

## M-Coat B

### Vishay Measurements Group GmbH

Version No: 6.0

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

Initial Date: 11/24/2025

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Print Date: 03/23/2026

S.REACH.GB.EN

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

##### 1.1. Product Identifier

Product name	M-Coat B
Chemical Name	Not Applicable
Synonyms	Not Available
Proper shipping name	METHYL ETHYL KETONE
Chemical formula	Not Applicable
Other means of identification	UFI: Mixture

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

Relevant identified uses	Coatings and paints, thinners and paint removers
Uses advised against	No specific uses advised against are identified.

##### 1.3. Details of the manufacturer or importer of the safety data sheet

Manufacturer/Supplier	Vishay Measurements Group GmbH
Address	Tatschenweg 1 Heilbronn 74078 Germany
Telephone	+49 (0) 7131 39099-0
Fax	+49 (0) 7131 39099-229
Website	<a href="http://www.VPGSensors.com">www.VPGSensors.com</a>
Email	mm.de@vpgsensors.com

##### 1.4. Emergency telephone number

Association / Organisation	Chemtrec (24/7/365)
Emergency telephone number(s)	(00-1) 703-527-3887 (Worldwide)
Other emergency telephone number(s)	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]	H225 - Flammable Liquids Category 2, H319 - Serious Eye Damage/Eye Irritation Category 2, H336 - Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, H350 - Carcinogenicity Category 1B
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	<b>Danger</b>

##### Hazard statement(s)

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H350	May cause cancer.

##### Supplementary statement(s)

## M-Coat B

<b>EUH066</b>	Repeated exposure may cause skin dryness or cracking.
<b>EUH208</b>	Contains formaldehyde solutions - non flammable. May produce an allergic reaction.

**Precautionary statement(s) Prevention**

<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P271</b>	Use only outdoors or in a well-ventilated area.
<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection.
<b>P240</b>	Ground and bond container and receiving equipment.
<b>P241</b>	Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.
<b>P242</b>	Use non-sparking tools.
<b>P243</b>	Take action to prevent static discharges.
<b>P261</b>	Avoid breathing dust/fume/gas/mist/vapours/spray.
<b>P202</b>	Do not handle until all safety precautions have been read and understood.
<b>P264</b>	Wash all exposed external body areas thoroughly after handling.

**Precautionary statement(s) Response**

<b>P308+P313</b>	IF exposed or concerned: Get medical advice/ attention.
<b>P370+P378</b>	In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.
<b>P305+P351+P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>P312</b>	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
<b>P337+P313</b>	If eye irritation persists: Get medical advice/attention.
<b>P303+P361+P353</b>	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
<b>P304+P340</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

**Precautionary statement(s) Storage**

<b>P403+P235</b>	Store in a well-ventilated place. Keep cool.
<b>P405</b>	Store locked up.

**Precautionary statement(s) Disposal**

<b>P501</b>	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
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Material contains methyl ethyl ketone, formaldehyde solutions - non flammable.

**2.3. Other hazards**

Inhalation and/or skin contact may produce health damage\*.

Cumulative effects may result following exposure\*.

May produce skin discomfort\*.

\*LIMITED EVIDENCE

<b>methyl ethyl ketone</b>	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)
<b>formaldehyde solutions - non flammable</b>	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)

This substance/mixture does not meet the criteria for classification as Persistent, Bioaccumulative, and Toxic (PBT) in accordance with Annex XIII, Commission Delegated Regulation (EU) 2017/2100, and Commission Regulation (EU) 2018/605.

This substance/mixture does not meet the criteria for classification as very Persistent and very Bioaccumulative (vPvB) in accordance with Annex XIII, Commission Delegated Regulation (EU) 2017/2100, and Commission Regulation (EU) 2018/605.

This substance/mixture does not meet the criteria for classification as Persistent, Mobile and Toxic (PMT) in accordance with Commission Delegated Regulation (EU) 2023/707.

This substance/mixture does not meet the criteria for classification as very Persistent and very Mobile (vPvM) in accordance with Commission Delegated Regulation (EU) 2023/707.

The substance/mixture does not contain components considered to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605, nor is it included in the list established under REACH Article 59(1), at concentrations equal to or greater than 0.1% (w/w).

No further product hazard information.

