Violet 49 (sodium salt)		
	TOXICITY	**IRRITATION**
	Not Available	Not Available

D&C RED No. 28		
	TOXICITY	**IRRITATION**
	dermal (rat) LD50: >2000 mg/kg[1]	Eye: adverse effect observed (irritating)[1]
	Oral (Mouse) LD50; 310 mg/kg[2]	Skin: no adverse effect observed (not irritating)[1]

Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*

propylene glycol	The acute oral toxicity of propylene glycol is very low; large amounts are needed to cause perceptible health damage in humans. Serious toxicity generally occurs only at blood concentrations over 1 g/L, which requires extremely high intake over a relatively short period of time; this is nearly impossible with consuming foods or supplements which contain 1g/kg of PG at most.
GLYCEROL	At very high concentrations, evidence predicts that glycerol may cause tremor, irritation of the skin, eyes, digestive tract and airway. Otherwise it is of low toxicity.
1,2-BENZISOTHIAZOLINE-3-ONE	In light of potential adverse effects, and to ensure a harmonised risk assessment and management, the EU regulatory framework for biocides has been established with the objective of ensuring a high level of protection of human and animal health and the environment. To this aim, it is required that risk assessment of biocidal products is carried out before they can be placed on the market. The predominant fate of the thiazole ring is oxidative ring scission catalysed by cytochrome P450 (CYP) and formation of the corresponding alpha-dicarbonyl metabolites and thioamide derivatives. The well-established toxicity associated with thioamides and thioureas has led to the speculation that thiazole toxicity is attributed to ring scission yielding the corresponding thioamide metabolite. **Acute toxicity** data show that 1,2-benzisothiazoline-3-one (BIT) is moderately toxic by the oral and dermal routes but that this chemical is a severe eye irritant. Irritation to the skin from acute data show only mild skin irritation , but repeated dermal application indicated a more significant skin irritation response.
2-OCTYL-4-ISOTHIAZOLIN-3-ONE	ROHM & HAAS Data ADI: 0.03 mg/kg/day NOEL: 60 mg/kg/day
C.I. ACID RED 52, SODIUM SALT	Hamster cell mutagen
C.I. FOOD YELLOW 3	Acceptable daily intake as food additive = 2.5 mg/kg FAO/WHO 1982
C.I. ACID RED 18	Sensitivity reactions have been reported. The results of animal tests were such that the Joint FAO/WHO Expert Committe on Food additives recommended that its use in food is acceptable. There is no evidence of carcinogenicity, genotoxicity, neurotoxicity, or reproductive and developmental toxicity at the permitted dietary exposures; the European acceptable daily intake (ADI) is 0.7 mg/kg and the WHO/FAO ADI is 4 mg/kg.[1]:460 The production process may result in unsulphonated aromatic amines present in concentrations of up to 100 mg/kg which may be linked to cancer. The lake pigment form of the colour additive can also increase the intake of aluminium beyond the tolerable weekly intake (TWI) of 1 mg/kg/week. **NOTE:** Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA.
EOSIN YELLOWISH	Bacterial cell mutagen
C.I. ACID YELLOW 23	Suspected allergen *[Hawley's] Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure.
C.I. Acid Yellow 3	Studies done on animals showed that quinoline and its metabolites are almost completely excreted via the urine but caused fatty liver and bile duct proliferation in some cases. There is no evidence to suggest that quinoline causes cancer in humans, but it is reported to cause liver cancer in rats and skin cancer in mice.
C.I. ACID VIOLET 49 (SODIUM SALT)	**WARNING:** This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.
D&C RED NO. 28	&C Red No. 27 and D&C Red No. 28 are fluorescein-based dyes that were approved in 1982 for use in drugs and cosmetics (except the eye area). Cosmetic retail products containing these dyes are primarily lipsticks and blushers. Dyes physically associated with non-aqueous aluminum or zirconium minerals (lakes) are used in lipsticks, blushers, make-up preparations, hair dyes and colors, rouges and face powders. The toxicological data reviewed by FDA prior to approval of D&C Red No. 27 and D&C Red No. 28 did not include studies of acute phototoxicity or chronic phototoxicity (i.e. photocarcinogenesis). Our current knowledge of the photochemistry and photobiology of D&C Red No. 27 and D&C Red No. 28 raises new concerns about the long-term safety of these colorants. D&C Red No. 28 is now known to be an

Continued...

	extremely efficient photodynamic sensitizer whose photo-excitation results in the formation of free radicals and singlet oxygen. These highly reactive species attack cellular components such as lipids, proteins and nucleic acids. Investigators have shown that the genetic damage sensitized by D&C Red No. 28 is mutagenic in bacterial assays. vitro studies using mammalian cells have shown that D&C Red No. 28 sensitizes photooxidation of guanine bases in cellular DNA (i.e. 8-oxo-7,8-dihydroguanine), a lesion known to be mutagenic.
Micro Tip/Fine Liner/ Fine Writer pen ink [MT I] & 1,2-BENZISOTHIAZOLINE-3-ONE & 2-OCTYL-4-ISOTHIAZOLIN-3-ONE & C.I. ACID YELLOW 23	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema.
WATER & 1,2-BENZISOTHIAZOLINE-3-ONE ^ C.I. ACID VIOLET 49 (SODIUM SALT)	No significant acute toxicological data identified in literature search.
propylene glycol & EOSIN YELLOWISH	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
GLYCEROL & 2-OCTYL-4-ISOTHIAZOLIN-3-ONE & C.I. ACID RED 14 & C.I. FOOD YELLOW 3 & C.I. ACID YELLOW 23	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound.
C.I. ACID BLUE 9, DISODIUM SALT & C.I. ACID RED 14	The substance is classified by IARC as Group 3: **NOT** classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.
C.I. ACID RED 14 & C.I. FOOD YELLOW 3 & C.I. ACID RED 18 & C.I. Acid Yellow 3	There has been public concern that food colourings may cause ADHD-like behavior in children. These concerns have led the FDA and other food safety authorities to regularly review the scientific literature, and led the UK FSA to commission a study by researchers at Southampton University of the effect of a mixture of six food dyes (Tartrazine, Allura Red AC, Ponceau 4R, Quinoline Yellow WS, Sunset Yellow and Carmoisine (dubbed the 'Southampton 6')) and sodium benzoate (preservative) on children in the general population, who consumed them in beverages; the study published in 2007.
C.I. ACID RED 14 & C.I. ACID VIOLET 49 (SODIUM SALT)	Detailed analysis of molecular structure indicates that the azo colourant can split off cancer-causing arylamines. The azo linkage, a double bond between two nitrogen atoms, is considered the most unstable part of an azo dye.
C.I. ACID RED 18 & EOSIN YELLOWISH	Equivocal tumorigen by RTECS criteria
EOSIN YELLOWISH & D&C RED NO. 28	Topical, oral, and intravenous use of fluorescein usually causes nausea, diarrhoea, hives, acute hypotension, hyper allergic reaction, heart attack and even sudden death. As such, health care staff should use prophylactic antihistamines and always prepare for possible emergency resuscitation to reduce risk and prevent death from emergencies.

Acute Toxicity	✗	**Carcinogenicity**	✗
Skin Irritation/Corrosion	✗	**Reproductivity**	✗
Serious Eye Damage/Irritation	✗	**STOT - Single Exposure**	✗
Respiratory or Skin sensitisation	✔	**STOT - Repeated Exposure**	✗
Mutagenicity	✗	**Aspiration Hazard**	✗

Legend: ✗ *– Data either not available or does not fill the criteria for classification*

✔ *– Data available to make classification*

11.2 Information on other hazards

11.2.1. Endocrine disrupting properties

Many chemicals may mimic or interfere with the body s hormones, known as the endocrine system. Endocrine disruptors are chemicals that can interfere with endocrine (or hormonal) systems.
Endocrine disruptors interfere with the synthesis, secretion, transport, binding, action, or elimination of natural hormones in the body. Any system in the body controlled by hormones can be derailed by hormone disruptors. Specifically, endocrine disruptors may be associated with the development of learning disabilities, deformations of the body various cancers and sexual development problems.
Endocrine disrupting chemicals cause adverse effects in animals. But limited scientific information exists on potential health problems in humans. Because people are typically exposed to multiple endocrine disruptors at the same time, assessing public health effects is difficult.

11.2.2. Other information

See Section 11.1

SECTION 12 Ecological information

Continued...

12.1. Toxicity

Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

water

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

propylene glycol

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	96h	Algae or other aquatic plants	19000mg/l	2
EC50	72h	Algae or other aquatic plants	19300mg/l	2
EC50	48h	Crustacea	>114.4mg/L	4
NOEC(ECx)	336h	Algae or other aquatic plants	<5300mg/l	1
LC50	96h	Fish	710mg/L	4

glycerol

Endpoint	Test Duration (hr)	Species	Value	Source
EC0(ECx)	24h	Crustacea	>500mg/l	1
LC50	96h	Fish	>11mg/L	2

D-sorbitol

Endpoint	Test Duration (hr)	Species	Value	Source
EC10(ECx)	168h	Algae or other aquatic plants	8408.53mg/L	4

C.I. Acid Blue 9, disodium salt

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	>100mg/l	2
NOEC(ECx)	504h	Crustacea	>=10mg/l	2
EC50	48h	Crustacea	>100mg/l	2
LC50	96h	Fish	>132<276mg/l	2

1,2-benzisothiazoline-3-one

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	0.07mg/L	2
NOEC(ECx)	72h	Algae or other aquatic plants	0.04mg/L	2
EC50	48h	Crustacea	0.097mg/L	4
LC50	96h	Fish	0.067-0.29mg/L	4

2-octyl-4-isothiazolin-3-one

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	96h	Algae or other aquatic plants	0.15mg/l	2
NOEC(ECx)	840h	Fish	0.009mg/L	4
EC50	48h	Crustacea	0.057-0.178mg/L	4
LC50	96h	Fish	0.041-0.104mg/l	4

C.I. Acid Red 52, sodium salt

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

C.I. Acid Red 14

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	48h	Crustacea	115.097mg/l	2
LC50	96h	Fish	>100mg/l	2
EC50	72h	Algae or other aquatic plants	34.823mg/l	2
EC50(ECx)	72h	Algae or other aquatic plants	34.823mg/l	2

Continued...

C.I. Food Yellow 3

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	96h	Algae or other aquatic plants	44524mg/l	2
EC50	72h	Algae or other aquatic plants	113.2mg/l	2
NOEC(ECx)	72h	Algae or other aquatic plants	15.729mg/l	2
EC50	48h	Crustacea	>100mg/l	2
LC50	96h	Fish	>100mg/l	2

C.I. Acid Red 18

Endpoint	Test Duration (hr)	Species	Value	Source
NOEC(ECx)	168h	Algae or other aquatic plants	100mg/l	2
EC50	48h	Crustacea	>100mg/l	2
LC50	96h	Fish	>1000mg/l	2

eosin yellowish

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	51.3mg/l	2
EC50(ECx)	72h	Algae or other aquatic plants	51.3mg/l	2
EC50	48h	Crustacea	>100mg/l	2
LC50	96h	Fish	>100mg/l	2

C.I. Acid Yellow 23

Endpoint	Test Duration (hr)	Species	Value	Source
BCF	1008h	Fish	<0.29	7
EC50	72h	Algae or other aquatic plants	>125mg/l	2
EC50(ECx)	48h	Crustacea	>120mg/l	2
EC50	48h	Crustacea	>120mg/l	2
LC50	96h	Fish	>120mg/l	2

C.I. Acid Yellow 3

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

C.I. Acid Violet 49 (sodium salt)

Endpoint	Test Duration (hr)	Species	Value	Source
BCF	672h	Fish	<0.7-1.4	7

D&C RED No. 28

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	7.5mg/l	2
EC50(ECx)	72h	Algae or other aquatic plants	7.5mg/l	2
EC50	48h	Crustacea	14.5mg/l	2
LC50	96h	Fish	97.7mg/l	2

Legend: *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 8. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

For Acid Dyes: Environmental Fate: Many dyes are visible in water at very low concentrations. Textile processing waste waters are therefore usually highly colored and discharge in open waters presents an aesthetic problem.
Environmental Fate: Isothiazolinones are antimicrobials used to control bacteria, fungi, and for wood preservation and antifouling agents. They are frequently used in personal care products such as shampoos and other hair care products, as well as certain paint formulations.

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
water	LOW	LOW
propylene glycol	LOW	LOW
glycerol	LOW	LOW
D-sorbitol	LOW	LOW
2-octyl-4-isothiazolin-3-one	HIGH	HIGH

Continued...

Ingredient	Persistence: Water/Soil	Persistence: Air
C.I. Acid Red 14	HIGH	HIGH
C.I. Acid Red 18	HIGH	HIGH
eosin yellowish	HIGH	HIGH
C.I. Acid Yellow 23	HIGH	HIGH

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
water	LOW (LogKOW = -1.38)
propylene glycol	LOW (BCF = 1)
glycerol	LOW (LogKOW = -1.76)
D-sorbitol	LOW (LogKOW = -3.0108)
C.I. Acid Blue 9, disodium salt	LOW (LogKOW = -4.94)
2-octyl-4-isothiazolin-3-one	LOW (LogKOW = 2.561)
C.I. Acid Red 52, sodium salt	LOW (LogKOW = -0.01)
C.I. Acid Red 14	LOW (LogKOW = 0)
C.I. Acid Red 18	LOW (LogKOW = 1.6301)
eosin yellowish	HIGH (LogKOW = 4.8032)
C.I. Acid Yellow 23	LOW (BCF = 3)
C.I. Acid Yellow 3	LOW (LogKOW = 1.06)
C.I. Acid Violet 49 (sodium salt)	LOW (BCF = 9.9)
D&C RED No. 28	HIGH (LogKOW = 5.47)

12.4. Mobility in soil

Ingredient	Mobility
propylene glycol	HIGH (Log KOC = 1)
glycerol	HIGH (Log KOC = 1)
D-sorbitol	LOW (Log KOC = 10)
2-octyl-4-isothiazolin-3-one	LOW (Log KOC = 2120)
C.I. Acid Red 14	LOW (Log KOC = 220300)
C.I. Acid Red 18	LOW (Log KOC = 1572000)
eosin yellowish	LOW (Log KOC = 18860)
C.I. Acid Yellow 23	LOW (Log KOC = 79.38)

12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not Available	Not Available	Not Available
PBT	✘	✘	✘
vPvB	✘	✘	✘

PBT Criteria fulfilled?	No
vPvB	No

12.6. Endocrine disrupting properties

The evidence linking adverse effects to endocrine disruptors is more compelling in the environment than it is in humans. Endocrine distruptors profoundly alter reproductive physiology of ecosystems and ultimately impact entire populations. Some endocrine-disrupting chemicals are slow to break-down in the environment. That characteristic makes them potentially hazardous over long periods of time. Some well established adverse effects of endocrine disruptors in various wildlife species include; eggshell-thinning, displayed of characteristics of the opposite sex and impaired reproductive development. Other adverse changes in wildlife species that have been suggested, but not proven include; reproductive abnormalities, immune dysfunction and skeletal deformaties.

