



Perma-Lock Blue Threadlocker - Medium Strength

JRP Distribution Ltd

Version No: 4.11

Safety data sheet according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

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S.REACH.GB.EN

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

1.1. Product Identifier

Product name	Perma-Lock Blue Threadlocker - Medium Strength
Synonyms	24206, 24213, 24236, 24250 (Perma-Lock Blue Threadlocker - Medium Strength)
Other means of identification	Not Available

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

Relevant identified uses	Sealant.
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	JRP Distribution Ltd
Address	Unit 10A, Business Park, City Fields Way Tangmere PO20 2FT United Kingdom
Telephone	+44 1903 750355
Fax	903-885-5911
Website	www.jbweld.com
Email	info@jbweld.com

1.4. Emergency telephone number

Association / Organisation	Department of Health & Social Care (DHSC)
Emergency telephone numbers	112
Other emergency telephone numbers	Not Available

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567 [1]	H315 - Skin Corrosion/Irritation Category 2, H317 - Sensitisation (Skin) Category 1, H319 - Serious Eye Damage/Eye Irritation Category 2, H373 - Specific Target Organ Toxicity - Repeated Exposure Category 2
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

Hazard pictogram(s)	
Signal word	Warning

Hazard statement(s)

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure. (Respiratory system) (Inhalation)

Supplementary statement(s)

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Not Applicable

Precautionary statement(s) Prevention

P260	Do not breathe mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary statement(s) Response

P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314	Get medical advice/attention if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

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.
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2.3. Other hazards

cumene	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)
methyl methacrylate	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)
methanol	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)

SECTION 3 Composition / information on ingredients

3.1.Substances

See 'Composition on ingredients' in Section 3.2

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. 80-15-9 2.201-254-7 3.617-002-00-8 4.Not Available	1-5	<u>cumyl hydroperoxide</u>	Organic Peroxides Type E, Acute Toxicity (Oral) Category 4, Acute Toxicity (Dermal) Category 4, Acute Toxicity (Inhalation) Category 3, Skin Corrosion/Irritation Category 1B, Specific Target Organ Toxicity - Repeated Exposure Category 2, Hazardous to the Aquatic Environment Long-Term Hazard Category 2; H242, H302, H312, H331, H314, H373, H411 [2]	Skin Corr. 1B; H314: C ≥ 10 % Skin Irrit. 2; H315: 3 % ≤ C < 10 % Eye Dam. 1; H318: 3 % ≤ C < 10 % Eye Irrit. 2; H319: 1 % ≤ C < 3 % STOT SE 3; H335: C < 10 %	Not Available
1. 98-82-8 2.202-704-5 3.601-024-00-X 4.Not Available	<1	<u>cumene</u> *	Flammable Liquids Category 3, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, Aspiration Hazard Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 2; H226, H335, H304, H411 [2]	Not Available	Not Available
1. 57-55-6 2.200-338-0 3.Not Available 4.Not Available	1-5	<u>propylene glycol</u>	Not Classified [3]	Not Available	Not Available
1. 80-62-6 2.201-297-1 3.607-035-00-6 4.Not Available	<1	<u>methyl methacrylate</u> * -	Flammable Liquids Category 2, Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3; H225, H315, H317, H335 [2]	Not Available	Not Available
1. 609-72-3 2.210-199-8 3.612-056-00-9 4.Not Available	<1	<u>N,N-dimethyl-o-toluidine</u>	Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Acute Toxicity (Inhalation) Category 3, Specific Target Organ Toxicity - Repeated Exposure Category 2, Hazardous to the Aquatic Environment Long-Term Hazard Category 3; H301, H311, H331, H373, H412 [2]	*	Not Available
1. 613-48-9 2.210-345-0 3.Not Available 4.Not Available	<1	<u>N,N-diethyl-p-toluidine</u>	Acute Tox. 4, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2; H302, H315, H319 [3]	Not Available	Not Available

