



# SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

## MOY MATERIALS

Chemwatch Hazard Alert Code: 4

Version No: 8.8

Safety Data Sheet (Conforms to Annex II of REACH (1907/2006) - Regulation 2020/878)

Issue Date: 03/05/2024

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S.REACH.IRL.EN

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

#### 1.1. Product Identifier

Product name	SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER
Chemical Name	Not Applicable
Synonyms	MOY
Proper shipping name	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.
Chemical formula	Not Applicable
Other means of identification	UFI:2AAT-D0S3-100V-A81V

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

Chemical Product Category	PC1	Adhesives, sealants
Sectors of Use	SU22	Professional uses
	SU3	Industrial uses
Sector of Use - Sub Category	SU0	Other
	SU19	Building and construction work
Relevant identified uses	Use according to manufacturer's directions.	
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	MOY MATERIALS
Address	Unit K, South City Business Park, Whitestown Way, Tallaght, Dublin 24 D24 PE83 Ireland
Telephone	+ 353 (0) 1 4519077
Fax	n/a
Website	<a href="http://www.moymaterials.com">www.moymaterials.com</a>
Email	info@moymaterials.com

#### 1.4. Emergency telephone number

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE (24/7)
Emergency telephone numbers	+353 1 443 4289
Other emergency telephone numbers	+61 3 9573 3188

Once connected and if the message is not in your preferred language then please dial 01


### SECTION 2 Hazards identification

## SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

### 2.1. Classification of the substance or mixture

<b>Classification according to regulation (EC) No 1272/2008 [CLP] and amendments [1]</b>	H222+H229 - Aerosols Category 1, H317 - Sensitisation (Skin) Category 1, H319 - Serious Eye Damage/Eye Irritation Category 2, H334 - Sensitisation (Respiratory) Category 1, H336 - Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, H351 - Carcinogenicity Category 2
<b>Legend:</b>	1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

### 2.2. Label elements

<b>Hazard pictogram(s)</b>	
<b>Signal word</b>	<b>Danger</b>

### Hazard statement(s)

<b>H222+H229</b>	Extremely flammable aerosol. Pressurized container: may burst if heated.
<b>H317</b>	May cause an allergic skin reaction.
<b>H319</b>	Causes serious eye irritation.
<b>H334</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b>H336</b>	May cause drowsiness or dizziness.
<b>H351</b>	Suspected of causing cancer.

### Supplementary statement(s)

<b>EUH066</b>	Repeated exposure may cause skin dryness or cracking.
<b>EUH204</b>	Contains isocyanates. May produce an allergic reaction.

### Precautionary statement(s) Prevention

<b>P201</b>	Obtain special instructions before use.
<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P211</b>	Do not spray on an open flame or other ignition source.
<b>P251</b>	Do not pierce or burn, even after use.
<b>P261</b>	Avoid breathing gas.

### Precautionary statement(s) Response

<b>P304+P340</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
<b>P308+P313</b>	IF exposed or concerned: Get medical advice/ attention.
<b>P342+P311</b>	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician/first aider.
<b>P302+P352</b>	IF ON SKIN: Wash with plenty of water and soap.
<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.

### Precautionary statement(s) Storage

<b>P405</b>	Store locked up.
<b>P410+P412</b>	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
<b>P403+P233</b>	Store in a well-ventilated place. Keep container tightly closed.

### 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 acetate, 4,4'-diphenylmethane diisocyanate (MDI), p-toluenesulfonyl isocyanate.

### 2.3. Other hazards

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## SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

May produce discomfort of the respiratory system and skin\*.

Limited evidence of a carcinogenic effect\*.

Possible respiratory and skin sensitizer\*.

<b>methyl acetate</b>	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)
<b>4,4'-diphenylmethane diisocyanate (MDI)</b>	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)
<b>dimethyl ether</b>	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	Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	SCL / M-Factor	Nanoform Particle Characteristics
1. 79-20-9 2. 201-185-2 3. 607-021-00-X 4. 01-2119459211-47-0012	20-40	<u>methyl acetate</u>	Flammable Liquids Category 2, Serious Eye Damage/Eye Irritation Category 2, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3; H225, H319, H336 [2]	Not Available Acute M factor: Not Available Chronic M factor: Not Available	Not Available
1. 101-68-8 2. 406-550-1 202-966-0 3. 615-005-00-9 4. 01- 2119457014-47-0000	1-5	<u>4,4'-diphenylmethane diisocyanate (MDI)</u>	Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2, Acute Toxicity (Inhalation) Category 4, Sensitisation (Respiratory) Category 1, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, Carcinogenicity Category 2, Specific Target Organ Toxicity - Repeated Exposure Category 2; H315, H317, H319, H332, H334, H335, H351, H373 [2]	Eye Irrit. 2; H319: C ≥ 5 %   Skin Irrit. 2; H315: C ≥ 5 %   Resp. Sens. 1; H334: C ≥ 0,1 %   STOT SE 3; H335: C ≥ 5 % Acute M factor: Not Available Chronic M factor: Not Available	Not Available
1. 4083-64-1 2. 223-810-8 3. 615-012-00-7 4. 01-2119980050-47-0001	<1	<u>p-toluenesulfonyl isocyanate</u>	Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2, Sensitisation (Respiratory) Category 1, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3; H315, H319, H334, H335 [2]	Eye Irrit.; H319: C ≥ 5 %   STOT SE 3; H335: C ≥ 5 %   Skin Irrit. 2; H315: C ≥ 5 % Acute M factor: Not Available Chronic M factor: Not Available	Not Available
1. 115-10-6 2. 204-065-8 3. 603-019-00-8 4. Not Available	30-50	<u>dimethyl ether</u> *	Flammable Gases Category 1, Gases Under Pressure; H220, H280 [2]	Not Available Acute M factor: Not Available Chronic M factor: Not Available	Not Available