12.7. Other adverse effects

Continued...

One or more ingredients within this SDS has the potential of causing ozone depletion and/or photochemical ozone creation.

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal	‣ Containers may still present a chemical hazard/ danger when empty. ‣ Return to supplier for reuse/ recycling if possible. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. ‣ **DO NOT** allow wash water from cleaning or process equipment to enter drains. ‣ It may be necessary to collect all wash water for treatment before disposal. ‣ Recycle wherever possible. ‣ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
Waste treatment options	Not Available
Sewage disposal options	Not Available

SECTION 14 Transport information

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number or ID number**	Not Applicable
14.2. **UN proper shipping name**	Not Applicable
14.3. **Transport hazard class(es)**	Class: Not Applicable Subsidiary Hazard: Not Applicable
14.4. **Packing group**	Not Applicable
14.5. **Environmental hazard**	Not Applicable
14.6. **Special precautions for user**	Hazard identification (Kemler): Not Applicable Classification code: Not Applicable Hazard Label: Not Applicable Special provisions: Not Applicable Limited quantity: Not Applicable Tunnel Restriction Code: Not Applicable

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number**	Not Applicable
14.2. **UN proper shipping name**	Not Applicable
14.3. **Transport hazard class(es)**	ICAO/IATA Class: Not Applicable ICAO / IATA Subsidiary Hazard: Not Applicable ERG Code: Not Applicable
14.4. **Packing group**	Not Applicable
14.5. **Environmental hazard**	Not Applicable
14.6. **Special precautions for user**	Special provisions: Not Applicable Cargo Only Packing Instructions: Not Applicable

Continued...

	Cargo Only Maximum Qty / Pack	Not Applicable
	Passenger and Cargo Packing Instructions	Not Applicable
	Passenger and Cargo Maximum Qty / Pack	Not Applicable
	Passenger and Cargo Limited Quantity Packing Instructions	Not Applicable
	Passenger and Cargo Limited Maximum Qty / Pack	Not Applicable

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number**	Not Applicable	
14.2. **UN proper shipping name**	Not Applicable	
14.3. **Transport hazard class(es)**	IMDG Class	Not Applicable
	IMDG Subsidiary Hazard	Not Applicable
14.4. **Packing group**	Not Applicable	
14.5 **Environmental hazard**	Not Applicable	
14.6. **Special precautions for user**	EMS Number	Not Applicable
	Special provisions	Not Applicable
	Limited Quantities	Not Applicable

Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number**	Not Applicable	
14.2. **UN proper shipping name**	Not Applicable	
14.3. **Transport hazard class(es)**	Not Applicable	Not Applicable
14.4. **Packing group**	Not Applicable	
14.5. **Environmental hazard**	Not Applicable	
14.6. **Special precautions for user**	Classification code	Not Applicable
	Special provisions	Not Applicable
	Limited quantity	Not Applicable
	Equipment required	Not Applicable
	Fire cones number	Not Applicable

14.7. Maritime transport in bulk according to IMO instruments

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
water	Not Available
propylene glycol	Not Available
glycerol	Not Available
D-sorbitol	Not Available
C.I. Acid Blue 9, disodium salt	Not Available
1,2-benzisothiazoline-3-one	Not Available
2-octyl-4-isothiazolin-3-one	Not Available
C.I. Acid Red 52, sodium salt	Not Available
C.I. Acid Red 14	Not Available
C.I. Food Yellow 3	Not Available

Continued...

Product name	Group
C.I. Acid Red 18	Not Available
eosin yellowish	Not Available
C.I. Acid Yellow 23	Not Available
C.I. Acid Yellow 3	Not Available
C.I. Acid Violet 49 (sodium salt)	Not Available
D&C RED No. 28	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
water	Not Available
propylene glycol	Not Available
glycerol	Not Available
D-sorbitol	Not Available
C.I. Acid Blue 9, disodium salt	Not Available
1,2-benzisothiazoline-3-one	Not Available
2-octyl-4-isothiazolin-3-one	Not Available
C.I. Acid Red 52, sodium salt	Not Available
C.I. Acid Red 14	Not Available
C.I. Food Yellow 3	Not Available
C.I. Acid Red 18	Not Available
eosin yellowish	Not Available
C.I. Acid Yellow 23	Not Available
C.I. Acid Yellow 3	Not Available
C.I. Acid Violet 49 (sodium salt)	Not Available
D&C RED No. 28	Not Available

SECTION 15 Regulatory information

15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture

water is found on the following regulatory lists

Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

propylene glycol is found on the following regulatory lists

Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

glycerol is found on the following regulatory lists

Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

D-sorbitol is found on the following regulatory lists

Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

C.I. Acid Blue 9, disodium salt is found on the following regulatory lists

Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

1,2-benzisothiazoline-3-one is found on the following regulatory lists

Continued...

Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)
European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

2-octyl-4-isothiazolin-3-one is found on the following regulatory lists

Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)
European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

C.I. Acid Red 52, sodium salt is found on the following regulatory lists

Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

C.I. Acid Red 14 is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

C.I. Food Yellow 3 is found on the following regulatory lists

Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

C.I. Acid Red 18 is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

eosin yellowish is found on the following regulatory lists

Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

C.I. Acid Yellow 23 is found on the following regulatory lists

Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

C.I. Acid Yellow 3 is found on the following regulatory lists

Not Applicable

C.I. Acid Violet 49 (sodium salt) is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)
European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans

D&C RED No. 28 is found on the following regulatory lists

Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

Additional Regulatory Information

Not Applicable

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATPs.

Information according to 2012/18/EU (Seveso III):

Seveso Category	Not Available

15.2. Chemical safety assessment

Continued...

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

ECHA SUMMARY

Ingredient	CAS number	Index No	ECHA Dossier
water	7732-18-5	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Eye Irrit. 2; Flam. Liq. 3; Acute Tox. 3; Skin Corr. 1A; Acute Tox. 2	GHS05; Dgr; GHS02; GHS06	H318; H226; H314; H301; H411; H335

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
propylene glycol	57-55-6	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Aquatic Chronic 1; Eye Irrit. 2; Acute Tox. 4; Skin Irrit. 2; STOT SE 3; STOT SE 3; Skin Sens. 1	GHS09; Wng; GHS08	H410; H319; H315; H335; H336; H317; H301

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
glycerol	56-81-5	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	STOT RE 1; STOT SE 3; Skin Corr. 1; Eye Dam. 1; Acute Tox. 4	GHS08; Dgr; GHS05	H372; H335; H314; H318; H332

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
D-sorbitol	50-70-4	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Not Classified	Not Available	Not Available
1	Not Classified	Not Available	Not Available
2	Not Classified	Not Available	Not Available

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
C.I. Acid Blue 9, disodium salt	3844-45-9	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Skin Irrit. 2; Eye Irrit. 2; STOT RE 2; Muta. 2; Aquatic Chronic 3	Wng; GHS08	H315; H319; H373; H341; H412

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
1,2-benzisothiazoline-3-one	2634-33-5	613-088-00-6	Not Available

Harmonisation (C&L	Hazard Class and Category Code(s)	Pictograms Signal Word	Hazard Statement Code(s)

Continued...

Inventory)		Code(s)	
1	Acute Tox. 4; Skin Irrit. 2; Skin Sens. 1; Eye Dam. 1; Aquatic Acute 1	GHS09; GHS05; Dgr	H302; H315; H317; H318; H400
2	Acute Tox. 4; Skin Irrit. 2; Skin Sens. 1; Eye Dam. 1; Aquatic Acute 1; Acute Tox. 2; Aquatic Chronic 1	GHS05; GHS09; Dgr; GHS06; GHS08	H302; H315; H317; H318; H400; H410; H330

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
2-octyl-4-isothiazolin-3-one	26530-20-1	613-112-00-5	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Acute Tox. 4; Acute Tox. 3; Skin Corr. 1B; Skin Sens. 1; Acute Tox. 3; Aquatic Acute 1; Aquatic Chronic 1	GHS05; GHS09; GHS06; Dgr	H302; H311; H314; H317; H331; H410
2	Acute Tox. 3; Acute Tox. 3; Skin Corr. 1; Skin Sens. 1A; Eye Dam. 1; Acute Tox. 2; Aquatic Acute 1; Aquatic Chronic 1	GHS09; GHS05; GHS06; Dgr	H301; H311; H314; H317; H318; H330; H400; H410

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
C.I. Acid Red 52, sodium salt	3520-42-1	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Not Classified	Not Available	Not Available
1	Not Classified	Not Available	Not Available
2	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Aquatic Chronic 3; Skin Sens. 1	GHS07; Dgr	H315; H319; H335; H412; H317

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
C.I. Acid Red 14	3567-69-9	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Aquatic Chronic 3	GHS07; Wng	H315; H319; H335; H412

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
C.I. Food Yellow 3	2783-94-0	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Aquatic Chronic 2; STOT RE 2	Wng; GHS09; GHS08	H315; H319; H335; H411; H373

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
C.I. Acid Red 18	2611-82-7	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Muta. 2	Wng; GHS08	H302; H315; H319; H335; H341

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Continued...

Ingredient	CAS number	Index No	ECHA Dossier
eosin yellowish	17372-87-1	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Eye Irrit. 2	GHS07; Wng	H319
2	Skin Sens. 1; Eye Dam. 1; Aquatic Chronic 3; Acute Tox. 4; Acute Tox. 3; Acute Tox. 3; Skin Corr. 1	GHS05; Dgr; GHS06	H317; H318; H412; H332; H301; H311; H314
1		GHS08; Wng	H319; H341
2		GHS08; Wng	H319; H341

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
C.I. Acid Yellow 23	1934-21-0	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Skin Sens. 1; Resp. Sens. 1; Aquatic Chronic 2; Repr. 2	GHS08; Dgr; GHS09	H317; H334; H411; H361

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
C.I. Acid Violet 49 (sodium salt)	1694-09-3	650-010-00-X	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Carc. 2	GHS08; Wng	H351
2	Carc. 2; Acute Tox. 3; Acute Tox. 3; STOT RE 2; Aquatic Chronic 2	GHS08; GHS09; GHS06; Dgr	H351; H301; H311; H373; H411

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
D&C RED No. 28	18472-87-2	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Eye Irrit. 2	GHS07; Wng	H319
2	Eye Irrit. 2; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 2; Skin Irrit. 2; STOT SE 3	Wng; GHS08; GHS09	H319; H373; H400; H411; H315; H335

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (water; propylene glycol; glycerol; D-sorbitol; C.I. Acid Blue 9, disodium salt; 1,2-benzisothiazoline-3-one; 2-octyl-4-isothiazolin-3-one; C.I. Acid Red 52, sodium salt; C.I. Acid Red 14; C.I. Food Yellow 3; C.I. Acid Red 18; eosin yellowish; C.I. Acid Yellow 23; C.I. Acid Yellow 3; C.I. Acid Violet 49 (sodium salt); D&C RED No. 28)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (C.I. Acid Yellow 3)
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	All chemical substances in this product have been designated as TSCA Inventory ‘Active'

Continued...

National Inventory	Status
Taiwan - TCSI	Yes
Mexico - INSQ	No (C.I. Acid Red 52, sodium salt; C.I. Acid Red 14; C.I. Food Yellow 3; C.I. Acid Red 18; C.I. Acid Violet 49 (sodium salt); D&C RED No. 28)
Vietnam - NCI	Yes
Russia - FBEPH	No (C.I. Acid Red 52, sodium salt; C.I. Acid Violet 49 (sodium salt))
Legend:	*Yes = All CAS declared ingredients are on the inventory* *No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.*

SECTION 16 Other information

Revision Date	30/12/2024
Initial Date	23/12/2024

Full text Risk and Hazard codes

H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

SDS Version Summary

Version	Date of Update	Sections Updated
2.11	30/12/2024	Composition / information on ingredients - Ingredients, Name

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.
Disclaimer: “The information in SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.”
For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:
EN 166 Personal eye-protection
EN 340 Protective clothing
EN 374 Protective gloves against chemicals and micro-organisms
EN 13832 Footwear protecting against chemicals
EN 133 Respiratory protective devices

Continued...

Definitions and abbreviations

- PC—TWA: Permissible Concentration-Time Weighted Average
- PC—STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit。
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- MARPOL: International Convention for the Prevention of Pollution from Ships
- IMSBC: International Maritime Solid Bulk Cargoes Code
- IGC: International Gas Carrier Code
- IBC: International Bulk Chemical Code

- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	**Classification Procedure**
Sensitisation (Skin) Category 1A, H317	Expert judgement

Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]
Techink Industries

Version No: **3.11**
Safety Data Sheet according to OSHA HazCom Standard (2012) requirements
Country Specific: US

Issue Date: **30/12/2024**
Print Date: **30/12/2024**
S.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]
Synonyms	Not Available
Other means of identification	Not Available

Recommended use of the chemical and restrictions on use

Relevant identified uses	Marking ink; Filling in pen

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	**Techink Industries**
Address	A-21, Sector 80, Noida, Uttar Pradesh India
Telephone	+91-120-4582667
Fax	Not Available
Website	Not Available
Email	onkar.joshi@techink.in

Emergency phone number

Association / Organisation	**Not Available**
Emergency telephone number(s)	Not Available
Other emergency telephone number(s)	Not Available

SECTION 2 Hazard(s) identification

Classification of the substance or mixture

NFPA 704 diamond

Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification	Sensitisation (Skin) Category 1A

Label elements

Hazard pictogram(s)	
Signal word	**Warning**

Hazard statement(s)

H317	May cause an allergic skin reaction.