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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. 67-56-1 2. 200-659-6 3. 603-001-00-X 4. Not Available	<1	<u>methanol</u> *	Flammable Liquids Category 2, Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Acute Toxicity (Inhalation) Category 3, Specific Target Organ Toxicity - Single Exposure Category 1; H225, H301, H311, H331, H370 [2]	* STOT SE 1; H370: C ≥ 10 % STOT SE 2; H371: 3 % ≤ C < 10 %	Not Available
1. 12188-41-9 2. 236-675-5 3. 022-006-00-2 4. Not Available	<1	<u>titanium dioxide (brookite)</u>	Carcinogenicity Category 2; H351 [2]	Not Available	Not Available
1. 112945-52-5 2. Not Available 3. Not Available 4. Not Available	1-5	<u>silica amorphous fumed, crystalline free</u>	Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2, Specific Target Organ Toxicity - Single Exposure Category 3; H315, H319, H335, EUH066 [3]	Not Available	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	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Wash out immediately with fresh running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ 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	<ul style="list-style-type: none"> ▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▶ Other measures are usually unnecessary.
Ingestion	<ul style="list-style-type: none"> ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▶ Seek medical advice.

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

- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility	▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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5.3. Advice for firefighters

Fire Fighting	<ul style="list-style-type: none"> ▶ When silica dust is dispersed in air, firefighters should wear inhalation protection as hazardous substances from the fire may be adsorbed on the silica particles. ▶ When heated to extreme temperatures, (>1700 deg.C) amorphous silica can fuse. ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear full body protective clothing with breathing apparatus. ▶ Prevent, by any means available, spillage from entering drains or water course.
Fire/Explosion Hazard	<ul style="list-style-type: none"> ▶ When silica dust is dispersed in air, firefighters should wear inhalation protection as hazardous substances from the fire may be adsorbed on the silica particles. ▶ When heated to extreme temperatures, (>1700 deg.C) amorphous silica can fuse. ▶ Combustible. ▶ Slight fire hazard when exposed to heat or flame. ▶ Heating may cause expansion or decomposition leading to violent rupture of containers. <p>Combustion products include:</p>

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carbon dioxide (CO₂)
silicon dioxide (SiO₂)
other pyrolysis products typical of burning organic material.
May emit poisonous fumes.
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	<ul style="list-style-type: none"> ▶ Remove all ignition sources. ▶ Clean up all spills immediately. ▶ Avoid breathing vapours and contact with skin and eyes.
Major Spills	<ul style="list-style-type: none"> ▶ Clear area of personnel and move upwind. ▶ Alert Fire Department and tell them location and nature of hazard.

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	<ul style="list-style-type: none"> ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs. ▶ Use in a well-ventilated area. ▶ DO NOT allow clothing wet with material to stay in contact with skin
Fire and explosion protection	See section 5
Other information	<ul style="list-style-type: none"> ▶ Store in original containers. ▶ Keep containers securely sealed. ▶ No smoking, naked lights or ignition sources.