**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	Nanofom Particle Characteristics
1. 78-93-3 2. 201-159-0 3. 606-002-00-3 4. Not Available	<=74	<u>methyl ethyl ketone</u> *	Flammable Liquids Category 2, Serious Eye Damage/Eye Irritation Category 2, Specific Target Organ Toxicity - Single	SCL: Not Available Acute M factor: Not Applicable	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
			Exposure (Narcotic Effects) Category 3; H225, H319, H336 [2]	Chronic M factor: Not Applicable	
1. 50-00-0 2.200-001-8 3.605-001-00-5 4.Not Available	<=0.13	<u>formaldehyde solutions - non flammable</u>	Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Skin Corrosion/Irritation Category 1B, Sensitisation (Skin) Category 1, Acute Toxicity (Inhalation) Category 3, Germ Cell Mutagenicity Category 2, Carcinogenicity Category 1B; H301, H311, H314, H317, H331, H341, H350 [2]	* Skin Corr. 1B; H314: C ≥25 %   Skin Irrit. 2; H315: 5 % ≤ C < 25 %   Eye Irrit. 2; H319: 5 % ≤ C <25 %   STOT SE 3; H335: C ≥ 5 %   SkinSens.; H317: C ≥ 0,2 % Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
<b>Legend:</b>	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

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ 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.</li> <li>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor, without delay.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ Immediately give a glass of water.</li> <li>▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> <li>▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.</li> </ul>

## 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

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

for simple ketones:

## BASIC TREATMENT

- ▶ Establish a patent airway with suction where necessary.
- ▶ Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- ▶ Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- ▶ Monitor and treat, where necessary, for pulmonary oedema .
- ▶ Monitor and treat, where necessary, for shock.
- ▶ **DO NOT use emetics.** Where ingestion is suspected rinse mouth and give up to 200 ml water (5mL/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- ▶ Give activated charcoal.

## ADVANCED TREATMENT

- ▶ Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- ▶ Consider intubation at first sign of upper airway obstruction resulting from oedema.
- ▶ Positive-pressure ventilation using a bag-valve mask might be of use.
- ▶ Monitor and treat, where necessary, for arrhythmias.
- ▶ Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- ▶ Drug therapy should be considered for pulmonary oedema.
- ▶ Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- ▶ Treat seizures with diazepam.
- ▶ Proparacaine hydrochloride should be used to assist eye irrigation.

## EMERGENCY DEPARTMENT

- ▶ Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- ▶ Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- ▶ Consult a toxicologist as necessary.

BRONSTEIN, A.C. and CURRRANCE, P.L.

EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

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## SECTION 5 Firefighting measures

## 5.1. Extinguishing media

- ▶ Alcohol stable foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.
- ▶ Water spray or fog - Large fires only.

## 5.2. Special hazards arising from the substrate or mixture

<b>Fire Incompatibility</b>	▶ 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

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ May be violently or explosively reactive.</li> <li>▶ Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Consider evacuation (or protect in place).</li> <li>▶ Fight fire from a safe distance, with adequate cover.</li> <li>▶ If safe, switch off electrical equipment until vapour fire hazard removed.</li> <li>▶ Use water delivered as a fine spray to control the fire and cool adjacent area.</li> <li>▶ Avoid spraying water onto liquid pools.</li> <li>▶ <b>Do not approach containers suspected to be hot.</b></li> <li>▶ Cool fire exposed containers with water spray from a protected location.</li> <li>▶ If safe to do so, remove containers from path of fire.</li> </ul>
<b>Fire/Explosion Hazard</b>	<ul style="list-style-type: none"> <li>▶ Liquid and vapour are highly flammable.</li> <li>▶ Severe fire hazard when exposed to heat, flame and/or oxidisers.</li> <li>▶ Vapour may travel a considerable distance to source of ignition.</li> <li>▶ Heating may cause expansion or decomposition leading to violent rupture of containers.</li> <li>▶ On combustion, may emit toxic fumes of carbon monoxide (CO).</li> </ul> <p>Combustion products include:</p> <ul style="list-style-type: none"> <li>▶ carbon dioxide (CO<sub>2</sub>)</li> <li>▶ other pyrolysis products typical of burning organic material.</li> </ul> <p><b>Contains low boiling substance:</b> Closed containers may rupture due to pressure buildup under fire conditions.</p>