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) Prevention

P280	Wear protective gloves and protective clothing.
P261	Avoid breathing mist/vapours/spray.

Precautionary statement(s) Response

P302+P352	IF ON SKIN: Wash with plenty of water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
7732-18-5	80.3335	water
57-55-6	10	propylene glycol
56-81-5	1	glycerol
50-70-4	1	D-sorbitol
3844-45-9	1	C.I. Acid Blue 9, disodium salt
2634-33-5	0.0005	1,2-benzisothiazoline-3-one
26530-20-1	0.001	2-octyl-4-isothiazolin-3-one
3520-42-1	0.8	C.I. Acid Red 52, sodium salt
3567-69-9	0.4	C.I. Acid Red 14
2783-94-0	2.5	C.I. Food Yellow 3
2611-82-7	0.8	C.I. Acid Red 18
17372-87-1	0.3	eosin yellowish
1934-21-0	0.9	C.I. Acid Yellow 23
8004-92-0	0.85	C.I. Acid Yellow 3
1694-09-3	0.015	C.I. Acid Violet 49 (sodium salt)
18472-87-2	0.1	D&C RED No. 28

SECTION 4 First-aid measures

Description of first aid measures

Eye Contact	If this product comes in contact with eyes: ▸ Wash out immediately with water. ▸ If irritation continues, seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ Immediately remove all contaminated clothing, including footwear. ▸ Flush skin and hair with running water (and soap if available).

Continued...

	‣ Seek medical attention in event of irritation.
Inhalation	‣ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ‣ Other measures are usually unnecessary.
Ingestion	‣ Immediately give a glass of water. ‣ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Fire-fighting measures

Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.

Special protective equipment and precautions for fire-fighters

Fire Fighting	‣ Alert Fire Brigade and tell them location and nature of hazard. ‣ Wear breathing apparatus plus protective gloves in the event of a fire.
Fire/Explosion Hazard	‣ Non combustible. Not considered a significant fire risk, however containers may burn. Decomposition may produce toxic fumes of: sulfur oxides (SOx) May emit corrosive fumes.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	‣ Clean up all spills immediately. ‣ Avoid breathing vapours and contact with skin and eyes.
Major Spills	‣ Absorb or contain isothiazolinone liquid spills with sand, earth, inert material or vermiculite. ‣ The absorbent (and surface soil to a depth sufficient to remove all of the biocide) should be shovelled into a drum and treated with an 11% solution of sodium metabisulfite ($Na_2S_2O_5$) or sodium bisulfite ($NaHSO_3$), or 12% sodium sulfite (Na_2SO_3) and 8% hydrochloric acid (HCl).

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	‣ Avoid all personal contact, including inhalation. ‣ Wear protective clothing when risk of exposure occurs. ‣ **DO NOT** allow clothing wet with material to stay in contact with skin
Other information	

Conditions for safe storage, including any incompatibilities

Suitable container	‣ Polyethylene or polypropylene container. ‣ Packing as recommended by manufacturer.

Continued...

Storage incompatibility	None known

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Limits (PELs) Table Z-1	glycerol	Glycerin (mist)- Total dust	15 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	glycerol	Glycerin (mist)- Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	glycerol	Glycerin (mist)	Not Available	Not Available	Not Available	See Appendix D

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
propylene glycol	30 mg/m3	1,300 mg/m3	7,900 mg/m3
glycerol	45 mg/m3	180 mg/m3	1,100 mg/m3

Ingredient	Original IDLH	Revised IDLH
water	Not Available	Not Available
propylene glycol	Not Available	Not Available
glycerol	Not Available	Not Available
D-sorbitol	Not Available	Not Available
C.I. Acid Blue 9, disodium salt	Not Available	Not Available
1,2-benzisothiazoline-3-one	Not Available	Not Available
2-octyl-4-isothiazolin-3-one	Not Available	Not Available
C.I. Acid Red 52, sodium salt	Not Available	Not Available
C.I. Acid Red 14	Not Available	Not Available
C.I. Food Yellow 3	Not Available	Not Available
C.I. Acid Red 18	Not Available	Not Available
eosin yellowish	Not Available	Not Available
C.I. Acid Yellow 23	Not Available	Not Available
C.I. Acid Yellow 3	Not Available	Not Available
C.I. Acid Violet 49 (sodium salt)	Not Available	Not Available
D&C RED No. 28	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
1,2-benzisothiazoline-3-one	E	≤ 0.01 mg/m³
2-octyl-4-isothiazolin-3-one	E	≤ 0.1 ppm
C.I. Acid Red 14	E	≤ 0.01 mg/m³
C.I. Acid Red 18	D	> 0.01 to ≤ 0.1 mg/m³
C.I. Acid Yellow 23	E	≤ 0.01 mg/m³
C.I. Acid Violet 49 (sodium salt)	E	≤ 0.01 mg/m³
Notes:	*Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.*	

Continued...

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
Individual protection measures, such as personal protective equipment	
Eye and face protection	‣ Safety glasses with side shields. ‣ Chemical goggles.
Skin protection	See Hand protection below
Hands/feet protection	‣ Wear chemical protective gloves, e.g. PVC. ‣ Wear safety footwear or safety gumboots, e.g. Rubber **NOTE:** ‣ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. ‣ Butyl rubber gloves ·Nitrile rubber gloves (Note: Nitric acid penetrates nitrile gloves in a few minutes.)
Body protection	See Other protection below
Other protection	‣ Overalls. ‣ P.V.C apron.

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
'Forsberg Clothing Performance Index'.
The effect(s) of the following substance(s) are taken into account in the ***computer-generated*** selection:
Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]

Material	CPI
BUTYL	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE	C
NITRILE	C
PE/EVAL/PE	C
PVA	C
PVC	C
VITON	C

и CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
C: Where the glove is to be used on a short term, casual or infrequent basis, factors such as 'feel' or convenience (e.g. disposability), may dictate a choic of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Ansell Glove Selection

Glove — *In order of recommendation*
AlphaTec® Solvex® 37-675
MICROFLEX® 93-260
AlphaTec® Solvex® 37-185

Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the 'Exposure Standard' (or ES), respiratory protection is required Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-PAPR-2 P2 ^

^ - Full-face
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

Continued...

AlphaTec® 38-612
AlphaTec® 58-008
AlphaTec® 58-530B
AlphaTec® 58-530W
AlphaTec® 58-735
AlphaTec® 79-700
DermaShield™ 73-711

The suggested gloves for use should be confirmed with the glove supplier.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Not Available

Physical state	Liquid	**Relative density (Water = 1)**	Not Available
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	6.5-8.5	**Decomposition temperature (°C)**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	2.2-3
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Available	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	27-30
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Water base Ink (Soluble in Water)	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available
Heat of Combustion (kJ/g)	Not Available	**Ignition Distance (cm)**	Not Available
Flame Height (cm)	Not Available	**Flame Duration (s)**	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	**Enclosed Space Ignition Deflagration Density (g/m3)**	Not Available
Nanoform Solubility	Not Available	**Nanoform Particle Characteristics**	Not Available
Particle Size	Not Available		

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	‣ Unstable in the presence of incompatible materials. ‣ Product is considered stable.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

Continued...

SECTION 11 Toxicological information

Information on toxicological effects

Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Not normally a hazard due to non-volatile nature of product
Ingestion	The material has **NOT** been classified by EC Directives or other classification systems as 'harmful by ingestion'. This is becaus of the lack of corroborating animal or human evidence. Taken by mouth, isothiazolinones have moderate to high toxicity. The major signs of toxicity are severe stomach irritation, lethargy, and inco-ordination.
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. A 0.5% solution of 1,2-benzisothiazoline-3-one (BIT) is irritating to the skin. Even 0.05% can cause allergy, according to patch tests, with reddening of the skin. Solutions of isothiazolinones may be irritating or even damaging to the skin, depending on concentration. A concentration of over 0.1% can irritate, and over 0.5% can cause severe irritation.
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn). Solutions containing isothiazolinones may damage the mucous membranes and cornea. Animal testing showed very low concentrations (under 0.1%) did not cause irritation, while higher levels (3-5.5%) produced severe irritation and damage to the eye.
Chronic	Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. In animal testing, 1,2-benzisothiazoline-3-one (BIT) did not cause toxicity to the embryo or birth defects. The material does not cause mutations or an increase in cancer. The isothiazolinones are known contact sensitisers. Sensitisation is more likely with the chlorinated species as opposed to the non-chlorinated species.

Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]

TOXICITY	IRRITATION
Not Available	Not Available

water

TOXICITY	IRRITATION
Oral (Rat) LD50: >90000 mg/kg[2]	Not Available

propylene glycol

TOXICITY	IRRITATION
Dermal (rabbit) LD50: 11890 mg/kg[2]	Eye (Rodent - rabbit): 100mg - Mild
Dermal (rabbit) LD50: 20800 mg/kg[2]	Eye (Rodent - rabbit): 500mg/24H - Mild
Oral (Rat) LD50: 20000 mg/kg[2]	Eye: no adverse effect observed (not irritating)[1]
	Skin (Human - child): 30%/96H(continuous) - Moderate
	Skin (Human - man): 10%/2D
	Skin (Human - woman): 30%/96H - Mild
	Skin (Human): 104mg/3D (intermittent) - Moderate
	Skin (Human): 20%
	Skin (Human): 500mg/7D - Mild
	Skin: no adverse effect observed (not irritating)[1]

glycerol

TOXICITY	IRRITATION
Dermal (Guinea Pig) LD50: 58500 mg/kg[1]	Eye (Rodent - rabbit): 500mg/24H - Mild
Inhalation (Rat) LC50: >5.85 mg/L4h[1]	Eye: no adverse effect observed (not irritating)[1]
Oral (Mouse) LD50; 4090 mg/kg[2]	Skin (Rodent - rabbit): 500mg/24H - Mild
	Skin: no adverse effect observed (not irritating)[1]

D-sorbitol

TOXICITY	IRRITATION
Oral (Rat) LD50: 15900 mg/kg[2]	Not Available

Continued...

C.I. Acid Blue 9, disodium salt

TOXICITY	IRRITATION
Oral (Rat) LD50: >1900 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
	Skin: no adverse effect observed (not irritating)[1]

1,2-benzisothiazoline-3-one

TOXICITY	IRRITATION
dermal (rat) LD50: >2000 mg/kg[1]	Eye: adverse effect observed (irreversible damage)[1]
Oral (Rat) LD50: 454 mg/kg[1]	Skin (Human - man): 0.05%
	Skin (Human): 1%/1H
	Skin (Human): 5%/48H - Mild
	Skin: no adverse effect observed (not irritating)[1]

2-octyl-4-isothiazolin-3-one

TOXICITY	IRRITATION
Dermal (rabbit) LD50: 311 mg/kg[2]	Eye (Rodent - rabbit): 100mg - Severe
Oral (Rat) LD50: 248 mg/kg[2]	Eye: adverse effect observed (irreversible damage)[1]
	Skin (Human): 0.1%
	Skin (Rodent - rabbit): 500mg/24H
	Skin: adverse effect observed (corrosive)[1]
	Skin: adverse effect observed (irritating)[1]

C.I. Acid Red 52, sodium salt

TOXICITY	IRRITATION
Oral (Mouse) LD50; 10300 mg/kg[2]	Not Available

C.I. Acid Red 14

TOXICITY	IRRITATION
dermal (rat) LD50: >2000 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
Oral (Rat) LD50: 5000 mg/kg[1]	Skin: no adverse effect observed (not irritating)[1]

C.I. Food Yellow 3

TOXICITY	IRRITATION
dermal (rat) LD50: >2000 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
Oral (Rat) LD50: >2000 mg/kg[1]	Skin: no adverse effect observed (not irritating)[1]

C.I. Acid Red 18

TOXICITY	IRRITATION
Oral (Rat) LD50: >8000 mg/kg[2]	Eye: no adverse effect observed (not irritating)[1]
	Skin: no adverse effect observed (not irritating)[1]

eosin yellowish

TOXICITY	IRRITATION
dermal (rat) LD50: >2000 mg/kg[1]	Eye: adverse effect observed (irritating)[1]
Oral (Rat) LD50: >2000 mg/kg[1]	Skin: no adverse effect observed (not irritating)[1]

C.I. Acid Yellow 23

TOXICITY	IRRITATION
Oral (Rat) LD50: >2000 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
	Skin: no adverse effect observed (not irritating)[1]

C.I. Acid Yellow 3

TOXICITY	IRRITATION
Oral (Rat) LD50: 2000 mg/kg[2]	Not Available

C.I. Acid Violet 49 (sodium salt)

TOXICITY	IRRITATION
Not Available	Not Available

Continued...