7.2. Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none"> ▶ Metal can or drum ▶ Packaging as recommended by manufacturer. ▶ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	<p>The substance may be or contains a 'metalloid'</p> <p>The following elements are considered to be metalloids; boron, silicon, germanium, arsenic, antimony, tellurium and (possibly) polonium. The electronegativities and ionisation energies of the metalloids are between those of the metals and nonmetals, so the metalloids exhibit characteristics of both classes. The reactivity of the metalloids depends on the element with which they are reacting. For example, boron acts as a nonmetal when reacting with sodium yet as a metal when reacting with fluorine.</p> <p>Silicas:</p> <ul style="list-style-type: none"> ▶ react with hydrofluoric acid to produce silicon tetrafluoride gas ▶ react with xenon hexafluoride to produce explosive xenon trioxide ▶ reacts exothermically with oxygen difluoride, and explosively with chlorine trifluoride (these halogenated materials are not commonplace industrial materials) and other fluorine-containing compounds ▶ may react with fluorine, chlorates ▶ are incompatible with strong oxidisers, manganese trioxide, chlorine trioxide, strong alkalis, metal oxides, concentrated orthophosphoric acid, vinyl acetate ▶ may react vigorously when heated with alkali carbonates. ▶ Avoid reaction with oxidising agents
Hazard categories in accordance with Regulation (EC) No 1272/2008	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
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Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
cumyl hydroperoxide	Inhalation 6 mg/m ³ (Systemic, Chronic)	0.003 mg/L (Water (Fresh)) 0.031 mg/L (Water - Intermittent release) 0 mg/L (Water (Marine)) 0.023 mg/kg sediment dw (Sediment (Fresh Water)) 0.002 mg/kg sediment dw (Sediment (Marine)) 0.003 mg/kg soil dw (Soil) 0.35 mg/L (STP)
cumene	Dermal 15.4 mg/kg bw/day (Systemic, Chronic) Inhalation 100 mg/m ³ (Systemic, Chronic) Inhalation 221 mg/m ³ (Local, Chronic) Inhalation 442 mg/m ³ (Systemic, Acute) Inhalation 250 mg/m ³ (Local, Acute) <i>Dermal 1.2 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 16.6 mg/m³ (Systemic, Chronic) *</i> <i>Oral 5 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 65.3 mg/m³ (Local, Chronic) *</i> <i>Inhalation 260 mg/m³ (Systemic, Acute) *</i> <i>Inhalation 260 mg/m³ (Local, Acute) *</i>	0.035 mg/L (Water (Fresh)) 0.012 mg/L (Water - Intermittent release) 0.004 mg/L (Water (Marine)) 3.22 mg/kg sediment dw (Sediment (Fresh Water)) 0.322 mg/kg sediment dw (Sediment (Marine)) 0.624 mg/kg soil dw (Soil) 200 mg/L (STP)
propylene glycol	Inhalation 168 mg/m ³ (Systemic, Chronic) Inhalation 10 mg/m ³ (Local, Chronic) <i>Inhalation 50 mg/m³ (Systemic, Chronic) *</i> <i>Inhalation 10 mg/m³ (Local, Chronic) *</i>	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)
methyl methacrylate	Dermal 13.67 mg/kg bw/day (Systemic, Chronic) Inhalation 348.4 mg/m ³ (Systemic, Chronic) Dermal 1.5 mg/cm ² (Local, Chronic) Inhalation 208 mg/m ³ (Local, Chronic) Dermal 1.5 mg/cm ² (Local, Acute) Inhalation 416 mg/m ³ (Local, Acute) <i>Dermal 8.2 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 74.3 mg/m³ (Systemic, Chronic) *</i> <i>Oral 8.2 mg/kg bw/day (Systemic, Chronic) *</i> <i>Dermal 1.5 mg/cm² (Local, Chronic) *</i> <i>Inhalation 104 mg/m³ (Local, Chronic) *</i> <i>Dermal 1.5 mg/cm² (Local, Acute) *</i> <i>Inhalation 208 mg/m³ (Local, Acute) *</i>	0.94 mg/L (Water (Fresh)) 0.69 mg/L (Water - Intermittent release) 0.094 mg/L (Water (Marine)) 10.2 mg/kg sediment dw (Sediment (Fresh Water)) 1.02 mg/kg sediment dw (Sediment (Marine)) 1.48 mg/kg soil dw (Soil) 10 mg/L (STP)
methanol	Dermal 1 601 mg/kg bw/day (Systemic, Chronic) Inhalation 11.67 mg/m ³ (Systemic, Chronic) Inhalation 20 mg/m ³ (Local, Chronic) Dermal 20 mg/kg bw/day (Systemic, Acute) Inhalation 130 mg/m ³ (Systemic, Acute) Inhalation 40 mg/m ³ (Local, Acute) <i>Dermal 4 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 2.9 mg/m³ (Systemic, Chronic) *</i> <i>Oral 1 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 26 mg/m³ (Local, Chronic) *</i> <i>Dermal 4 mg/kg bw/day (Systemic, Acute) *</i> <i>Inhalation 26 mg/m³ (Systemic, Acute) *</i> <i>Oral 4 mg/kg bw/day (Systemic, Acute) *</i> <i>Inhalation 26 mg/m³ (Local, Acute) *</i>	Not Available
titanium dioxide (brookite)	Inhalation 0.8 mg/m ³ (Local, Chronic) <i>Inhalation 28 µg/m³ (Local, Chronic) *</i>	Not Available

* Values for General Population

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
UK Workplace Exposure Limits (WELs).	cumene	Cumene	25 ppm / 125 mg/m ³	250 mg/m ³ / 50 ppm	Not Available	Sk
UK Workplace Exposure Limits (WELs).	propylene glycol	Propane-1,2-diol: total vapour and particulates	150 ppm / 474 mg/m ³	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs).	propylene glycol	Propane-1,2-diol: particulates	10 mg/m ³	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs).	methyl methacrylate	Methyl methacrylate	50 ppm / 208 mg/m ³	416 mg/m ³ / 100 ppm	Not Available	Not Available
UK Workplace Exposure Limits (WELs).	methanol	Methanol	200 ppm / 266 mg/m ³	333 mg/m ³ / 250 ppm	Not Available	Sk
UK Workplace Exposure Limits (WELs).	titanium dioxide (brookite)	Titanium dioxide: total inhalable	10 mg/m ³	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs).	titanium dioxide (brookite)	Titanium dioxide: respirable	4 mg/m ³	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs).	silica amorphous, fumed, crystalline free	Silica, amorphous: respirable dust	2.4 mg/m ³	Not Available	Not Available	Not Available