## 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

<b>Minor Spills</b>	<ul style="list-style-type: none"> <li>▶ Remove all ignition sources.</li> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Control personal contact with the substance, by using protective equipment.</li> <li>▶ Contain and absorb small quantities with vermiculite or other absorbent material.</li> <li>▶ Wipe up.</li> <li>▶ Collect residues in a flammable waste container.</li> </ul>
<b>Major Spills</b>	<ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ May be violently or explosively reactive.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Consider evacuation (or protect in place).</li> <li>▶ No smoking, naked lights or ignition sources.</li> <li>▶ Increase ventilation.</li> <li>▶ Stop leak if safe to do so.</li> <li>▶ Water spray or fog may be used to disperse /absorb vapour.</li> <li>▶ Contain spill with sand, earth or vermiculite.</li> <li>▶ Use only spark-free shovels and explosion proof equipment.</li> <li>▶ Collect recoverable product into labelled containers for recycling.</li> <li>▶ Absorb remaining product with sand, earth or vermiculite.</li> <li>▶ Collect solid residues and seal in labelled drums for disposal.</li> <li>▶ Wash area and prevent runoff into drains.</li> <li>▶ If contamination of drains or waterways occurs, advise emergency services.</li> </ul>

## 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

<b>Safe handling</b>	<ul style="list-style-type: none"> <li>▶ Ensure operatives are trained to minimise exposures.</li> <li>▶ Obtain special instructions before use.</li> <li>▶ Do not handle until all safety precautions have been read and understood.</li> <li>▶ Ensure adequate ventilation.</li> <li>▶ Do not breathe vapour.</li> <li>▶ In case of inadequate ventilation wear respiratory protection.</li> <li>▶ Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.</li> </ul>
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	<ul style="list-style-type: none"> <li>▶ No smoking.</li> <li>▶ May form explosive mixture with air particularly in enclosed spaces.</li> <li>▶ Take precautionary measures against static discharges.</li> <li>▶ Wear protective gloves/protective clothing/eye protection/face protection.</li> <li>▶ Avoid all contact.</li> <li>▶ Do not eat, drink or smoke when using this product.</li> </ul>
<b>Fire and explosion protection</b>	See section 5

**7.2. Conditions for safe storage, including any incompatibilities**

<b>Storage incompatibility</b>	Storage temperature: Ambient. Incompatible materials: Keep away from: Flammable liquid, Oxidizing agents, Corrosive Substances, Alcohols.
<b>Hazard categories in accordance with Regulation (EC) No 2012/18/EU (Seveso III)</b>	P5a: Flammable Liquids, P5b: Flammable Liquids, P5c: Flammable Liquids
<b>Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of</b>	P5a Lower- / Upper-tier requirements: 10 / 50 P5b Lower- / Upper-tier requirements: 50 / 200 P5c Lower- / Upper-tier requirements: 5 000 / 50 000

**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
methyl ethyl ketone	Dermal 1161 mg/kg bw/day (Systemic, Chronic) Inhalation 600 mg/m <sup>3</sup> (Systemic, Chronic) Inhalation 900 mg/m <sup>3</sup> (Systemic, Acute) Dermal 412 mg/kg bw/day (Systemic, Chronic) * Inhalation 106 mg/m <sup>3</sup> (Systemic, Chronic) * Oral 31 mg/kg bw/day (Systemic, Chronic) * Inhalation 450 mg/m <sup>3</sup> (Systemic, Acute) *	Not Available
formaldehyde solutions - non flammable	Dermal 240 mg/kg bw/day (Systemic, Chronic) Inhalation 9 mg/m <sup>3</sup> (Systemic, Chronic) Dermal 0.037 mg/cm <sup>2</sup> (Local, Chronic) Inhalation 0.375 mg/m <sup>3</sup> (Local, Chronic) Inhalation 0.75 mg/m <sup>3</sup> (Local, Acute) Dermal 102 mg/kg bw/day (Systemic, Chronic) * Inhalation 3.2 mg/m <sup>3</sup> (Systemic, Chronic) * Oral 4.1 mg/kg bw/day (Systemic, Chronic) * Dermal 0.012 mg/cm <sup>2</sup> (Local, Chronic) * Inhalation 0.1 mg/m <sup>3</sup> (Local, Chronic) *	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).	methyl ethyl ketone	Butan-2-one (methyl ethyl ketone)	200 ppm / 600 mg/m <sup>3</sup>	899 mg/m <sup>3</sup> / 300 ppm	Not Available	Sk, BMGV
UK Workplace Exposure Limits (WELs).	formaldehyde solutions - non flammable	Formaldehyde	2 ppm / 2.5 mg/m <sup>3</sup>	2.5 mg/m <sup>3</sup> / 2 ppm	Not Available	Carc