D&C RED No. 28	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >2000 mg/kg[1]	Eye: adverse effect observed (irritating)[1]
	Oral (Mouse) LD50; 310 mg/kg[2]	Skin: no adverse effect observed (not irritating)[1]

Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*

propylene glycol	The acute oral toxicity of propylene glycol is very low; large amounts are needed to cause perceptible health damage in humans. Serious toxicity generally occurs only at blood concentrations over 1 g/L, which requires extremely high intake over a relatively short period of time; this is nearly impossible with consuming foods or supplements which contain 1g/kg of PG at most.
GLYCEROL	At very high concentrations, evidence predicts that glycerol may cause tremor, irritation of the skin, eyes, digestive tract and airway. Otherwise it is of low toxicity.
1,2-BENZISOTHIAZOLINE-3-ONE	In light of potential adverse effects, and to ensure a harmonised risk assessment and management, the EU regulatory framework for biocides has been established with the objective of ensuring a high level of protection of human and animal health and the environment. To this aim, it is required that risk assessment of biocidal products is carried out before they can be placed on the market. The predominant fate of the thiazole ring is oxidative ring scission catalysed by cytochrome P450 (CYP) and formation of the corresponding alpha-dicarbonyl metabolites and thioamide derivatives. The well-established toxicity associated with thioamides and thioureas has led to the speculation that thiazole toxicity is attributed to ring scission yielding the corresponding thioamide metabolite. **Acute toxicity** data show that 1,2-benzisothiazoline-3-one (BIT) is moderately toxic by the oral and dermal routes but that this chemical is a severe eye irritant. Irritation to the skin from acute data show only mild skin irritation , but repeated dermal application indicated a more significant skin irritation response.
2-OCTYL-4-ISOTHIAZOLIN-3-ONE	ROHM & HAAS Data ADI: 0.03 mg/kg/day NOEL: 60 mg/kg/day
C.I. ACID RED 52, SODIUM SALT	Hamster cell mutagen
C.I. FOOD YELLOW 3	Acceptable daily intake as food additive = 2.5 mg/kg FAO/WHO 1982
C.I. ACID RED 18	Sensitivity reactions have been reported. The results of animal tests were such that the Joint FAO/WHO Expert Committe on Food additives recommended that its use in food is acceptable. There is no evidence of carcinogenicity, genotoxicity, neurotoxicity, or reproductive and developmental toxicity at the permitted dietary exposures; the European acceptable daily intake (ADI) is 0.7 mg/kg and the WHO/FAO ADI is 4 mg/kg.[1]:460 The production process may result in unsulphonated aromatic amines present in concentrations of up to 100 mg/kg which may be linked to cancer. The lake pigment form of the colour additive can also increase the intake of aluminium beyond the tolerable weekly intake (TWI) of 1 mg/kg/week. **NOTE:** Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA.
EOSIN YELLOWISH	Bacterial cell mutagen
C.I. ACID YELLOW 23	Suspected allergen *[Hawley's] Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure.
C.I. Acid Yellow 3	Studies done on animals showed that quinoline and its metabolites are almost completely excreted via the urine but caused fatty liver and bile duct proliferation in some cases. There is no evidence to suggest that quinoline causes cancer in humans, but it is reported to cause liver cancer in rats and skin cancer in mice.
C.I. ACID VIOLET 49 (SODIUM SALT)	**WARNING:** This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.
D&C RED NO. 28	&C Red No. 27 and D&C Red No. 28 are fluorescein-based dyes that were approved in 1982 for use in drugs and cosmetics (except the eye area). Cosmetic retail products containing these dyes are primarily lipsticks and blushers. Dyes physically associated with non-aqueous aluminum or zirconium minerals (lakes) are used in lipsticks, blushers, make-up preparations, hair dyes and colors, rouges and face powders. The toxicological data reviewed by FDA prior to approval of D&C Red No. 27 and D&C Red No. 28 did not include studies of acute phototoxicity or chronic phototoxicity (i.e. photocarcinogenesis). Our current knowledge of the photochemistry and photobiology of D&C Red No. 27 and D&C Red No. 28 raises new concerns about the long-term safety of these colorants. D&C Red No. 28 is now known to be an extremely efficient photodynamic sensitizer whose photo-excitation results in the formation of free radicals and singlet oxygen. These highly reactive species attack cellular components such as lipids, proteins and nucleic acids. Investigators have shown that the genetic damage sensitized by D&C Red No. 28 is mutagenic in bacterial assays. vitro studies using mammalian cells have shown that D&C Red No. 28 sensitizes photooxidation of guanine bases in cellular DNA (i.e. 8-oxo-7,8-dihydroguanine), a lesion known to be mutagenic.

Continued...

Micro Tip/Fine Liner/ Fine Writer pen ink [MT I] & 1,2-BENZISOTHIAZOLINE-3-ONE & 2-OCTYL-4-ISOTHIAZOLIN-3-ONE & C.I. ACID YELLOW 23	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema.
WATER & 1,2-BENZISOTHIAZOLINE-3-ONE ^ C.I. ACID VIOLET 49 (SODIUM SALT)	No significant acute toxicological data identified in literature search.
propylene glycol & EOSIN YELLOWISH	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
GLYCEROL & 2-OCTYL-4-ISOTHIAZOLIN-3-ONE & C.I. ACID RED 14 & C.I. FOOD YELLOW 3 & C.I. ACID YELLOW 23	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound.
C.I. ACID BLUE 9, DISODIUM SALT & C.I. ACID RED 14	The substance is classified by IARC as Group 3: **NOT** classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.
C.I. ACID RED 14 & C.I. FOOD YELLOW 3 & C.I. ACID RED 18 & C.I. Acid Yellow 3	There has been public concern that food colourings may cause ADHD-like behavior in children. These concerns have led the FDA and other food safety authorities to regularly review the scientific literature, and led the UK FSA to commission a study by researchers at Southampton University of the effect of a mixture of six food dyes (Tartrazine, Allura Red AC, Ponceau 4R, Quinoline Yellow WS, Sunset Yellow and Carmoisine (dubbed the 'Southampton 6')) and sodium benzoate (preservative) on children in the general population, who consumed them in beverages; the study published in 2007.
C.I. ACID RED 14 & C.I. ACID VIOLET 49 (SODIUM SALT)	Detailed analysis of molecular structure indicates that the azo colourant can split off cancer-causing arylamines. The azo linkage, a double bond between two nitrogen atoms, is considered the most unstable part of an azo dye.
C.I. ACID RED 18 & EOSIN YELLOWISH	Equivocal tumorigen by RTECS criteria
EOSIN YELLOWISH & D&C RED NO. 28	Topical, oral, and intravenous use of fluorescein usually causes nausea, diarrhoea, hives, acute hypotension, hyper allergic reaction, heart attack and even sudden death. As such, health care staff should use prophylactic antihistamines and always prepare for possible emergency resuscitation to reduce risk and prevent death from emergencies.

Acute Toxicity	✗	**Carcinogenicity**	✗
Skin Irritation/Corrosion	✗	**Reproductivity**	✗
Serious Eye Damage/Irritation	✗	**STOT - Single Exposure**	✗
Respiratory or Skin sensitisation	✓	**STOT - Repeated Exposure**	✗
Mutagenicity	✗	**Aspiration Hazard**	✗

Legend: ✗ *– Data either not available or does not fill the criteria for classification*
✓ *– Data available to make classification*

SECTION 12 Ecological information

Toxicity

Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

water

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

propylene glycol

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	96h	Algae or other aquatic plants	19000mg/l	2
EC50	72h	Algae or other aquatic plants	19300mg/l	2
EC50	48h	Crustacea	>114.4mg/L	4
NOEC(ECx)	336h	Algae or other aquatic plants	<5300mg/l	1
LC50	96h	Fish	710mg/L	4

Continued...

glycerol

Endpoint	Test Duration (hr)	Species	Value	Source
EC0(ECx)	24h	Crustacea	>500mg/l	1
LC50	96h	Fish	>11mg/L	2

D-sorbitol

Endpoint	Test Duration (hr)	Species	Value	Source
EC10(ECx)	168h	Algae or other aquatic plants	8408.53mg/L	4

C.I. Acid Blue 9, disodium salt

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	>100mg/l	2
NOEC(ECx)	504h	Crustacea	>=10mg/l	2
EC50	48h	Crustacea	>100mg/l	2
LC50	96h	Fish	>132<276mg/l	2

1,2-benzisothiazoline-3-one

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	0.07mg/L	2
NOEC(ECx)	72h	Algae or other aquatic plants	0.04mg/L	2
EC50	48h	Crustacea	0.097mg/L	4
LC50	96h	Fish	0.067-0.29mg/L	4

2-octyl-4-isothiazolin-3-one

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	96h	Algae or other aquatic plants	0.15mg/l	2
NOEC(ECx)	840h	Fish	0.009mg/L	4
EC50	48h	Crustacea	0.057-0.178mg/L	4
LC50	96h	Fish	0.041-0.104mg/l	4

C.I. Acid Red 52, sodium salt

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

C.I. Acid Red 14

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	48h	Crustacea	115.097mg/l	2
LC50	96h	Fish	>100mg/l	2
EC50	72h	Algae or other aquatic plants	34.823mg/l	2
EC50(ECx)	72h	Algae or other aquatic plants	34.823mg/l	2

C.I. Food Yellow 3

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	96h	Algae or other aquatic plants	44524mg/l	2
EC50	72h	Algae or other aquatic plants	113.2mg/l	2
NOEC(ECx)	72h	Algae or other aquatic plants	15.729mg/l	2
EC50	48h	Crustacea	>100mg/l	2
LC50	96h	Fish	>100mg/l	2

C.I. Acid Red 18

Endpoint	Test Duration (hr)	Species	Value	Source
NOEC(ECx)	168h	Algae or other aquatic plants	100mg/l	2
EC50	48h	Crustacea	>100mg/l	2
LC50	96h	Fish	>1000mg/l	2

eosin yellowish

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	51.3mg/l	2
EC50(ECx)	72h	Algae or other aquatic plants	51.3mg/l	2

Continued...

	EC50	48h	Crustacea	>100mg/l	2
	LC50	96h	Fish	>100mg/l	2

C.I. Acid Yellow 23					
	Endpoint	**Test Duration (hr)**	**Species**	**Value**	**Source**
	BCF	1008h	Fish	<0.29	7
	EC50	72h	Algae or other aquatic plants	>125mg/l	2
	EC50(ECx)	48h	Crustacea	>120mg/l	2
	EC50	48h	Crustacea	>120mg/l	2
	LC50	96h	Fish	>120mg/l	2

C.I. Acid Yellow 3					
	Endpoint	**Test Duration (hr)**	**Species**	**Value**	**Source**
	Not Available	Not Available	Not Available	Not Available	Not Available

C.I. Acid Violet 49 (sodium salt)					
	Endpoint	**Test Duration (hr)**	**Species**	**Value**	**Source**
	BCF	672h	Fish	<0.7-1.4	7

D&C RED No. 28					
	Endpoint	**Test Duration (hr)**	**Species**	**Value**	**Source**
	EC50	72h	Algae or other aquatic plants	7.5mg/l	2
	EC50(ECx)	72h	Algae or other aquatic plants	7.5mg/l	2
	EC50	48h	Crustacea	14.5mg/l	2
	LC50	96h	Fish	97.7mg/l	2

Legend:	*Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 9. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

For Acid Dyes: Environmental Fate: Many dyes are visible in water at very low concentrations. Textile processing waste waters are therefore usually highly colored and discharge in open waters presents an aesthetic problem.
Environmental Fate: Isothiazolinones are antimicrobials used to control bacteria, fungi, and for wood preservation and antifouling agents. They are frequently used in personal care products such as shampoos and other hair care products, as well as certain paint formulations.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
water	LOW	LOW
propylene glycol	LOW	LOW
glycerol	LOW	LOW
D-sorbitol	LOW	LOW
2-octyl-4-isothiazolin-3-one	HIGH	HIGH
C.I. Acid Red 14	HIGH	HIGH
C.I. Acid Red 18	HIGH	HIGH
eosin yellowish	HIGH	HIGH
C.I. Acid Yellow 23	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
water	LOW (LogKOW = -1.38)
propylene glycol	LOW (BCF = 1)
glycerol	LOW (LogKOW = -1.76)
D-sorbitol	LOW (LogKOW = -3.0108)
C.I. Acid Blue 9, disodium salt	LOW (LogKOW = -4.94)
2-octyl-4-isothiazolin-3-one	LOW (LogKOW = 2.561)
C.I. Acid Red 52, sodium salt	LOW (LogKOW = -0.01)
C.I. Acid Red 14	LOW (LogKOW = 0)

Continued...

Ingredient	Bioaccumulation
C.I. Acid Red 18	LOW (LogKOW = 1.6301)
eosin yellowish	HIGH (LogKOW = 4.8032)
C.I. Acid Yellow 23	LOW (BCF = 3)
C.I. Acid Yellow 3	LOW (LogKOW = 1.06)
C.I. Acid Violet 49 (sodium salt)	LOW (BCF = 9.9)
D&C RED No. 28	HIGH (LogKOW = 5.47)

Mobility in soil

Ingredient	Mobility
propylene glycol	HIGH (Log KOC = 1)
glycerol	HIGH (Log KOC = 1)
D-sorbitol	LOW (Log KOC = 10)
2-octyl-4-isothiazolin-3-one	LOW (Log KOC = 2120)
C.I. Acid Red 14	LOW (Log KOC = 220300)
C.I. Acid Red 18	LOW (Log KOC = 1572000)
eosin yellowish	LOW (Log KOC = 18860)
C.I. Acid Yellow 23	LOW (Log KOC = 79.38)

Other adverse effects

One or more ingredients within this SDS has the potential of causing ozone depletion and/or photochemical ozone creation.

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	‣ Containers may still present a chemical hazard/ danger when empty. ‣ Return to supplier for reuse/ recycling if possible. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. ‣ **DO NOT** allow wash water from cleaning or process equipment to enter drains. ‣ It may be necessary to collect all wash water for treatment before disposal. ‣ Recycle wherever possible. ‣ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.

SECTION 14 Transport information

Labels Required

Marine Pollutant	NO

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS 14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
water	Not Available
propylene glycol	Not Available
glycerol	Not Available

Continued...