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Source	Ingredient	Material name	TWA	STEL	Peak	Notes
UK Workplace Exposure Limits (WELs).	silica amorphous, fumed, crystalline free	Silica, amorphous: inhalable dust	6 mg/m ³	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
cumyl hydroperoxide	0.15 ppm	1.6 ppm	9.7 ppm
cumene	Not Available	Not Available	Not Available
propylene glycol	30 mg/m ³	1,300 mg/m ³	7,900 mg/m ³
methyl methacrylate	Not Available	Not Available	Not Available
methanol	Not Available	Not Available	Not Available
titanium dioxide (brookite)	30 mg/m ³	330 mg/m ³	2,000 mg/m ³
silica amorphous, fumed, crystalline free	18 mg/m ³	100 mg/m ³	630 mg/m ³

Ingredient	Original IDLH	Revised IDLH
cumyl hydroperoxide	Not Available	Not Available
cumene	900 ppm	Not Available
propylene glycol	Not Available	Not Available
methyl methacrylate	1,000 ppm	Not Available
N,N-dimethyl-o-toluidine	Not Available	Not Available
N,N-diethyl-p-toluidine	Not Available	Not Available
methanol	6,000 ppm	Not Available
titanium dioxide (brookite)	5,000 mg/m ³	Not Available
silica amorphous, fumed, crystalline free	Not Available	Not Available


Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
cumyl hydroperoxide	E	≤ 0.1 ppm
N,N-dimethyl-o-toluidine	E	≤ 0.1 ppm
N,N-diethyl-p-toluidine	E	≤ 0.01 mg/m ³

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. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk.
8.2.2. Individual protection measures, such as personal protective equipment	
Eye and face protection	<ul style="list-style-type: none"> ▸ Safety glasses with side shields. ▸ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent] ▸ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.
Skin protection	See Hand protection below
Hands/feet protection	<ul style="list-style-type: none"> ▸ Wear chemical protective gloves, e.g. PVC. ▸ Wear safety footwear or safety gumboots, e.g. Rubber <p>NOTE:</p> <ul style="list-style-type: none"> ▸ 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. ▸ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. <p>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.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p>
Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> ▸ Overalls. ▸ P.V.C apron. ▸ Barrier cream.

Respiratory protection

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

- ▶ Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- ▶ The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- ▶ Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