**8.2. Exposure controls**

<b>8.2.1. Appropriate engineering controls</b>	<p>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:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.</p> <ul style="list-style-type: none"> <li>▶ Employees exposed to confirmed human carcinogens should be authorized to do so by the employer, and work in a regulated area.</li> <li>▶ Work should be undertaken in an isolated system such as a "glove-box" . Employees should wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.</li> <li>▶ Within regulated areas, the carcinogen should be stored in sealed containers, or enclosed in a closed system, including piping systems, with any sample ports or openings closed while the carcinogens are contained within.</li> <li>▶ Open-vessel systems are prohibited.</li> <li>▶ Each operation should be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation.</li> <li>▶ Exhaust air should not be discharged to regulated areas, non-regulated areas or the external environment unless decontaminated. Clean make-up air should be introduced in sufficient volume to maintain correct operation of the local exhaust system.</li> <li>▶ For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood. Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood.</li> <li>▶ Except for outdoor systems, regulated areas should be maintained under negative pressure (with respect to non-regulated areas).</li> <li>▶ Local exhaust ventilation requires make-up air be supplied in equal volumes to replaced air.</li> <li>▶ Laboratory hoods must be designed and maintained so as to draw air inward at an average linear face velocity of 0.76 m/sec with a minimum of 0.64 m/sec. Design and construction of the fume hood requires that insertion of any portion of the employees body, other</li> </ul>
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than hands and arms, be disallowed.

<p><b>8.2.2. Individual protection measures, such as personal protective equipment</b></p>	
<p><b>Eye and face protection</b></p>	<ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].</li> </ul>
<p><b>Skin protection</b></p>	<p>See Hand protection below</p>
<p><b>Hands/feet protection</b></p>	<ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>▶ 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.</li> <li>▶ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.</li> </ul> <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> <p>Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.</p> <p>Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:</p> <ul style="list-style-type: none"> <li>· frequency and duration of contact,</li> <li>· chemical resistance of glove material,</li> <li>· glove thickness and</li> <li>· dexterity</li> </ul> <p>Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).</p> <ul style="list-style-type: none"> <li>· When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.</li> <li>· When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.</li> <li>· Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.</li> <li>· Contaminated gloves should be replaced.</li> </ul> <p>As defined in ASTM F-739-96 in any application, gloves are rated as:</p> <ul style="list-style-type: none"> <li>· Excellent when breakthrough time &gt; 480 min</li> <li>· Good when breakthrough time &gt; 20 min</li> <li>· Fair when breakthrough time &lt; 20 min</li> <li>· Poor when glove material degrades</li> </ul> <p>For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.</p> <p>It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.</p> <p>Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers technical data should always be taken into account to ensure selection of the most appropriate glove for the task.</p> <p>Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:</p> <ul style="list-style-type: none"> <li>· Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.</li> <li>· Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential</li> </ul> <p>Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.</p>
<p><b>Body protection</b></p>	<p>See Other protection below</p>
<p><b>Other protection</b></p>	<ul style="list-style-type: none"> <li>▶ Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area. [AS/NZS ISO 6529:2006 or national equivalent]</li> <li>▶ Employees engaged in handling operations involving carcinogens should be provided with, and required to wear and use half-face filter-type respirators with filters for dusts, mists and fumes, or air purifying canisters or cartridges. A respirator affording higher levels of protection may be substituted. [AS/NZS 1715 or national equivalent]</li> <li>▶ Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely.</li> <li>▶ Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels. For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood.</li> <li>▶ Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood. <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ PVC Apron.</li> <li>▶ PVC protective suit may be required if exposure severe.</li> <li>▶ Eyewash unit.</li> <li>▶ Ensure there is ready access to a safety shower.</li> <li>▶ Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.</li> </ul> </li> <li>▶ For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets).</li> <li>▶ Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot an shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds. Electrical resistance must range between 0 to 500,000 ohms. Conductive shoes should be stored in lockers close to the room in which they are worn. Personnel who have been issued conductive footwear should not wear them from their place of work to their homes and return.</li> </ul>

## M-Coat B

## 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:

M-Coat B

Material	CPI
BUTYL	A
PE/EVAL/PE	A
TEFLON	A
BUTYL/NEOPRENE	C
HYPALON	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE	C
NEOPRENE/NATURAL	C
NITRILE	C
NITRILE+PVC	C
PE	C
PVA	C
PVC	C
SARANEX-23	C
VITON	C
VITON/NEOPRENE	C