Product name	Group
D-sorbitol	Not Available
C.I. Acid Blue 9, disodium salt	Not Available
1,2-benzisothiazoline-3-one	Not Available
2-octyl-4-isothiazolin-3-one	Not Available
C.I. Acid Red 52, sodium salt	Not Available
C.I. Acid Red 14	Not Available
C.I. Food Yellow 3	Not Available
C.I. Acid Red 18	Not Available
eosin yellowish	Not Available
C.I. Acid Yellow 23	Not Available
C.I. Acid Yellow 3	Not Available
C.I. Acid Violet 49 (sodium salt)	Not Available
D&C RED No. 28	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
water	Not Available
propylene glycol	Not Available
glycerol	Not Available
D-sorbitol	Not Available
C.I. Acid Blue 9, disodium salt	Not Available
1,2-benzisothiazoline-3-one	Not Available
2-octyl-4-isothiazolin-3-one	Not Available
C.I. Acid Red 52, sodium salt	Not Available
C.I. Acid Red 14	Not Available
C.I. Food Yellow 3	Not Available
C.I. Acid Red 18	Not Available
eosin yellowish	Not Available
C.I. Acid Yellow 23	Not Available
C.I. Acid Yellow 3	Not Available
C.I. Acid Violet 49 (sodium salt)	Not Available
D&C RED No. 28	Not Available

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

water is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

propylene glycol is found on the following regulatory lists

US - New Jersey Right to Know Hazardous Substances
US - Pennsylvania - Hazardous Substance List
US AIHA Workplace Environmental Exposure Levels (WEELs)
US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)
US DOE Temporary Emergency Exposure Limits (TEELs)
US EPA Integrated Risk Information System (IRIS)
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US Toxicology Excellence for Risk Assessment (TERA) Workplace Environmental Exposure Levels (WEEL)

Continued...

glycerol is found on the following regulatory lists

US - Massachusetts - Right To Know Listed Chemicals
US - New Jersey Right to Know Hazardous Substances
US - Pennsylvania - Hazardous Substance List
US DOE Temporary Emergency Exposure Limits (TEELs)
US NIOSH Recommended Exposure Limits (RELs)
US OSHA Permissible Exposure Limits (PELs) Table Z-1
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

D-sorbitol is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

C.I. Acid Blue 9, disodium salt is found on the following regulatory lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
US - Massachusetts - Right To Know Listed Chemicals
US New York City Community Right-to-Know: List of Hazardous Substances
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

1,2-benzisothiazoline-3-one is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

2-octyl-4-isothiazolin-3-one is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

C.I. Acid Red 52, sodium salt is found on the following regulatory lists

US Clean Air Act - Hazardous Air Pollutants
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

C.I. Acid Red 14 is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

C.I. Food Yellow 3 is found on the following regulatory lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

C.I. Acid Red 18 is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

eosin yellowish is found on the following regulatory lists

US Clean Air Act - Hazardous Air Pollutants
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

C.I. Acid Yellow 23 is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

C.I. Acid Yellow 3 is found on the following regulatory lists

US - California Hazardous Air Pollutants Identified as Toxic Air Contaminants
US Clean Air Act - Hazardous Air Pollutants
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

C.I. Acid Violet 49 (sodium salt) is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans
US - California Proposition 65 - Carcinogens
US - California Proposition 65 - No Significant Risk Levels (NSRLs) for Carcinogens
US - California Safe Drinking Water and Toxic Enforcement Act of 1986 - Proposition 65 List
US - Massachusetts - Right To Know Listed Chemicals
US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Carcinogens
US - New Jersey Right to Know Hazardous Substances

Continued...

US - Pennsylvania - Hazardous Substance List
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

D&C RED No. 28 is found on the following regulatory lists

US Clean Air Act - Hazardous Air Pollutants
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

Additional Regulatory Information

Not Applicable

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	Yes
Serious eye damage or eye irritation	No
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

None Reported

Additional Federal Regulatory Information

Not Applicable

State Regulations

US. California Proposition 65

WARNING: This product can expose you to chemicals including **C.I. Acid Violet 49 (sodium salt)**, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov

Additional State Regulatory Information

Not Applicable

National Inventory Status

Continued...

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (water; propylene glycol; glycerol; D-sorbitol; C.I. Acid Blue 9, disodium salt; 1,2-benzisothiazoline-3-one; 2-octyl-4-isothiazolin-3-one; C.I. Acid Red 52, sodium salt; C.I. Acid Red 14; C.I. Food Yellow 3; C.I. Acid Red 18; eosin yellowish; C.I. Acid Yellow 23; C.I. Acid Yellow 3; C.I. Acid Violet 49 (sodium salt); D&C RED No. 28)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (C.I. Acid Yellow 3)
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	All chemical substances in this product have been designated as TSCA Inventory 'Active'
Taiwan - TCSI	Yes
Mexico - INSQ	No (C.I. Acid Red 52, sodium salt; C.I. Acid Red 14; C.I. Food Yellow 3; C.I. Acid Red 18; C.I. Acid Violet 49 (sodium salt); D&C RED No. 28)
Vietnam - NCI	Yes
Russia - FBEPH	No (C.I. Acid Red 52, sodium salt; C.I. Acid Violet 49 (sodium salt))
Legend:	*Yes = All CAS declared ingredients are on the inventory* *No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.*

SECTION 16 Other information

Revision Date	30/12/2024
Initial Date	23/12/2024

SDS Version Summary

Version	Date of Update	Sections Updated
2.11	30/12/2024	Composition / information on ingredients - Ingredients, Name

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.
Disclaimer: "The information in SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product."

Definitions and abbreviations

- PC—TWA: Permissible Concentration-Time Weighted Average
- PC—STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit。
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- MARPOL: International Convention for the Prevention of Pollution from Ships
- IMSBC: International Maritime Solid Bulk Cargoes Code
- IGC: International Gas Carrier Code

Continued...

- IBC: International Bulk Chemical Code
- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]
Techink Industries

SECTION 1 Identification of the substance / mixture and of the company / undertaking

1.1. Product Identifier

Product name	Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]
Synonyms	Not Available
Other means of identification	Not Available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Marking ink; Filling in pen
Uses advised against	No specific uses advised against are identified.

1.3. Details of the manufacturer or supplier of the safety data sheet

Registered company name	**Techink Industries**
Address	A-21, Sector 80, Noida, Uttar Pradesh India
Telephone	+91-120-4582667
Fax	Not Available
Website	Not Available
Email	onkar.joshi@techink.in

1.4. Emergency telephone number

Association / Organisation	**Not Available**
Emergency telephone number(s)	Not Available
Other emergency telephone number(s)	Not Available

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

NFPA 704 diamond

Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567 [1]	H317 - Sensitisation (Skin) Category 1A
Legend:	*1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567*

2.2. Label elements

Page 1 continued...

Hazard pictogram(s)	

Signal word	**Warning**

Hazard statement(s)

H317	May cause an allergic skin reaction.

Supplementary statement(s)

Not Applicable

Precautionary statement(s) Prevention

P280	Wear protective gloves and protective clothing.
P261	Avoid breathing mist/vapours/spray.

Precautionary statement(s) Response

P302+P352	IF ON SKIN: Wash with plenty of water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

Material contains C.I. Acid Violet 49 (sodium salt), 2-octyl-4-isothiazolin-3-one, 1,2-benzisothiazoline-3-one.

2.3. Other hazards

Ingestion may produce health damage*.

May produce discomfort of the eyes and skin*.

1,2-benzisothiazoline-3-one	Determined to have endocrine-disrupting properties according to Europe Regulation (EU) 528/2012, Europe Regulation (EU) 2017/2100, and Europe Regulation (EU) 2018/605

SECTION 3 Composition / information on ingredients

3.1.Substances

See 'Composition on ingredients' in Section 3.

3.2.Mixtures

1. CAS No 2.EC No 3.Index No 4.REACH No	**%[weight]**	**Name**	**Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567**	**SCL / M-Factor**	**Nanoform Particle Characteristics**
1. 7732-18-5 2.231-791-2 3.Not Available 4.Not Available	80.3335	water	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 57-55-6 2.200-338-0 3.Not Available 4.Not Available	10	propylene glycol	Non hazardous [1]	SCL: Not Available Acute M factor: Not Applicable	Not Available

Continued...

1. CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	SCL / M-Factor	Nanoform Particle Characteristics
				Chronic M factor: Not Applicable	
1. 56-81-5 2.200-289-5 3.Not Available 4.Not Available	1	glycerol	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 50-70-4 2.200-061-5 3.Not Available 4.Not Available	1	D-sorbitol	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 3844-45-9 2.223-339-8 3.Not Available 4.Not Available	1	C.I. Acid Blue 9, disodium salt	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 2634-33-5 2.220-120-9 3.613-088-00-6 4.Not Available	0.0005	1,2-benzisothiazoline-3-one [e]	Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 1, Hazardous to the Aquatic Environment Acute Hazard Category 1; H302, H315, H317, H318, H400 [2]	Sensitisation (Skin) Category 1; H317: C≥0,05% Acute M factor: 10 Chronic M factor: Not Applicable	Not Available
1. 26530-20-1 2.247-761-7 3.613-112-00-5 4.Not Available	0.001	2-octyl-4-isothiazolin-3-one	Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Skin Corrosion/Irritation Category 1, Sensitisation (Skin) Category 1A, Serious Eye Damage/Eye Irritation Category 1, Acute Toxicity (Inhalation) Category 2, Hazardous to the Aquatic Environment Acute Hazard Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 1; H301, H311, H314, H317, H318, H330, H400, H410 [2]	inhalation: ATE = 0,27 mg/L (dusts or mists) | dermal: ATE = 311 mg/kg bw oral: ATE = 125 mg/kg bw | Sensitisation (Skin) Category 1A; H317: C≥0,0015%|M=100|M=100 Acute M factor: 100 Chronic M factor: 100	Not Available
1. 3520-42-1 2.222-529-8 3.Not Available 4.Not Available	0.8	C.I. Acid Red 52, sodium salt	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 3567-69-9 2.222-657-4 3.Not Available 4.Not Available	0.4	C.I. Acid Red 14	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor:	Not Available

Continued...

1. CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	SCL / M-Factor	Nanoform Particle Characteristics
				Not Applicable	
1. 2783-94-0 2.220-491-7 3.Not Available 4.Not Available	2.5	C.I. Food Yellow 3	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 2611-82-7 2.220-036-2 3.Not Available 4.Not Available	0.8	C.I. Acid Red 18	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 17372-87-1 2.241-409-6 3.Not Available 4.Not Available	0.3	eosin yellowish	Serious Eye Damage/Eye Irritation Category 2; H319 [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 1934-21-0 2.217-699-5 3.Not Available 4.Not Available	0.9	C.I. Acid Yellow 23	Not Classified [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 8004-92-0 2.Not Available 3.Not Available 4.Not Available	0.85	C.I. Acid Yellow 3	Non hazardous [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 1694-09-3 2.216-901-9 3.650-010-00-X 4.Not Available	0.015	C.I. Acid Violet 49 (sodium salt)	Carcinogenicity Category 2; H351 [2]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 18472-87-2 2.242-355-6 3.Not Available 4.Not Available	0.1	D&C RED No. 28	Serious Eye Damage/Eye Irritation Category 2; H319 [3]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available

Legend:	*1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567; 3. Classification drawn from C&L; * EU IOELVs available; [e] Substance identified as having endocrine disrupting properties*

SECTION 4 First aid measures

4.1. Description of first aid measures

Eye Contact	If this product comes in contact with eyes:

Continued...

	‣ Wash out immediately with water. ‣ If irritation continues, seek medical attention. ‣ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ‣ Immediately remove all contaminated clothing, including footwear. ‣ Flush skin and hair with running water (and soap if available). ‣ Seek medical attention in event of irritation.
Inhalation	‣ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ‣ Other measures are usually unnecessary.
Ingestion	‣ Immediately give a glass of water. ‣ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

5.1. Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.

5.3. Advice for firefighters

Fire Fighting	‣ Alert Fire Brigade and tell them location and nature of hazard. ‣ Wear breathing apparatus plus protective gloves in the event of a fire.
Fire/Explosion Hazard	‣ Non combustible. Not considered a significant fire risk, however containers may burn. Decomposition may produce toxic fumes of: sulfur oxides (SOx) May emit corrosive fumes.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

Minor Spills	‣ Clean up all spills immediately. ‣ Avoid breathing vapours and contact with skin and eyes.
Major Spills	‣ Absorb or contain isothiazolinone liquid spills with sand, earth, inert material or vermiculite. ‣ The absorbent (and surface soil to a depth sufficient to remove all of the biocide) should be shovelled into a drum and treated with an 11% solution of sodium metabisulfite (Na2S2O5) or sodium bisulfite (NaHSO3), or 12% sodium sulfite (Na2SO3) and 8% hydrochloric acid (HCl).

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Safe handling	‣ Avoid all personal contact, including inhalation.

Continued...