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	Blue Liquid		
Physical state	Liquid	Relative density (Water = 1)	1.05-1.2
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
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)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	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	<ul style="list-style-type: none"> ▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ Hazardous polymerisation will not occur.
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 either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other
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	route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Ingestion	<p>Accidental ingestion of the material may be damaging to the health of the individual.</p> <p>Ingestion of propylene glycol produced reversible central nervous system depression in humans following ingestion of 60 ml. Symptoms included increased heart-rate (tachycardia), excessive sweating (diaphoresis) and grand mal seizures in a 15 month child who ingested large doses (7.5 ml/day for 8 days) as an ingredient of vitamin preparation.</p> <p>Excessive repeated ingestions may cause hypoglycaemia (low levels of glucose in the blood stream) among susceptible individuals; this may result in muscular weakness, incoordination and mental confusion.</p>
Skin Contact	<p>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.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>
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).
Chronic	<p>Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.</p> <p>This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects.</p> <p>Amorphous silicas generally are less hazardous than crystalline silicas, but the former can be converted to the latter on heating and subsequent cooling. Inhalation of dusts containing crystalline silicas may lead to silicosis, a disabling lung disease that may take years to develop. Soluble silicates do not exhibit sensitizing potential. Testing in bacterial and animal experiments have not shown any evidence of them causing mutations or birth defects.</p> <p>Propylene glycol is thought to be sensitizing following the regular use of topical creams by eczema patients. Testing in humans showed that 16% of exposed individuals, irritation occurred, with 12.5% showing toxic or allergic reactions. The reaction responses reached their maximum on the second day or later.</p>
Perma-Lock Blue Threadlocker - Medium Strength	TOXICITY
	Not Available
	IRRITATION
	Not Available
cumyl hydroperoxide	TOXICITY
	dermal (rat) LD50: 500 mg/kg ^[2]
	Inhalation(Rat) LC50: 220 ppm4h ^[2]
	Oral (Rat) LD50: 382 mg/kg ^[2]
	IRRITATION
	Eye (rabbit): 1 mg
	Skin (rabbit): 500 mg - mild
cumene	TOXICITY
	Dermal (rabbit) LD50: 2000 mg/kg ^[2]
	Inhalation(Rat) LC50: 39 mg/L4h ^[2]
	Oral (Rat) LD50: 1400 mg/kg ^[2]
	IRRITATION
	Eye (rabbit): 500 mg/24h mild
	Eye (rabbit): 86 mg mild
	Eye: no adverse effect observed (not irritating) ^[1]
	Skin (rabbit): 10 mg/24h mild
	Skin (rabbit):100 mg/24h moderate
	Skin: no adverse effect observed (not irritating) ^[1]
propylene glycol	TOXICITY
	Dermal (rabbit) LD50: 11890 mg/kg ^[2]
	Inhalation(Rat) LC50: >44.9 mg/l4h ^[1]
	Oral (Rat) LD50: 20000 mg/kg ^[2]
	IRRITATION
	Eye (rabbit): 100 mg - mild
	Eye (rabbit): 500 mg/24h - mild
	Eye: no adverse effect observed (not irritating) ^[1]
	Skin(human):104 mg/3d Intermit Mod
	Skin(human):500 mg/7days mild
methyl methacrylate	TOXICITY
	Dermal (rabbit) LD50: >5000 mg/kg ^[2]
	Inhalation(Rat) LC50: 29.8 mg/l4h ^[1]
	Oral (Rat) LD50: 7872 mg/kg ^[2]
	IRRITATION
	Eye (rabbit): 150 mg
	Skin (rabbit): 10000 mg/kg (open)
N,N-dimethyl-o-toluidine	TOXICITY
	Not Available
	IRRITATION
	Not Available

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N,N-diethyl-p-toluidine	TOXICITY	IRRITATION
	Not Available	Not Available
methanol	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 15800 mg/kg ^[2]	Eye (rabbit): 100 mg/24h-moderate
	Inhalation(Rat) LC50: 64000 ppm4h ^[2]	Eye (rabbit): 40 mg-moderate
	Oral (Rat) LD50: 5628 mg/kg ^[2]	Eye: no adverse effect observed (not irritating) ^[1]
		Skin (rabbit): 20 mg/24 h-moderate
		Skin: no adverse effect observed (not irritating) ^[1]
titanium dioxide (brookite)	TOXICITY	IRRITATION
	dermal (hamster) LD50: >=10000 mg/kg ^[2]	Eye: no adverse effect observed (not irritating) ^[1]
	Inhalation(Rat) LC50: >2.28 mg/l4h ^[1]	Skin: no adverse effect observed (not irritating) ^[1]
	Oral (Rat) LD50: >=2000 mg/kg ^[1]	
silica amorphous, fumed, crystalline free	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >5000 mg/kg ^[2]	Not Available
	Oral (Rat) LD50: 3160 mg/kg ^[2]	
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	