\* 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. -

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

## Respiratory protection

Type AB-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	AB-AUS P2	-	AB-PAPR-AUS / Class 1 P2
up to 50 x ES	-	AB-AUS / Class 1 P2	-
up to 100 x ES	-	AB-2 P2	AB-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(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- ▶ 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	Viscous, tan-colored liquid		
Physical state	Liquid	Relative density (Water = 1)	0.81
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	404
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	-86	Viscosity (cSt)	2.516
Initial boiling point and boiling range (°C)	82.3	Molecular weight (g/mol)	Not Available
Flash point (°C)	-9	Taste	Not Available
Evaporation rate	1 BuAC = 1	Explosive properties	Not Available
Flammability	HIGHLY FLAMMABLE.	Oxidising properties	Not Available
Upper Explosive Limit (%)	10.0	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	2.0	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	12.6	Gas group	Not Available
Solubility in water	Partly miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	>1	VOC g/L	675
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

## M-Coat B

Particle Size	Not Available
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## 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"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul>
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

a) Acute Toxicity	Based on available data, the classification criteria are not met.
b) Skin Irritation/Corrosion	Based on available data, the classification criteria are not met.
c) Serious Eye Damage/Irritation	There is sufficient evidence to classify this material as eye damaging or irritating
d) Respiratory or Skin sensitisation	Based on available data, the classification criteria are not met.
e) Mutagenicity	Based on available data, the classification criteria are not met.
f) Carcinogenicity	There is sufficient evidence to classify this material as carcinogenic
g) Reproductivity	Based on available data, the classification criteria are not met.
h) STOT - Single Exposure	There is sufficient evidence to classify this material as toxic to specific organs through single exposure
i) STOT - Repeated Exposure	Based on available data, the classification criteria are not met.
j) Aspiration Hazard	Based on available data, the classification criteria are not met.
Inhaled	<p>Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.</p> <p>Acute exposure of humans to high concentrations of methyl ethyl ketone produces irritation to the eyes, nose and throat. Acute exposure by inhalation also causes nervous system depression, headache, and nausea. High vapour levels are easily detected due to odour, however odour fatigue may occur, with loss of warning of exposure.</p> <p>Ketone vapours irritate the nose, throat and mucous membrane. High concentrations depress the central nervous system, causing headache, vertigo, poor concentration, sleep and failure of the heart and breathing.</p> <p>The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation.</p>
Ingestion	<p>The material is not thought to produce adverse health effects following ingestion (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum.</p> <p>Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733)</p>
Skin Contact	<p>The material may accentuate any pre-existing dermatitis condition</p> <p>Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.</p> <p>In humans exposed to methyl ethyl ketone, skin inflammation has been reported. Animal testing has shown methyl ethyl ketone to have high acute toxicity from skin exposure.</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> <p>There is some evidence to suggest that the material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.</p>
Eye	<p>This material causes serious eye irritation.</p> <p>The vapour when concentrated has pronounced eye irritation effects and this gives some warning of high vapour concentrations. If eye irritation occurs seek to reduce exposure with available control measures, or evacuate area.</p>
Chronic	<p>Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems.</p> <p>Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems.</p> <p>Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>There is sufficient evidence to suggest that this material directly causes cancer in humans.</p> <p>Toxic: 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>Ample evidence exists from experimentation that reduced human fertility is directly caused by exposure to the material.</p> <p>Animal testing shows that methyl ethyl ketone may have slight effects on the nervous system, liver, kidney and respiratory system; there may also be developmental effects and an increase in birth defects. However, there is limited information available on the long-term effects of methyl ethyl ketone in humans, and no information is available on whether it causes developmental or reproductive toxicity or cancer. It is generally considered to have low toxicity, but it is often used in combination with other solvents, and the toxic effects of the mixture may be greater than with either solvent alone. Combinations of n-hexane or methyl n-butyl ketone with methyl ethyl ketone may increase the rate of peripheral neuropathy, a progressive disorder of the nerves of the extremities. Combinations with chloroform also show increase in toxicity. Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.</p>