	‣ Wear protective clothing when risk of exposure occurs. ‣ **DO NOT** allow clothing wet with material to stay in contact with skin
Fire and explosion protection	See section 5
Other information	

7.2. Conditions for safe storage, including any incompatibilities

Suitable container	‣ Polyethylene or polypropylene container. ‣ Packing as recommended by manufacturer.
Storage incompatibility	None known
Hazard categories in accordance with Regulation (EC) No 2012/18/EU (Seveso III)	Not Available
Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of	Not Available

7.3. Specific end use(s)

See section 1.2

SECTION 8 Exposure controls / personal protection

8.1. Control parameters

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
propylene glycol	Inhalation 168 mg/m³ (Systemic, Chronic) Inhalation 10 mg/m³ (Local, Chronic) *Inhalation 0.05 mg/m³ (Systemic, Chronic) ** *Inhalation 10 mg/m³ (Local, Chronic) **	260 mg/L (Water (Fresh)) 183 mg/L (Water - Intermittent release) 26 mg/L (Water (Marine)) 572 mg/kg sediment dw (Sediment (Fresh Water)) 57.2 mg/kg sediment dw (Sediment (Marine)) 50 mg/kg soil dw (Soil) 20000 mg/L (STP)
C.I. Acid Blue 9, disodium salt	Dermal 30 mg/kg bw/day (Systemic, Chronic) Inhalation 106 mg/m³ (Systemic, Chronic) *Dermal 10.7 mg/kg bw/day (Systemic, Chronic) ** *Inhalation 0.0187 mg/m³ (Systemic, Chronic) ** *Oral 6 mg/kg bw/day (Systemic, Chronic) **	0.1 mg/L (Water (Fresh)) 1 mg/L (Water - Intermittent release) 0.01 mg/L (Water (Marine)) 100 mg/L (STP)
1,2-benzisothiazoline-3-one	Dermal 0.966 mg/kg bw/day (Systemic, Chronic) Inhalation 6.81 mg/m³ (Systemic, Chronic) *Dermal 0.345 mg/kg bw/day (Systemic, Chronic) ** *Inhalation 0.0012 mg/m³ (Systemic, Chronic) **	0.00403 mg/L (Water (Fresh)) 0.0011 mg/L (Water - Intermittent release) 0.000403 mg/L (Water (Marine)) 0.0499 mg/kg sediment dw (Sediment (Fresh Water)) 0.00499 mg/kg sediment dw (Sediment (Marine)) 3 mg/kg soil dw (Soil) 1.03 mg/L (STP)
2-octyl-4-isothiazolin-3-one	Not Available	0.0022 mg/L (Water (Fresh)) 0.00122 mg/L (Water - Intermittent release) 0.00022 mg/L (Water (Marine)) 0.0475 mg/kg sediment dw (Sediment (Fresh Water)) 0.00475 mg/kg sediment dw (Sediment (Marine)) 0.0082 mg/kg soil dw (Soil)
C.I. Food Yellow 3	Dermal 833.333 mg/kg bw/day (Systemic, Chronic) Inhalation 1469.298 mg/m³ (Systemic, Chronic) *Dermal 416.667 mg/kg bw/day (Systemic, Chronic) ** *Inhalation 0.362319 mg/m³ (Systemic, Chronic) ** *Oral 208.333 mg/kg bw/day (Systemic, Chronic) **	0.113 mg/L (Water (Fresh)) 1.132 mg/L (Water - Intermittent release) 0.011 mg/L (Water (Marine)) 72054.279 mg/kg sediment dw (Sediment (Fresh Water)) 72054.279 mg/kg sediment dw (Sediment (Marine)) 34499.718 mg/kg soil dw (Soil) 1.76 mg/L (STP)
C.I. Acid Red 18	Dermal 7 mg/kg bw/day (Systemic, Chronic) Inhalation 24.7 mg/m³ (Systemic, Chronic) *Dermal 2.5 mg/kg bw/day (Systemic, Chronic) ** *Inhalation 0.0037 mg/m³ (Systemic, Chronic) **	0.1 mg/L (Water (Fresh)) 1 mg/L (Water - Intermittent release) 0.01 mg/L (Water (Marine)) 0.392 mg/kg sediment dw (Sediment (Fresh Water))

Continued...

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
	*Oral 2.5 mg/kg bw/day (Systemic, Chronic) **	0.039 mg/kg sediment dw (Sediment (Marine)) 0.02 mg/kg soil dw (Soil) 10 mg/L (STP)
C.I. Acid Yellow 23	Dermal 52.82 mg/kg bw/day (Systemic, Chronic) Inhalation 372.52 mg/m³ (Systemic, Chronic) *Dermal 26.41 mg/kg bw/day (Systemic, Chronic) ** *Inhalation 0.09186 mg/m³ (Systemic, Chronic) ** *Oral 26.41 mg/kg bw/day (Systemic, Chronic) **	0.12 mg/L (Water (Fresh)) 1.2 mg/L (Water - Intermittent release) 0.012 mg/L (Water (Marine)) 0.47 mg/kg sediment dw (Sediment (Fresh Water)) 0.047 mg/kg sediment dw (Sediment (Marine)) 0.024 mg/kg soil dw (Soil) 10 mg/L (STP)
D&C RED No. 28	Dermal 2.33 mg/kg bw/day (Systemic, Chronic) Inhalation 8.22 mg/m³ (Systemic, Chronic) *Dermal 0.833 mg/kg bw/day (Systemic, Chronic) ** *Inhalation 0.00145 mg/m³ (Systemic, Chronic) ** *Oral 0.833 mg/kg bw/day (Systemic, Chronic) **	0.0075 mg/L (Water (Fresh)) 0.075 mg/L (Water - Intermittent release) 0.00075 mg/L (Water (Marine)) 0.0535 mg/kg sediment dw (Sediment (Fresh Water)) 0.00535 mg/kg sediment dw (Sediment (Marine)) 0.00631 mg/kg soil dw (Soil)

* Values for General Population

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
UK Workplace Exposure Limits (WELs).	propylene glycol	Propane-1,2-diol: total vapour and particulates	150 ppm / 474 mg/m3	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs).	propylene glycol	Propane-1,2-diol: particulates	10 mg/m3	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs).	glycerol	Glycerol, mist	10 mg/m3	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
water	Not Available	Not Available
propylene glycol	Not Available	Not Available
glycerol	Not Available	Not Available
D-sorbitol	Not Available	Not Available
C.I. Acid Blue 9, disodium salt	Not Available	Not Available
1,2-benzisothiazoline-3-one	Not Available	Not Available
2-octyl-4-isothiazolin-3-one	Not Available	Not Available
C.I. Acid Red 52, sodium salt	Not Available	Not Available
C.I. Acid Red 14	Not Available	Not Available
C.I. Food Yellow 3	Not Available	Not Available
C.I. Acid Red 18	Not Available	Not Available
eosin yellowish	Not Available	Not Available
C.I. Acid Yellow 23	Not Available	Not Available
C.I. Acid Yellow 3	Not Available	Not Available
C.I. Acid Violet 49 (sodium salt)	Not Available	Not Available
D&C RED No. 28	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
1,2-benzisothiazoline-3-one	E	≤ 0.01 mg/m³
2-octyl-4-isothiazolin-3-one	E	≤ 0.1 ppm
C.I. Acid Red 14	E	≤ 0.01 mg/m³
Notes:	*Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.*	

Continued...

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
C.I. Acid Red 18	D	> 0.01 to ≤ 0.1 mg/m³
C.I. Acid Yellow 23	E	≤ 0.01 mg/m³
C.I. Acid Violet 49 (sodium salt)	E	≤ 0.01 mg/m³
Notes:	*Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.*	

8.2. Exposure controls

8.2.1. Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
8.2.2. Individual protection measures, such as personal protective equipment	
Eye and face protection	‣ Safety glasses with side shields. ‣ Chemical goggles.
Skin protection	See Hand protection below
Hands/feet protection	‣ Wear chemical protective gloves, e.g. PVC. ‣ Wear safety footwear or safety gumboots, e.g. Rubber **NOTE:** ‣ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. ‣ Butyl rubber gloves ·Nitrile rubber gloves (Note: Nitric acid penetrates nitrile gloves in a few minutes.)
Body protection	See Other protection below
Other protection	‣ Overalls. ‣ P.V.C apron.

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
'Forsberg Clothing Performance Index'.
The effect(s) of the following substance(s) are taken into account in the ***computer-generated*** selection:
Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]

Material	CPI
BUTYL	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE	C
NITRILE	C
PE/EVAL/PE	C
PVA	C
PVC	C
VITON	C

и CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
D: Where the glove is to be used on a short term, casual or infrequent basis, factors such as 'feel' or convenience (e.g. disposability), may dictate a choic

Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the 'Exposure Standard' (or ES), respiratory protection is required Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-PAPR-2 P2 ^

^ - Full-face
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

Continued...

of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Ansell Glove Selection

Glove — *In order of recommendation*
AlphaTec® Solvex® 37-675
MICROFLEX® 93-260
AlphaTec® Solvex® 37-185
AlphaTec® 38-612
AlphaTec® 58-008
AlphaTec® 58-530B
AlphaTec® 58-530W
AlphaTec® 58-735
AlphaTec® 79-700
DermaShield™ 73-711

The suggested gloves for use should be confirmed with the glove supplier.

8.2.3. Environmental exposure controls

See section 12

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Not Available

Physical state	Liquid	**Relative density (Water = 1)**	Not Available
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	6.5-8.5	**Decomposition temperature (°C)**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	2.2-3
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Available	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	27-30
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Water base Ink (Soluble in Water)	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available
Heat of Combustion (kJ/g)	Not Available	**Ignition Distance (cm)**	Not Available
Flame Height (cm)	Not Available	**Flame Duration (s)**	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	**Enclosed Space Ignition Deflagration Density (g/m3)**	Not Available
Nanoform Solubility	Not Available	**Nanoform Particle Characteristics**	Not Available
Particle Size	Not Available		

Continued...

9.2. Other information

Not Available

SECTION 10 Stability and reactivity

10.1.Reactivity	See section 7.2
10.2. Chemical stability	‣ Unstable in the presence of incompatible materials. ‣ Product is considered stable.
10.3. Possibility of hazardous reactions	See section 7.2
10.4. Conditions to avoid	See section 7.2
10.5. Incompatible materials	See section 7.2
10.6. Hazardous decomposition products	See section 5.3

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Not normally a hazard due to non-volatile nature of product
Ingestion	The material has **NOT** been classified by EC Directives or other classification systems as 'harmful by ingestion'. This is becaus of the lack of corroborating animal or human evidence. Taken by mouth, isothiazolinones have moderate to high toxicity. The major signs of toxicity are severe stomach irritation, lethargy, and inco-ordination.
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. A 0.5% solution of 1,2-benzisothiazoline-3-one (BIT) is irritating to the skin. Even 0.05% can cause allergy, according to patch tests, with reddening of the skin. Solutions of isothiazolinones may be irritating or even damaging to the skin, depending on concentration. A concentration of over 0.1% can irritate, and over 0.5% can cause severe irritation.
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn). Solutions containing isothiazolinones may damage the mucous membranes and cornea. Animal testing showed very low concentrations (under 0.1%) did not cause irritation, while higher levels (3-5.5%) produced severe irritation and damage to the eye.
Chronic	Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. In animal testing, 1,2-benzisothiazoline-3-one (BIT) did not cause toxicity to the embryo or birth defects. The material does not cause mutations or an increase in cancer. The isothiazolinones are known contact sensitisers. Sensitisation is more likely with the chlorinated species as opposed to the non-chlorinated species.

Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
water	**TOXICITY**	**IRRITATION**
	Oral (Rat) LD50: >90000 mg/kg[2]	Not Available
propylene glycol	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 11890 mg/kg[2]	Eye (Rodent - rabbit): 100mg - Mild
	Dermal (rabbit) LD50: 20800 mg/kg[2]	Eye (Rodent - rabbit): 500mg/24H - Mild
	Oral (Rat) LD50: 20000 mg/kg[2]	Eye: no adverse effect observed (not irritating)[1]
		Skin (Human - child): 30%/96H(continuous) - Moderate
		Skin (Human - man): 10%/2D

Continued...

	Skin (Human - woman): 30%/96H - Mild
	Skin (Human): 104mg/3D (intermittent) - Moderate
	Skin (Human): 20%
	Skin (Human): 500mg/7D - Mild
	Skin: no adverse effect observed (not irritating)[1]

glycerol

TOXICITY	IRRITATION
Dermal (Guinea Pig) LD50: 58500 mg/kg[1]	Eye (Rodent - rabbit): 500mg/24H - Mild
Inhalation (Rat) LC50: >5.85 mg/L4h[1]	Eye: no adverse effect observed (not irritating)[1]
Oral (Mouse) LD50; 4090 mg/kg[2]	Skin (Rodent - rabbit): 500mg/24H - Mild
	Skin: no adverse effect observed (not irritating)[1]

D-sorbitol

TOXICITY	IRRITATION
Oral (Rat) LD50: 15900 mg/kg[2]	Not Available

C.I. Acid Blue 9, disodium salt

TOXICITY	IRRITATION
Oral (Rat) LD50: >1900 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
	Skin: no adverse effect observed (not irritating)[1]

1,2-benzisothiazoline-3-one

TOXICITY	IRRITATION
dermal (rat) LD50: >2000 mg/kg[1]	Eye: adverse effect observed (irreversible damage)[1]
Oral (Rat) LD50: 454 mg/kg[1]	Skin (Human - man): 0.05%
	Skin (Human): 1%/1H
	Skin (Human): 5%/48H - Mild
	Skin: no adverse effect observed (not irritating)[1]

2-octyl-4-isothiazolin-3-one

TOXICITY	IRRITATION
Dermal (rabbit) LD50: 311 mg/kg[2]	Eye (Rodent - rabbit): 100mg - Severe
Oral (Rat) LD50: 248 mg/kg[2]	Eye: adverse effect observed (irreversible damage)[1]
	Skin (Human): 0.1%
	Skin (Rodent - rabbit): 500mg/24H
	Skin: adverse effect observed (corrosive)[1]
	Skin: adverse effect observed (irritating)[1]

C.I. Acid Red 52, sodium salt

TOXICITY	IRRITATION
Oral (Mouse) LD50; 10300 mg/kg[2]	Not Available

C.I. Acid Red 14

TOXICITY	IRRITATION
dermal (rat) LD50: >2000 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
Oral (Rat) LD50: 5000 mg/kg[1]	Skin: no adverse effect observed (not irritating)[1]

C.I. Food Yellow 3

TOXICITY	IRRITATION
dermal (rat) LD50: >2000 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
Oral (Rat) LD50: >2000 mg/kg[1]	Skin: no adverse effect observed (not irritating)[1]

C.I. Acid Red 18

TOXICITY	IRRITATION
Oral (Rat) LD50: >8000 mg/kg[2]	Eye: no adverse effect observed (not irritating)[1]
	Skin: no adverse effect observed (not irritating)[1]

Continued...