CUMYL HYDROPEROXIDE	Bacterial cell mutagen Equivocal tumorigen by RTECS criteria
CUMENE	<p>Cumene is reasonably anticipated to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in experimental animals. Cumene caused tumours at several tissue sites, including lung and liver in mice and kidney in male rats. Several proposed mechanisms of carcinogenesis support the relevance to humans of lung and liver tumours in experimental animals. similar metabolic pathways. There is also evidence that cumene is genotoxic in some tissues, based on findings of DNA damage in rodent lung and liver. Furthermore, mutations of the K-ras oncogene and p53 tumor-suppressor gene observed in cumene-induced lung tumours in mice, along with altered expression of many other genes, resemble molecular alterations found in human lung and other cancers. The relevance of the kidney tumors to cancer in humans is uncertain; there is evidence that a species-specific mechanism not relevant to humans contributes to their induction, but it is possible that other mechanisms relevant to humans, such as genotoxicity, may also contribute to kidney-tumour formation in male rats.</p> <p>For aromatic terpenes: p-cymene and cumene have low toxic potential and are excreted in the urine. At very high doses in animal testing, inco-ordination, damage to the kidneys and lung inflammation, with decrease in thymus weight, occurred. This group of substances does not seem to cause cancer, genetic damage or developmental toxicity and has low potential for reproductive toxicity.</p> <p>Tenth Annual Report on Carcinogens: Substance anticipated to be Carcinogen [National Toxicology Program: U.S. Dep. of Health & Human Services 2002]</p>
METHYL METHACRYLATE	<p>Inhalation (human) TCLo: 60 mg/m3(15 ppm) [* Manuf. Rohm & Haas]</p> <p>MMA is absorbed after inhalation, oral intake and less readily through the skin. Following inhalation it is partly deposited in the airway where it is metabolised by local enzymes. Acute toxicity is low.</p> <p>Where no 'official' classification for acrylates and methacrylates exists, there have been cautious attempts to create classifications in the absence of contrary evidence. For example</p> <p>Monalkyl or monoarylestere of acrylic acids should be classified as R36/37/38 and R51/53</p> <p>Monoalkyl or monoaryl estere of methacrylic acid should be classified as R36/37/38</p> <p>The substance is classified by IARC as Group 3:</p> <p>NOT classifiable as to its carcinogenicity to humans.</p> <p>Evidence of carcinogenicity may be inadequate or limited in animal testing.</p> <p>Based on the available oncogenicity data and without a better understanding of the carcinogenic mechanism the Health and Environmental Review Division (HERD), Office of Toxic Substances (OTS), of the US EPA previously concluded that all chemicals that contain the acrylate or methacrylate moiety (CH₂=CHCOO or CH₂=C(CH₃)COO) should be considered to be a carcinogenic hazard unless shown otherwise by adequate testing.</p> <p>This position has now been revised and acrylates and methacrylates are no longer <i>de facto</i> carcinogens.</p>
TITANIUM DIOXIDE (BROOKITE)	For titanium dioxide
Perma-Lock Blue Threadlocker - Medium Strength & METHYL METHACRYLATE & N,N-DIETHYL-P-TOLUIDINE	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. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.
Perma-Lock Blue Threadlocker - Medium Strength & SILICA AMORPHOUS, FUMED, CRYSTALLINE FREE	<p>For silica amorphous:</p> <p>Derived No Adverse Effects Level (NOAEL) in the range of 1000 mg/kg/d.</p> <p>In humans, synthetic amorphous silica (SAS) is essentially non-toxic by mouth, skin or eyes, and by inhalation. Epidemiology studies show little evidence of adverse health effects due to SAS. Repeated exposure (without personal protection) may cause mechanical irritation of the eye and drying/cracking of the skin.</p> <p>When experimental animals inhale synthetic amorphous silica (SAS) dust, it dissolves in the lung fluid and is rapidly eliminated.</p>
Perma-Lock Blue Threadlocker - Medium Strength & TITANIUM DIOXIDE (BROOKITE)	Exposure to titanium dioxide is via inhalation, swallowing or skin contact. When inhaled, it may deposit in lung tissue and lymph nodes causing dysfunction of the lungs and immune system. Absorption by the stomach and intestines depends on the size of the particle.

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Perma-Lock Blue Threadlocker - Medium Strength & 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. Poisonings are usually due to injection through a vein or accidental swallowing of large amounts by children.
Perma-Lock Blue Threadlocker - Medium Strength & CUMENE	WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.
CUMYL HYDROPEROXIDE & TITANIUM DIOXIDE (BROOKITE)	The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
CUMYL HYDROPEROXIDE & CUMENE & PROPYLENE GLYCOL & METHANOL & TITANIUM DIOXIDE (BROOKITE)	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.
CUMYL HYDROPEROXIDE & CUMENE & METHYL METHACRYLATE	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. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant.
N,N-DIETHYL-P-TOLUIDINE & TITANIUM DIOXIDE (BROOKITE)	No significant acute toxicological data identified in literature search.

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

No evidence of endocrine disrupting properties were found in the current literature.