**Legend:**

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

### SECTION 4 First aid measures

#### 4.1. Description of first aid measures

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Immediately hold eyelids apart and flush the eye continuously with 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>▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
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## SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

<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>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</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> <p>Following uptake by inhalation, move person to an area free from risk of further exposure. Oxygen or artificial respiration should be administered as needed. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. A physician should be consulted.</p>
<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

for lower alkyl ethers:

#### 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.
- ▶ A low-stimulus environment must be maintained.
- ▶ Monitor and treat, where necessary, for shock.
- ▶ Anticipate and treat, where necessary, for seizures.
- ▶ **DO NOT use emetics.** Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.

#### ADVANCED TREATMENT

- ▶ Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- ▶ 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 without signs of hypovolaemia may require vasopressors.
- ▶ 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.
- ▶ Ethers may produce anion gap acidosis. Hyperventilation and bicarbonate therapy might be indicated.
- ▶ Haemodialysis might be considered in patients with impaired renal function.
- ▶ Consult a toxicologist as necessary.

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

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

for simple esters:

#### 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.

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## SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

- **DO NOT use emetics.** Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/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.
- 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 CURRANCE, P.L. EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994*

For gas exposures:

### 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.
- Anticipate seizures.

### ADVANCED TREATMENT

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- 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.

*BRONSTEIN, A.C. and CURRANCE, P.L.*

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

For acute and short term repeated exposures to methanol:

- Toxicity results from accumulation of formaldehyde/formic acid.
- Clinical signs are usually limited to CNS, eyes and GI tract Severe metabolic acidosis may produce dyspnea and profound systemic effects which may become intractable. All symptomatic patients should have arterial pH measured. Evaluate airway, breathing and circulation.
- Stabilise obtunded patients by giving naloxone, glucose and thiamine.
- Decontaminate with Ipecac or lavage for patients presenting 2 hours post-ingestion. Charcoal does not absorb well; the usefulness of cathartic is not established.
- Forced diuresis is not effective; haemodialysis is recommended where peak methanol levels exceed 50 mg/dL (this correlates with serum bicarbonate levels below 18 mEq/L).
- Ethanol, maintained at levels between 100 and 150 mg/dL, inhibits formation of toxic metabolites and may be indicated when peak methanol levels exceed 20 mg/dL. An intravenous solution of ethanol in D5W is optimal.
- Folate, as leucovorin, may increase the oxidative removal of formic acid. 4-methylpyrazole may be an effective adjunct in the treatment. 8-Phenytoin may be preferable to diazepam for controlling seizure.

[Ellenhorn Barceloux: Medical Toxicology]

Methanol poisoning can be treated with fomepizole, or if unavailable, ethanol. Both drugs act to reduce the action of alcohol dehydrogenase on methanol by means of competitive inhibition. Ethanol, the active ingredient in alcoholic beverages, acts as a competitive inhibitor by more effectively binding and saturating the alcohol dehydrogenase enzyme in the liver, thus blocking the binding of methanol. Methanol is excreted by the kidneys without being converted into the very toxic metabolites formaldehyde and formic acid. Alcohol dehydrogenase instead enzymatically converts ethanol to acetaldehyde, a much less toxic organic molecule.

Additional treatment may include sodium bicarbonate for metabolic acidosis, and hemodialysis or hemodiafiltration to remove methanol and formate from the blood. Folinic acid or folic acid is also administered to enhance the metabolism of formate.

#### BIOLOGICAL EXPOSURE INDEX - BEI

Determinant	Index	Sampling Time	Comment
1. Methanol in urine	15 mg/l	End of shift	B, NS
2. Formic acid in urine	80 mg/gm creatinine	Before the shift at end of workweek	B, NS

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B: Background levels occur in specimens collected from subjects **NOT** exposed.