## M-Coat B

M-Coat B	TOXICITY	IRRITATION
	Not Available	Not Available
methyl ethyl ketone	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 6480 mg/kg <sup>[2]</sup>	Eye (Human): 350ppm
	Inhalation (Mouse) LC50: 32 mg/L4h <sup>[2]</sup>	Eye (Rodent - rabbit): 80mg
	Oral (Rat) LD50: 2054 mg/kg <sup>[1]</sup>	Eye: adverse effect observed (irritating) <sup>[1]</sup>
		Skin (Rodent - rabbit): 14mg/24H - Mild
		Skin (Rodent - rabbit): 402mg/24H - Mild
	Skin (Rodent - rabbit): 500mg/24H - Moderate	
	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>	
formaldehyde solutions - non flammable	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 270 mg/kg <sup>[2]</sup>	Eye (Human): 1ppm/6M - Mild
	Inhalation (Rat) LC50: <463 ppm4h <sup>[1]</sup>	Eye (Human): 4ppm/5M
	Oral (Rat) LD50: 100 mg/kg <sup>[2]</sup>	Eye (Rodent - mouse): 3% - Moderate
		Eye (Rodent - rabbit): 10mg - Severe
		Eye (Rodent - rabbit): 37% - Severe
		Eye (Rodent - rabbit): 750ug - Severe
		Eye (Rodent - rabbit): 750ug/24H - Severe
		Skin (Human - man): 1%/2D
		Skin (Human): 0.01% - Severe
		Skin (Human): 150ug/3D (intermittent) - Mild
		Skin (Human): 2%/48H
		Skin (Rodent - mouse): 7% - Moderate
		Skin (Rodent - rabbit): 0.8% - Severe
		Skin (Rodent - rabbit): 0.80%/72H - Severe
		Skin (Rodent - rabbit): 2mg/24H - Severe
	Skin (Rodent - rabbit): 50mg/24H - Moderate	
	Skin (Rodent - rabbit): 540mg - Mild	
	Skin (Rodent - rat): 7% - Moderate	
	Skin: adverse effect observed (corrosive) <sup>[1]</sup>	

**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

<b>METHYL ETHYL KETONE</b>	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.
<b>FORMALDEHYDE SOLUTIONS - NON FLAMMABLE</b>	No significant acute toxicological data identified in literature search. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function. The material may cause severe 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. Repeated exposures may produce severe ulceration.
<b>M-Coat B &amp; METHYL ETHYL KETONE &amp; FORMALDEHYDE SOLUTIONS - NON FLAMMABLE</b>	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. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.
<b>M-Coat B &amp; FORMALDEHYDE SOLUTIONS - NON FLAMMABLE</b>	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. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.
<b>M-Coat B &amp; METHYL ETHYL KETONE</b>	Methyl ethyl ketone is considered to have a low order of toxicity; however, methyl ethyl ketone is often used in combination with other solvents and the mixture may have greater toxicity than either solvent alone. Combinations of n-hexane with methyl ethyl ketone, and also methyl n-butyl ketone with methyl ethyl ketone may result in an increased in peripheral neuropathy, a progressive disorder of the nerves of the extremities. Combinations with chloroform also show an increase in toxicity.

Acute Toxicity	✘	Carcinogenicity	✔
Skin Irritation/Corrosion	✘	Reproductivity	✘
Serious Eye Damage/Irritation	✔	STOT - Single Exposure	✔

## M-Coat B

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

M-Coat B	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
methyl ethyl ketone	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	1220mg/l	2
	EC50	48h	Crustacea	308mg/l	2
	EC50	96h	Algae or other aquatic plants	>500mg/L	4
	NOEC(ECx)	48h	Crustacea	68mg/l	2
LC50	96h	Fish	>324mg/L	4	
formaldehyde solutions - non flammable	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	1.034-1.984mg/l	4
	EC50	48h	Crustacea	3.26mg/l	4
	EC50	96h	Algae or other aquatic plants	0.375-0.579mg/l	4
	NOEC(ECx)	96h	Algae or other aquatic plants	0.005mg/l	4
LC50	96h	Fish	0.727-9.193mg/L	4	
<b>Legend:</b>	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. US EPA, Ecotox database - Aquatic Toxicity Data 4. ECETOC Aquatic Hazard Assessment Data 5. NITE (Japan) - Bioconcentration Data 6. METI (Japan) - Bioconcentration Data 7. Vendor Data				

For Methyl Ethyl Ketone:

log Kow: 0.26-0.69;

log Koc: 0.69;

Koc: 34;

Half-life (hr) air: 2.3;

Half-life (hr) H2O surface water: 72-288;

Henry's atm m<sup>3</sup>/mol: 1.05E-05;

BOD 5: 1.5-2.24, 46%;

COD: 2.2-2.31, 100%;

ThOD: 2.44;

BCF: 1.