eosin yellowish	**TOXICITY** / **IRRITATION** dermal (rat) LD50: >2000 mg/kg[1] / Eye: adverse effect observed (irritating)[1] Oral (Rat) LD50: >2000 mg/kg[1] / Skin: no adverse effect observed (not irritating)[1]
C.I. Acid Yellow 23	**TOXICITY** / **IRRITATION** Oral (Rat) LD50: >2000 mg/kg[1] / Eye: no adverse effect observed (not irritating)[1] Skin: no adverse effect observed (not irritating)[1]
C.I. Acid Yellow 3	**TOXICITY** / **IRRITATION** Oral (Rat) LD50: 2000 mg/kg[2] / Not Available
C.I. Acid Violet 49 (sodium salt)	**TOXICITY** / **IRRITATION** Not Available / Not Available
D&C RED No. 28	**TOXICITY** / **IRRITATION** dermal (rat) LD50: >2000 mg/kg[1] / Eye: adverse effect observed (irritating)[1] Oral (Mouse) LD50; 310 mg/kg[2] / Skin: no adverse effect observed (not irritating)[1]
Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*

propylene glycol	The acute oral toxicity of propylene glycol is very low; large amounts are needed to cause perceptible health damage in humans. Serious toxicity generally occurs only at blood concentrations over 1 g/L, which requires extremely high intake over a relatively short period of time; this is nearly impossible with consuming foods or supplements which contain 1g/kg of PG at most.
GLYCEROL	At very high concentrations, evidence predicts that glycerol may cause tremor, irritation of the skin, eyes, digestive tract and airway. Otherwise it is of low toxicity.
1,2-BENZISOTHIAZOLINE-3-ONE	In light of potential adverse effects, and to ensure a harmonised risk assessment and management, the EU regulatory framework for biocides has been established with the objective of ensuring a high level of protection of human and animal health and the environment. To this aim, it is required that risk assessment of biocidal products is carried out before they can be placed on the market. The predominant fate of the thiazole ring is oxidative ring scission catalysed by cytochrome P450 (CYP) and formation of the corresponding alpha-dicarbonyl metabolites and thioamide derivatives. The well-established toxicity associated with thioamides and thioureas has led to the speculation that thiazole toxicity is attributed to ring scission yielding the corresponding thioamide metabolite. **Acute toxicity** data show that 1,2-benzisothiazoline-3-one (BIT) is moderately toxic by the oral and dermal routes but that this chemical is a severe eye irritant. Irritation to the skin from acute data show only mild skin irritation , but repeated dermal application indicated a more significant skin irritation response.
2-OCTYL-4-ISOTHIAZOLIN-3-ONE	ROHM & HAAS Data ADI: 0.03 mg/kg/day NOEL: 60 mg/kg/day
C.I. ACID RED 52, SODIUM SALT	Hamster cell mutagen
C.I. FOOD YELLOW 3	Acceptable daily intake as food additive = 2.5 mg/kg FAO/WHO 1982
C.I. ACID RED 18	Sensitivity reactions have been reported. The results of animal tests were such that the Joint FAO/WHO Expert Committe on Food additives recommended that its use in food is acceptable. There is no evidence of carcinogenicity, genotoxicity, neurotoxicity, or reproductive and developmental toxicity at the permitted dietary exposures; the European acceptable daily intake (ADI) is 0.7 mg/kg and the WHO/FAO ADI is 4 mg/kg.[1]:460 The production process may result in unsulphonated aromatic amines present in concentrations of up to 100 mg/kg which may be linked to cancer. The lake pigment form of the colour additive can also increase the intake of aluminium beyond the tolerable weekly intake (TWI) of 1 mg/kg/week. **NOTE:** Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA.
EOSIN YELLOWISH	Bacterial cell mutagen
C.I. ACID YELLOW 23	Suspected allergen *[Hawley's] Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following

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	exposure.
C.I. Acid Yellow 3	Studies done on animals showed that quinoline and its metabolites are almost completely excreted via the urine but caused fatty liver and bile duct proliferation in some cases. There is no evidence to suggest that quinoline causes cancer in humans, but it is reported to cause liver cancer in rats and skin cancer in mice.
C.I. ACID VIOLET 49 (SODIUM SALT)	**WARNING:** This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.
D&C RED NO. 28	&C Red No. 27 and D&C Red No. 28 are fluorescein-based dyes that were approved in 1982 for use in drugs and cosmetics (except the eye area). Cosmetic retail products containing these dyes are primarily lipsticks and blushers. Dyes physically associated with non-aqueous aluminum or zirconium minerals (lakes) are used in lipsticks, blushers, make-up preparations, hair dyes and colors, rouges and face powders. The toxicological data reviewed by FDA prior to approval of D&C Red No. 27 and D&C Red No. 28 did not include studies of acute phototoxicity or chronic phototoxicity (i.e. photocarcinogenesis). Our current knowledge of the photochemistry and photobiology of D&C Red No. 27 and D&C Red No. 28 raises new concerns about the long-term safety of these colorants. D&C Red No. 28 is now known to be an extremely efficient photodynamic sensitizer whose photo-excitation results in the formation of free radicals and singlet oxygen. These highly reactive species attack cellular components such as lipids, proteins and nucleic acids. Investigators have shown that the genetic damage sensitized by D&C Red No. 28 is mutagenic in bacterial assays. vitro studies using mammalian cells have shown that D&C Red No. 28 sensitizes photooxidation of guanine bases in cellular DNA (i.e. 8-oxo-7,8-dihydroguanine), a lesion known to be mutagenic.
Micro Tip/Fine Liner/ Fine Writer pen ink [MT I] & 1,2-BENZISOTHIAZOLINE-3-ONE ^ 2-OCTYL-4-ISOTHIAZOLIN-3-ONE & C.I. ACID YELLOW 23	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema.
WATER & 1,2-BENZISOTHIAZOLINE-3-ONE & C.I. ACID VIOLET 49 (SODIUM SALT)	No significant acute toxicological data identified in literature search.
propylene glycol & EOSIN YELLOWISH	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
GLYCEROL & 2-OCTYL-4-ISOTHIAZOLIN-3-ONE & C.I. ACID RED 14 & C.I. FOOD YELLOW 3 & C.I. ACID YELLOW 23	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound.
C.I. ACID BLUE 9, DISODIUM SALT & C.I. ACID RED 14	The substance is classified by IARC as Group 3: **NOT** classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.
C.I. ACID RED 14 & C.I. FOOD YELLOW 3 & C.I. ACID RED 18 & C.I. Acid Yellow 3	There has been public concern that food colourings may cause ADHD-like behavior in children. These concerns have led the FDA and other food safety authorities to regularly review the scientific literature, and led the UK FSA to commission a study by researchers at Southampton University of the effect of a mixture of six food dyes (Tartrazine, Allura Red AC, Ponceau 4R, Quinoline Yellow WS, Sunset Yellow and Carmoisine (dubbed the 'Southampton 6')) and sodium benzoate (preservative) on children in the general population, who consumed them in beverages; the study published in 2007.
C.I. ACID RED 14 & C.I. ACID VIOLET 49 (SODIUM SALT)	Detailed analysis of molecular structure indicates that the azo colourant can split off cancer-causing arylamines. The azo linkage, a double bond between two nitrogen atoms, is considered the most unstable part of an azo dye.
C.I. ACID RED 18 & EOSIN YELLOWISH	Equivocal tumorigen by RTECS criteria
EOSIN YELLOWISH & D&C RED NO. 28	Topical, oral, and intravenous use of fluorescein usually causes nausea, diarrhoea, hives, acute hypotension, hyper allergic reaction, heart attack and even sudden death. As such, health care staff should use prophylactic antihistamines and always prepare for possible emergency resuscitation to reduce risk and prevent death from emergencies.

Acute Toxicity	✗	**Carcinogenicity**	✗
Skin Irritation/Corrosion	✗	**Reproductivity**	✗
Serious Eye Damage/Irritation	✗	**STOT - Single Exposure**	✗
Respiratory or Skin sensitisation	✓	**STOT - Repeated Exposure**	✗
Mutagenicity	✗	**Aspiration Hazard**	✗

Legend: ✗ *– Data either not available or does not fill the criteria for classification*

✓ *– Data available to make classification*

11.2 Information on other hazards

11.2.1. Endocrine disrupting properties

Many chemicals may mimic or interfere with the body s hormones, known as the endocrine system. Endocrine disruptors are chemicals that can interfere with

Continued...

endocrine (or hormonal) systems.
Endocrine disruptors interfere with the synthesis, secretion, transport, binding, action, or elimination of natural hormones in the body. Any system in the body controlled by hormones can be derailed by hormone disruptors. Specifically, endocrine disruptors may be associated with the development of learning disabilities, deformations of the body various cancers and sexual development problems.
Endocrine disrupting chemicals cause adverse effects in animals. But limited scientific information exists on potential health problems in humans. Because people are typically exposed to multiple endocrine disruptors at the same time, assessing public health effects is difficult.

11.2.2. Other information

See Section 11.1

SECTION 12 Ecological information

12.1. Toxicity

Micro Tip/Fine Liner/ Fine Writer pen ink [MT I]

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

water

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

propylene glycol

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	96h	Algae or other aquatic plants	19000mg/l	2
EC50	72h	Algae or other aquatic plants	19300mg/l	2
EC50	48h	Crustacea	>114.4mg/L	4
NOEC(ECx)	336h	Algae or other aquatic plants	<5300mg/l	1
LC50	96h	Fish	710mg/L	4

glycerol

Endpoint	Test Duration (hr)	Species	Value	Source
EC0(ECx)	24h	Crustacea	>500mg/l	1
LC50	96h	Fish	>11mg/L	2

D-sorbitol

Endpoint	Test Duration (hr)	Species	Value	Source
EC10(ECx)	168h	Algae or other aquatic plants	8408.53mg/L	4

C.I. Acid Blue 9, disodium salt

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	>100mg/l	2
NOEC(ECx)	504h	Crustacea	>=10mg/l	2
EC50	48h	Crustacea	>100mg/l	2
LC50	96h	Fish	>132<276mg/l	2

1,2-benzisothiazoline-3-one

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	0.07mg/L	2
NOEC(ECx)	72h	Algae or other aquatic plants	0.04mg/L	2
EC50	48h	Crustacea	0.097mg/L	4
LC50	96h	Fish	0.067-0.29mg/L	4

2-octyl-4-isothiazolin-3-one

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	96h	Algae or other aquatic plants	0.15mg/l	2
NOEC(ECx)	840h	Fish	0.009mg/L	4
EC50	48h	Crustacea	0.057-0.178mg/L	4
LC50	96h	Fish	0.041-0.104mg/l	4

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C.I. Acid Red 52, sodium salt

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

C.I. Acid Red 14

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	48h	Crustacea	115.097mg/l	2
LC50	96h	Fish	>100mg/l	2
EC50	72h	Algae or other aquatic plants	34.823mg/l	2
EC50(ECx)	72h	Algae or other aquatic plants	34.823mg/l	2

C.I. Food Yellow 3

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	96h	Algae or other aquatic plants	44524mg/l	2
EC50	72h	Algae or other aquatic plants	113.2mg/l	2
NOEC(ECx)	72h	Algae or other aquatic plants	15.729mg/l	2
EC50	48h	Crustacea	>100mg/l	2
LC50	96h	Fish	>100mg/l	2

C.I. Acid Red 18

Endpoint	Test Duration (hr)	Species	Value	Source
NOEC(ECx)	168h	Algae or other aquatic plants	100mg/l	2
EC50	48h	Crustacea	>100mg/l	2
LC50	96h	Fish	>1000mg/l	2

eosin yellowish

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	51.3mg/l	2
EC50(ECx)	72h	Algae or other aquatic plants	51.3mg/l	2
EC50	48h	Crustacea	>100mg/l	2
LC50	96h	Fish	>100mg/l	2

C.I. Acid Yellow 23

Endpoint	Test Duration (hr)	Species	Value	Source
BCF	1008h	Fish	<0.29	7
EC50	72h	Algae or other aquatic plants	>125mg/l	2
EC50(ECx)	48h	Crustacea	>120mg/l	2
EC50	48h	Crustacea	>120mg/l	2
LC50	96h	Fish	>120mg/l	2

C.I. Acid Yellow 3

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

C.I. Acid Violet 49 (sodium salt)

Endpoint	Test Duration (hr)	Species	Value	Source
BCF	672h	Fish	<0.7-1.4	7

D&C RED No. 28

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	7.5mg/l	2
EC50(ECx)	72h	Algae or other aquatic plants	7.5mg/l	2
EC50	48h	Crustacea	14.5mg/l	2
LC50	96h	Fish	97.7mg/l	2

Legend: *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 10. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

For Acid Dyes: Environmental Fate: Many dyes are visible in water at very low concentrations. Textile processing waste waters are therefore usually highly colored

Continued...

and discharge in open waters presents an aesthetic problem.
Environmental Fate: Isothiazolinones are antimicrobials used to control bacteria, fungi, and for wood preservation and antifouling agents. They are frequently used in personal care products such as shampoos and other hair care products, as well as certain paint formulations.

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
water	LOW	LOW
propylene glycol	LOW	LOW
glycerol	LOW	LOW
D-sorbitol	LOW	LOW
2-octyl-4-isothiazolin-3-one	HIGH	HIGH
C.I. Acid Red 14	HIGH	HIGH
C.I. Acid Red 18	HIGH	HIGH
eosin yellowish	HIGH	HIGH
C.I. Acid Yellow 23	HIGH	HIGH

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
water	LOW (LogKOW = -1.38)
propylene glycol	LOW (BCF = 1)
glycerol	LOW (LogKOW = -1.76)
D-sorbitol	LOW (LogKOW = -3.0108)
C.I. Acid Blue 9, disodium salt	LOW (LogKOW = -4.94)
2-octyl-4-isothiazolin-3-one	LOW (LogKOW = 2.561)
C.I. Acid Red 52, sodium salt	LOW (LogKOW = -0.01)
C.I. Acid Red 14	LOW (LogKOW = 0)
C.I. Acid Red 18	LOW (LogKOW = 1.6301)
eosin yellowish	HIGH (LogKOW = 4.8032)
C.I. Acid Yellow 23	LOW (BCF = 3)
C.I. Acid Yellow 3	LOW (LogKOW = 1.06)
C.I. Acid Violet 49 (sodium salt)	LOW (BCF = 9.9)
D&C RED No. 28	HIGH (LogKOW = 5.47)

12.4. Mobility in soil

Ingredient	Mobility
propylene glycol	HIGH (Log KOC = 1)
glycerol	HIGH (Log KOC = 1)
D-sorbitol	LOW (Log KOC = 10)
2-octyl-4-isothiazolin-3-one	LOW (Log KOC = 2120)
C.I. Acid Red 14	LOW (Log KOC = 220300)
C.I. Acid Red 18	LOW (Log KOC = 1572000)
eosin yellowish	LOW (Log KOC = 18860)
C.I. Acid Yellow 23	LOW (Log KOC = 79.38)

12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not Available	Not Available	Not Available
PBT	✗	✗	✗
vPvB	✗	✗	✗

PBT Criteria fulfilled?	No

Continued...

vPvB	No

12.6. Endocrine disrupting properties

The evidence linking adverse effects to endocrine disruptors is more compelling in the environment than it is in humans. Endocrine distruptors profoundly alter reproductive physiology of ecosystems and ultimately impact entire populations. Some endocrine-disrupting chemicals are slow to break-down in the environment. That characteristic makes them potentially hazardous over long periods of time. Some well established adverse effects of endocrine disruptors in various wildlife species include; eggshell-thinning, displayed of characteristics of the opposite sex and impaired reproductive development. Other adverse changes in wildlife species that have been suggested, but not proven include; reproductive abnormalities, immune dysfunction and skeletal deformaties.