11.2.2. Other information

See Section 11.1

SECTION 12 Ecological information

12.1. Toxicity

Perma-Lock Blue Threadlocker - Medium Strength	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
cumyl hydroperoxide	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48h	Crustacea	18.84mg/l	2
	NOEC(ECx)	96h	Fish	<0.64mg/l	4
	LC50	96h	Fish	3.9mg/l	2
cumene	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	1.29mg/l	2
	EC50	48h	Crustacea	4mg/l	1
	NOEC(ECx)	96h	Crustacea	0.4mg/l	1
	LC50	96h	Fish	2.7mg/l	4
propylene glycol	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	19300mg/l	2
	EC50	48h	Crustacea	>114.4mg/L	4
	EC50	96h	Algae or other aquatic plants	19000mg/l	2
	LC50	96h	Fish	710mg/l	4
	NOEC(ECx)	336h	Algae or other aquatic plants	<5300mg/l	1
methyl methacrylate	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	>110mg/l	2

Continued...

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	EC50	48h	Crustacea	69mg/l	1
	EC50	96h	Algae or other aquatic plants	170mg/l	1
	EC0(ECx)	48h	Crustacea	48mg/l	1
	LC50	96h	Fish	>79mg/l	2
N,N-dimethyl-o-toluidine	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
N,N-diethyl-p-toluidine	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
methanol	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48h	Crustacea	>10000mg/l	2
	EC50	96h	Algae or other aquatic plants	14.11-20.623mg/l	4
	LC50	96h	Fish	290mg/l	2
	NOEC(ECx)	720h	Fish	0.007mg/L	4
titanium dioxide (brookite)	Endpoint	Test Duration (hr)	Species	Value	Source
	BCF	1008h	Fish	<1.1-9.6	7
	EC50	72h	Algae or other aquatic plants	3.75-7.58mg/l	4
	EC50	48h	Crustacea	1.9mg/l	2
	EC50	96h	Algae or other aquatic plants	179.05mg/l	2
	LC50	96h	Fish	1.85-3.06mg/l	4
	NOEC(ECx)	672h	Fish	>=0.004mg/L	2
silica amorphous, fumed, crystalline free	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
Legend:	<i>Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. 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</i>				

Propylene glycol is known to exert high levels of biochemical oxygen demand (BOD) during degradation in surface waters. This process can adversely affect aquatic life by consuming oxygen needed by aquatic organisms for survival. Large quantities of dissolved oxygen (DO) in the water column are consumed when microbial populations decompose propylene glycol.

For Amorphous Silica: Amorphous silica is chemically and biologically inert. It is not biodegradable.

Aquatic Fate: Due to its insolubility in water there is a separation at every filtration and sedimentation process.

For Silica:

Environmental Fate: Most documentation on the fate of silica in the environment concerns dissolved silica, in the aquatic environment, regardless of origin, (man-made or natural), or structure, (crystalline or amorphous).

Terrestrial Fate: Silicon makes up 25.7% of the Earth's crust, by weight, and is the second most abundant element, being exceeded only by oxygen. Silicon is not found free in nature, but occurs chiefly as the oxide and as silicates.

DO NOT discharge into sewer or waterways.

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
cumyl hydroperoxide	LOW (Half-life = 56 days)	LOW (Half-life = 5.42 days)
cumene	HIGH	HIGH
propylene glycol	LOW	LOW
methyl methacrylate	LOW	LOW
N,N-dimethyl-o-toluidine	HIGH	HIGH
N,N-diethyl-p-toluidine	HIGH	HIGH
methanol	LOW	LOW
titanium dioxide (brookite)	HIGH	HIGH

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
cumyl hydroperoxide	LOW (BCF = 35.5)
cumene	LOW (BCF = 35.5)
propylene glycol	LOW (BCF = 1)
methyl methacrylate	LOW (BCF = 6.6)
N,N-dimethyl-o-toluidine	LOW (LogKOW = 2.85)
N,N-diethyl-p-toluidine	LOW (LogKOW = 3.7001)

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Ingredient	Bioaccumulation
methanol	LOW (BCF = 10)
titanium dioxide (brookite)	LOW (BCF = 10)

12.4. Mobility in soil

Ingredient	Mobility
cumyl hydroperoxide	LOW (KOC = 2346)
cumene	LOW (KOC = 817.2)
propylene glycol	HIGH (KOC = 1)
methyl methacrylate	LOW (KOC = 10.14)
N,N-dimethyl-o-toluidine	LOW (KOC = 127.4)
N,N-diethyl-p-toluidine	LOW (KOC = 466.1)
methanol	HIGH (KOC = 1)
titanium dioxide (brookite)	LOW (KOC = 23.74)

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

No evidence of endocrine disrupting properties were found in the current literature.