Environmental Fate: Terrestrial Fate - Measured Koc values of 29 and 34 were obtained for methyl ethyl ketone in silt loams. Methyl ethyl ketone is expected to have very high mobility in soil. Volatilization of methyl ethyl ketone from moist and dry soil surfaces is expected. The volatilization half-life of methyl ethyl ketone from silt and sandy loams was measured as 4.9 days. Methyl ethyl ketone is expected to biodegrade under both aerobic and anaerobic conditions.

Aquatic Fate: Methyl ethyl ketone is not expected to adsorb to suspended solids and sediment in water and is expected to volatilize from water surfaces. Estimated half-lives for a model river and model lake are 19 and 197, hours respectively. Bioconcentration is expected to be low in aquatic systems.

Atmospheric Fate: Methyl ethyl ketone will exist solely as a vapour in the ambient atmosphere. Vapour-phase methyl ethyl ketone is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be about 14 days. Methyl ethyl ketone is also expected to undergo photodecomposition in the atmosphere by natural sunlight.

Ecotoxicity: Methyl ethyl ketone is not acutely toxic to fish, specifically, bluegill sunfish, guppy, goldfish, fathead minnow, mosquito fish, Daphnia magna water fleas and brine shrimp.

For Ketones: Ketones, unless they are alpha, beta-unsaturated ketones, can be considered as narcosis or baseline toxicity compounds.

Aquatic Fate: Hydrolysis of ketones in water is thermodynamically favourable only for low molecular weight ketones. Reactions with water are reversible with no permanent change in the structure of the ketone substrate. Ketones are stable to water under ambient environmental conditions. When pH levels are greater than 10, condensation reactions can occur which produce higher molecular weight products. Under ambient conditions of temperature, pH, and low concentration, these condensation reactions are unfavourable. Based on its reactions in air, it seems likely that ketones undergo photolysis in water.

Terrestrial Fate: It is probable that ketones will be biodegraded by micro-organisms in soil and water.

Ecotoxicity: Ketones are unlikely to bioconcentrate or biomagnify.

**DO NOT discharge into sewer or waterways.**

## 12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
methyl ethyl ketone	LOW (Half-life = 14 days)	LOW (Half-life = 26.75 days)
formaldehyde solutions - non flammable	LOW (Half-life = 14 days)	LOW (Half-life = 2.97 days)

## 12.3. Bioaccumulative potential

## M-Coat B

Ingredient	Bioaccumulation
methyl ethyl ketone	LOW (LogKOW = 0.29)
formaldehyde solutions - non flammable	LOW (LogKOW = 0.35)

## 12.4. Mobility in soil

Ingredient	Mobility
methyl ethyl ketone	MEDIUM (Log KOC = 3.827)
formaldehyde solutions - non flammable	HIGH (Log KOC = 1)

## 12.5. Results of PBT and vPvB assessment

	P	B	T	PBT criteria fulfilled?	vP	vB	vPvB criteria fulfilled?
M-Coat B				No			No
methyl ethyl ketone	No data available	No data available	No data available	No	No data available	No data available	No
formaldehyde solutions - non flammable	✗	✗	✓	No	✗	✗	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

<b>Product / Packaging disposal</b>	<ul style="list-style-type: none"> <li>▶ Containers may still present a chemical hazard/ danger when empty.</li> <li>▶ Return to supplier for reuse/ recycling if possible.</li> </ul> <p>Otherwise:</p> <ul style="list-style-type: none"> <li>▶ 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.</li> <li>▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> </ul> <p>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.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> <li>▶ Reduction</li> <li>▶ Reuse</li> <li>▶ Recycling</li> <li>▶ Disposal (if all else fails)</li> </ul> <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.</p> <ul style="list-style-type: none"> <li>▶ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li> <li>▶ It may be necessary to collect all wash water for treatment before disposal.</li> <li>▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>▶ Where in doubt contact the responsible authority.</li> <li>▶ Recycle wherever possible.</li> <li>▶ 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.</li> <li>▶ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material).</li> <li>▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.</li> </ul>
<b>Waste treatment options</b>	Not Available
<b>Sewage disposal options</b>	Not Available