12.7. Other adverse effects

One or more ingredients within this SDS has the potential of causing ozone depletion and/or photochemical ozone creation.

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal	‣ Containers may still present a chemical hazard/ danger when empty. ‣ Return to supplier for reuse/ recycling if possible. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. ‣ **DO NOT** allow wash water from cleaning or process equipment to enter drains. ‣ It may be necessary to collect all wash water for treatment before disposal. ‣ Recycle wherever possible. ‣ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
Waste treatment options	Not Available
Sewage disposal options	Not Available

SECTION 14 Transport information

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number or ID number**	Not Applicable
14.2. **UN proper shipping name**	Not Applicable
14.3. **Transport hazard class(es)**	Class: Not Applicable Subsidiary Hazard: Not Applicable
14.4. **Packing group**	Not Applicable
14.5. **Environmental hazard**	Not Applicable
14.6. **Special precautions for user**	Hazard identification (Kemler): Not Applicable Classification code: Not Applicable Hazard Label: Not Applicable Special provisions: Not Applicable Limited quantity: Not Applicable Tunnel Restriction Code: Not Applicable

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number**	Not Applicable
14.2. **UN proper shipping name**	Not Applicable

Continued...

14.3. **Transport hazard class(es)**	ICAO/IATA Class	Not Applicable
	ICAO / IATA Subsidiary Hazard	Not Applicable
	ERG Code	Not Applicable
14.4. **Packing group**	Not Applicable	
14.5. **Environmental hazard**	Not Applicable	
14.6. **Special precautions for user**	Special provisions	Not Applicable
	Cargo Only Packing Instructions	Not Applicable
	Cargo Only Maximum Qty / Pack	Not Applicable
	Passenger and Cargo Packing Instructions	Not Applicable
	Passenger and Cargo Maximum Qty / Pack	Not Applicable
	Passenger and Cargo Limited Quantity Packing Instructions	Not Applicable
	Passenger and Cargo Limited Maximum Qty / Pack	Not Applicable

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number**	Not Applicable	
14.2. **UN proper shipping name**	Not Applicable	
14.3. **Transport hazard class(es)**	IMDG Class	Not Applicable
	IMDG Subsidiary Hazard	Not Applicable
14.4. **Packing group**	Not Applicable	
14.5 **Environmental hazard**	Not Applicable	
14.6. **Special precautions for user**	EMS Number	Not Applicable
	Special provisions	Not Applicable
	Limited Quantities	Not Applicable

Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number**	Not Applicable	
14.2. **UN proper shipping name**	Not Applicable	
14.3. **Transport hazard class(es)**	Not Applicable	Not Applicable
14.4. **Packing group**	Not Applicable	
14.5. **Environmental hazard**	Not Applicable	
14.6. **Special precautions for user**	Classification code	Not Applicable
	Special provisions	Not Applicable
	Limited quantity	Not Applicable
	Equipment required	Not Applicable
	Fire cones number	Not Applicable

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
water	Not Available
propylene glycol	Not Available
glycerol	Not Available
D-sorbitol	Not Available

Continued...

Product name	Group
C.I. Acid Blue 9, disodium salt	Not Available
1,2-benzisothiazoline-3-one	Not Available
2-octyl-4-isothiazolin-3-one	Not Available
C.I. Acid Red 52, sodium salt	Not Available
C.I. Acid Red 14	Not Available
C.I. Food Yellow 3	Not Available
C.I. Acid Red 18	Not Available
eosin yellowish	Not Available
C.I. Acid Yellow 23	Not Available
C.I. Acid Yellow 3	Not Available
C.I. Acid Violet 49 (sodium salt)	Not Available
D&C RED No. 28	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
water	Not Available
propylene glycol	Not Available
glycerol	Not Available
D-sorbitol	Not Available
C.I. Acid Blue 9, disodium salt	Not Available
1,2-benzisothiazoline-3-one	Not Available
2-octyl-4-isothiazolin-3-one	Not Available
C.I. Acid Red 52, sodium salt	Not Available
C.I. Acid Red 14	Not Available
C.I. Food Yellow 3	Not Available
C.I. Acid Red 18	Not Available
eosin yellowish	Not Available
C.I. Acid Yellow 23	Not Available
C.I. Acid Yellow 3	Not Available
C.I. Acid Violet 49 (sodium salt)	Not Available
D&C RED No. 28	Not Available

SECTION 15 Regulatory information

15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture

water is found on the following regulatory lists

Not Applicable

propylene glycol is found on the following regulatory lists

UK Workplace Exposure Limits (WELs).

glycerol is found on the following regulatory lists

UK Workplace Exposure Limits (WELs).

D-sorbitol is found on the following regulatory lists

Not Applicable

C.I. Acid Blue 9, disodium salt is found on the following regulatory lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

Continued...

1,2-benzisothiazoline-3-one is found on the following regulatory lists

Great Britain GB Biocidal Active Substances
Great Britain GB mandatory classification and labelling (GB MCL) technical reports
Great Britain GB mandatory classification and labelling list (GB MCL)

2-octyl-4-isothiazolin-3-one is found on the following regulatory lists

Great Britain GB Biocidal Active Substances
Great Britain GB mandatory classification and labelling list (GB MCL)

C.I. Acid Red 52, sodium salt is found on the following regulatory lists

Not Applicable

C.I. Acid Red 14 is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

C.I. Food Yellow 3 is found on the following regulatory lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

C.I. Acid Red 18 is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List

eosin yellowish is found on the following regulatory lists

Not Applicable

C.I. Acid Yellow 23 is found on the following regulatory lists

Not Applicable

C.I. Acid Yellow 3 is found on the following regulatory lists

Not Applicable

C.I. Acid Violet 49 (sodium salt) is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
Great Britain GB mandatory classification and labelling list (GB MCL)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans

D&C RED No. 28 is found on the following regulatory lists

Not Applicable

Additional Regulatory Information

Not Applicable

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATPs.

Information according to 2012/18/EU (Seveso III):

Seveso Category	Not Available

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

ECHA SUMMARY

Ingredient	CAS number	Index No	ECHA Dossier
water	7732-18-5	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Eye Irrit. 2; Flam. Liq. 3; Acute Tox. 3; Skin Corr. 1A; Acute Tox. 2	GHS05; Dgr; GHS02; GHS06	H318; H226; H314; H301; H411; H335

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Continued...

Ingredient	CAS number	Index No	ECHA Dossier
propylene glycol	57-55-6	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Aquatic Chronic 1; Eye Irrit. 2; Acute Tox. 4; Skin Irrit. 2; STOT SE 3; STOT SE 3; Skin Sens. 1	GHS09; Wng; GHS08	H410; H319; H315; H335; H336; H317; H301

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
glycerol	56-81-5	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	STOT RE 1; STOT SE 3; Skin Corr. 1; Eye Dam. 1; Acute Tox. 4	GHS08; Dgr; GHS05	H372; H335; H314; H318; H332

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
D-sorbitol	50-70-4	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Not Classified	Not Available	Not Available
1	Not Classified	Not Available	Not Available
2	Not Classified	Not Available	Not Available

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
C.I. Acid Blue 9, disodium salt	3844-45-9	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Skin Irrit. 2; Eye Irrit. 2; STOT RE 2; Muta. 2; Aquatic Chronic 3	Wng; GHS08	H315; H319; H373; H341; H412

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
1,2-benzisothiazoline-3-one	2634-33-5	613-088-00-6	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Acute Tox. 4; Skin Irrit. 2; Skin Sens. 1; Eye Dam. 1; Aquatic Acute 1	GHS09; GHS05; Dgr	H302; H315; H317; H318; H400
2	Acute Tox. 4; Skin Irrit. 2; Skin Sens. 1; Eye Dam. 1; Aquatic Acute 1; Acute Tox. 2; Aquatic Chronic 1	GHS05; GHS09; Dgr; GHS06; GHS08	H302; H315; H317; H318; H400; H410; H330

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
2-octyl-4-isothiazolin-3-one	26530-20-1	613-112-00-5	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Continued...

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Acute Tox. 4; Acute Tox. 3; Skin Corr. 1B; Skin Sens. 1; Acute Tox. 3; Aquatic Acute 1; Aquatic Chronic 1	GHS05; GHS09; GHS06; Dgr	H302; H311; H314; H317; H331; H410
2	Acute Tox. 3; Acute Tox. 3; Skin Corr. 1; Skin Sens. 1A; Eye Dam. 1; Acute Tox. 2; Aquatic Acute 1; Aquatic Chronic 1	GHS09; GHS05; GHS06; Dgr	H301; H311; H314; H317; H318; H330; H400; H410

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
C.I. Acid Red 52, sodium salt	3520-42-1	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Not Classified	Not Available	Not Available
1	Not Classified	Not Available	Not Available
2	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Aquatic Chronic 3; Skin Sens. 1	GHS07; Dgr	H315; H319; H335; H412; H317

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
C.I. Acid Red 14	3567-69-9	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Aquatic Chronic 3	GHS07; Wng	H315; H319; H335; H412

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
C.I. Food Yellow 3	2783-94-0	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Aquatic Chronic 2; STOT RE 2	Wng; GHS09; GHS08	H315; H319; H335; H411; H373

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
C.I. Acid Red 18	2611-82-7	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Muta. 2	Wng; GHS08	H302; H315; H319; H335; H341

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
eosin yellowish	17372-87-1	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Eye Irrit. 2	GHS07; Wng	H319
2	Skin Sens. 1; Eye Dam. 1; Aquatic Chronic 3; Acute Tox. 4; Acute Tox. 3; Acute Tox. 3; Skin Corr. 1	GHS05; Dgr; GHS06	H317; H318; H412; H332; H301; H311; H314
1		GHS08; Wng	H319; H341

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Continued...

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
2		GHS08; Wng	H319; H341

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
C.I. Acid Yellow 23	1934-21-0	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Not Classified	Not Available	Not Available
2	Skin Sens. 1; Resp. Sens. 1; Aquatic Chronic 2; Repr. 2	GHS08; Dgr; GHS09	H317; H334; H411; H361

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
C.I. Acid Violet 49 (sodium salt)	1694-09-3	650-010-00-X	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Carc. 2	GHS08; Wng	H351
2	Carc. 2; Acute Tox. 3; Acute Tox. 3; STOT RE 2; Aquatic Chronic 2	GHS08; GHS09; GHS06; Dgr	H351; H301; H311; H373; H411

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
D&C RED No. 28	18472-87-2	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Eye Irrit. 2	GHS07; Wng	H319
2	Eye Irrit. 2; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 2; Skin Irrit. 2; STOT SE 3	Wng; GHS08; GHS09	H319; H373; H400; H411; H315; H335

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (water; propylene glycol; glycerol; D-sorbitol; C.I. Acid Blue 9, disodium salt; 1,2-benzisothiazoline-3-one; 2-octyl-4-isothiazolin-3-one; C.I. Acid Red 52, sodium salt; C.I. Acid Red 14; C.I. Food Yellow 3; C.I. Acid Red 18; eosin yellowish; C.I. Acid Yellow 23; C.I. Acid Yellow 3; C.I. Acid Violet 49 (sodium salt); D&C RED No. 28)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (C.I. Acid Yellow 3)
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	All chemical substances in this product have been designated as TSCA Inventory ‘Active'
Taiwan - TCSI	Yes
Mexico - INSQ	No (C.I. Acid Red 52, sodium salt; C.I. Acid Red 14; C.I. Food Yellow 3; C.I. Acid Red 18; C.I. Acid Violet 49 (sodium salt); D&C RED No. 28)
Vietnam - NCI	Yes
Russia - FBEPH	No (C.I. Acid Red 52, sodium salt; C.I. Acid Violet 49 (sodium salt))

Continued...

National Inventory	Status
Legend:	*Yes = All CAS declared ingredients are on the inventory* *No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.*

SECTION 16 Other information

Revision Date	30/12/2024
Initial Date	23/12/2024

Full text Risk and Hazard codes

H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

SDS Version Summary

Version	Date of Update	Sections Updated
2.11	30/12/2024	Composition / information on ingredients - Ingredients, Name

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.
Disclaimer: “The information in SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.”
For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:
EN 166 Personal eye-protection
EN 340 Protective clothing
EN 374 Protective gloves against chemicals and micro-organisms
EN 13832 Footwear protecting against chemicals
EN 133 Respiratory protective devices

Definitions and abbreviations

- PC—TWA: Permissible Concentration-Time Weighted Average
- PC—STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit

Continued...

- TEEL: Temporary Emergency Exposure Limit。
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- MARPOL: International Convention for the Prevention of Pollution from Ships
- IMSBC: International Maritime Solid Bulk Cargoes Code
- IGC: International Gas Carrier Code
- IBC: International Bulk Chemical Code
- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	Classification Procedure
Sensitisation (Skin) Category 1A, H317	Expert judgement

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