12.7. Other adverse effects

No evidence of ozone depleting properties were found in the current literature.

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"> ▶ Containers may still present a chemical hazard/ danger when empty. ▶ Return to supplier for reuse/ recycling if possible. Otherwise: <ul style="list-style-type: none"> ▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. <ul style="list-style-type: none"> ▶ 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. ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▶ Recycle wherever possible or consult manufacturer for recycling options. ▶ Consult State Land Waste Authority for disposal. ▶ Bury or incinerate residue at an approved site.
Waste treatment options	Not Available
Sewage disposal options	Not Available

SECTION 14 Transport information

HAZCHEM	Not Applicable
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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

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	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
	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
cumyl hydroperoxide	Not Available
cumene	Not Available
propylene glycol	Not Available
methyl methacrylate	Not Available

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Product name	Group
N,N-dimethyl-o-toluidine	Not Available
N,N-diethyl-p-toluidine	Not Available
methanol	Not Available
titanium dioxide (brookite)	Not Available
silica amorphous, fumed, crystalline free	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
cumyl hydroperoxide	Not Available
cumene	Not Available
propylene glycol	Not Available
methyl methacrylate	Not Available
N,N-dimethyl-o-toluidine	Not Available
N,N-diethyl-p-toluidine	Not Available
methanol	Not Available
titanium dioxide (brookite)	Not Available
silica amorphous, fumed, crystalline free	Not Available

SECTION 15 Regulatory information

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

cumyl hydroperoxide is found on the following regulatory lists

Great Britain GB mandatory classification and labelling list (GB MCL)

cumene is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List

Great Britain GB mandatory classification and labelling (GB MCL) technical reports

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

UK Workplace Exposure Limits (WELs).

propylene glycol is found on the following regulatory lists

UK Workplace Exposure Limits (WELs).

methyl methacrylate is found on the following regulatory lists

Great Britain GB mandatory classification and labelling (GB MCL) technical reports

Great Britain GB mandatory classification and labelling list (GB MCL)

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

UK Workplace Exposure Limits (WELs).

N,N-dimethyl-o-toluidine is found on the following regulatory lists

Great Britain GB mandatory classification and labelling list (GB MCL)

N,N-diethyl-p-toluidine is found on the following regulatory lists

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

methanol 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)

UK Workplace Exposure Limits (WELs).

titanium dioxide (brookite) 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

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

UK Workplace Exposure Limits (WELs).

silica amorphous, fumed, crystalline free is found on the following regulatory lists

Great Britain GB Biocidal Active Substances

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

UK Workplace Exposure Limits (WELs).

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.

Continued...

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National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (cumyl hydroperoxide; cumene; propylene glycol; methyl methacrylate; N,N-dimethyl-o-toluidine; N,N-diethyl-p-toluidine; methanol; titanium dioxide (brookite); silica amorphous, fumed, crystalline free)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (silica amorphous, fumed, crystalline free)
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	No (silica amorphous, fumed, crystalline free)
Taiwan - TCSI	Yes
Mexico - INSQ	No (N,N-dimethyl-o-toluidine; N,N-diethyl-p-toluidine)
Vietnam - NCI	Yes
Russia - FBEPH	Yes
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	10/25/2023
Initial Date	11/12/2020

Full text Risk and Hazard codes

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H242	Heating may cause a fire.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H370	Causes damage to organs.
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
3.11	10/24/2023	Hazards identification - Classification, Ecological Information - Environmental, Firefighting measures - Fire Fighter (fire/explosion hazard), Accidental release measures - Spills (major), Accidental release measures - Spills (minor), Handling and storage - Storage (storage requirement), Transport information - Transport, Transport Information

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. Risks may be determined by reference to Exposures Scenarios.

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

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

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Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	Classification Procedure
Skin Corrosion/Irritation Category 2, H315	Minimum classification
Sensitisation (Skin) Category 1, H317	Expert judgement
Serious Eye Damage/Eye Irritation Category 2, H319	Minimum classification
Specific Target Organ Toxicity - Repeated Exposure Category 2, H373	Expert judgement

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