## SECTION 14 Transport information

## Labels Required

	
<b>Marine Pollutant</b>	NO
<b>HAZCHEM</b>	•2YE

## Land transport (ADR-RID)

14.1. UN number or ID number	1193
14.2. UN proper shipping name	METHYL ETHYL KETONE
14.3. Transport hazard class(es)	Class   3

## M-Coat B

	Subsidiary Hazard	Not Applicable
14.4. Packing group	II	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Hazard identification (Kemler)	33
	Classification code	F1
	Hazard Label	3
	Special provisions	Not Applicable
	Limited quantity	1 L
	Transport Category	2
	Tunnel Restriction Code	D/E

## Air transport (ICAO-IATA / DGR)

14.1. UN number	1193	
14.2. UN proper shipping name	Methyl ethyl ketone	
14.3. Transport hazard class(es)	ICAO/IATA Class	3
	ICAO / IATA Subsidiary Hazard	Not Applicable
	ERG Code	3L
14.4. Packing group	II	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Special provisions	Not Applicable
	Cargo Only Packing Instructions	364
	Cargo Only Maximum Qty / Pack	60 L
	Passenger and Cargo Packing Instructions	353
	Passenger and Cargo Maximum Qty / Pack	5 L
	Passenger and Cargo Limited Quantity Packing Instructions	Y341
	Passenger and Cargo Limited Maximum Qty / Pack	1 L

## Sea transport (IMDG-Code / GGVSee)

14.1. UN number	1193	
14.2. UN proper shipping name	METHYL ETHYL KETONE	
14.3. Transport hazard class(es)	IMDG Class	3
	IMDG Subsidiary Hazard	Not Applicable
14.4. Packing group	II	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	EMS Number	F-E, S-D
	Special provisions	Not Applicable
	Limited Quantities	1 L

## Inland waterways transport (ADN)

14.1. UN number	1193	
14.2. UN proper shipping name	ETHYL METHYL KETONE (METHYL ETHYL KETONE)	
14.3. Transport hazard class(es)	3	Not Applicable
14.4. Packing group	II	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Classification code	F1
	Special provisions	Not Applicable
	Limited quantity	1 L
	Equipment required	PP, EX, A
	Fire cones number	1

## 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

## M-Coat B

Product name	Group
methyl ethyl ketone	Not Applicable
formaldehyde solutions - non flammable	Not Applicable

## 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
methyl ethyl ketone	Not Applicable
formaldehyde solutions - non flammable	Not Applicable

## SECTION 15 Regulatory information

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

## methyl ethyl ketone is found on the following regulatory lists

Great Britain GB mandatory classification and labelling list (GB MCL List)  
UK Workplace Exposure Limits (WELs).

## formaldehyde solutions - non flammable is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List  
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 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 1: Carcinogenic to humans  
UK Workplace Exposure Limits (WELs).

## 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	
	P5a, P5b, P5c

## 15.2. Chemical safety assessment

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

## National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (methyl ethyl ketone; formaldehyde solutions - non flammable)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
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	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
UAE - Control List (Banned/Restricted Substances)	No (methyl ethyl ketone; formaldehyde solutions - non flammable)
<b>Legend:</b>	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	03/02/2026
Initial Date	11/24/2025

## Full text Risk and Hazard codes

H301	Toxic if swallowed.
H311	Toxic in contact with skin.

## M-Coat B

<b>H314</b>	Causes severe skin burns and eye damage.
<b>H317</b>	May cause an allergic skin reaction.
<b>H331</b>	Toxic if inhaled.
<b>H341</b>	Suspected of causing genetic defects.

## SDS Version Summary

Version	Date of Update	Sections Updated
6.0	03/01/2026	Toxicological information - Chronic Health, Hazards identification - Classification, Composition / information on ingredients - Ingredients, Exposure controls / personal protection - Personal Protection (hands/feet), Identification of the substance / mixture and of the company / undertaking - Synonyms

## Other information

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. Scale of use, frequency of use and current or available engineering controls must be considered.

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
Flammable Liquids Category 2, H225	On basis of test data
Serious Eye Damage/Eye Irritation Category 2, H319	Calculation method
Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, H336	Calculation method
Carcinogenicity Category 1B, H350	Calculation method
, EUH066	On basis of test data
, EUH208	Calculation method

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