NS: Non-specific determinant - observed following exposure to other materials.

For sub-chronic and chronic exposures to isocyanates:

- ▶ This material may be a potent pulmonary sensitiser which causes bronchospasm even in patients without prior airway hyperreactivity.
- ▶ Clinical symptoms of exposure involve mucosal irritation of respiratory and gastrointestinal tracts.
- ▶ Conjunctival irritation, skin inflammation (erythema, pain vesiculation) and gastrointestinal disturbances occur soon after exposure.
- ▶ Pulmonary symptoms include cough, burning, substernal pain and dyspnoea.
- ▶ Some cross-sensitivity occurs between different isocyanates.
- ▶ Noncardiogenic pulmonary oedema and bronchospasm are the most serious consequences of exposure. Markedly symptomatic patients should receive oxygen, ventilatory support and an intravenous line.
- ▶ Treatment for asthma includes inhaled sympathomimetics (epinephrine [adrenalin], terbutaline) and steroids.
- ▶ Activated charcoal (1 g/kg) and a cathartic (sorbitol, magnesium citrate) may be useful for ingestion.
- ▶ Mydriatics, systemic analgesics and topical antibiotics (Sulamyd) may be used for corneal abrasions.
- ▶ There is no effective therapy for sensitised workers.

[Ellenhorn and Barceloux; Medical Toxicology]

**NOTE:** Isocyanates cause airway restriction in naive individuals with the degree of response dependant on the concentration and duration of exposure. They induce smooth muscle contraction which leads to bronchoconstrictive episodes. Acute changes in lung function, such as decreased FEV1, may not represent sensitivity.

[Karol & Jin, Frontiers in Molecular Toxicology, pp 56-61, 1992]

Personnel who work with isocyanates, isocyanate prepolymers or polyisocyanates should have a pre-placement medical examination and periodic examinations thereafter, including a pulmonary function test. Anyone with a medical history of chronic respiratory disease, asthmatic or bronchial attacks, indications of allergic responses, recurrent eczema or sensitisation conditions of the skin should not handle or work with isocyanates. Anyone who develops chronic respiratory distress when working with isocyanates should be removed from exposure and examined by a physician. Further exposure must be avoided if a sensitivity to isocyanates or polyisocyanates has developed.

## 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> </ul>
<b>Fire/Explosion Hazard</b>	<p>carbon dioxide (CO<sub>2</sub>) , isocyanates , and minor amounts of , hydrogen cyanide , nitrogen oxides (NO<sub>x</sub>) , other pyrolysis products typical of burning organic material.</p> <p><b>Contains low boiling substance:</b> Closed containers may rupture due to pressure buildup under fire conditions. BEWARE: Empty solvent, paint, lacquer and flammable liquid drums present a severe explosion hazard if cut by flame torch or welded. Even when thoroughly cleaned or reconditioned the drum seams may retain sufficient solvent to generate an explosive atmosphere in the drum.</p>

## SECTION 6 Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

See section 8

## SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

### 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> </ul>
<b>Major Spills</b>	<p>For isocyanate spills of less than 40 litres (2 m2):</p> <ul style="list-style-type: none"> <li>▶ Evacuate area from everybody not dealing with the emergency, keep them upwind and prevent further access, remove ignition sources and, if inside building, ventilate area as well as possible.</li> <li>▶ Notify supervision and others as necessary.</li> <li>▶ Put on personal protective equipment (suitable respiratory protection, face and eye protection, protective suit, gloves and impermeable boots).</li> <li>▶ Control source of leakage (where applicable).</li> <li>▶ Dike the spill to prevent spreading and to contain additions of decontaminating solution.</li> <li>▶ Avoid contamination with water, alkalies and detergent solutions.</li> <li>▶ Material reacts with water and generates gas, pressurises containers with even drum rupture resulting.</li> <li>▶ <b>DO NOT reseal container if contamination is suspected.</b></li> <li>▶ Open all containers with care.</li> <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> </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>	<p><b>Contains low boiling substance:</b></p> <p>Storage in sealed containers may result in pressure buildup causing violent rupture of containers not rated appropriately.</p> <ul style="list-style-type: none"> <li>▶ Check for bulging containers.</li> <li>▶ Vent periodically</li> <li>▶ Always release caps or seals slowly to ensure slow dissipation of vapours</li> </ul>
<b>Fire and explosion protection</b>	See section 5
<b>Other information</b>	

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

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>▶ Packing as supplied by manufacturer.</li> <li>▶ Plastic containers may only be used if approved for flammable liquid.</li> <li>▶ Check that containers are clearly labelled and free from leaks.</li> <li>▶ For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure.</li> <li>▶ For materials with a viscosity of at least 2680 cSt. (23 deg. C)</li> <li>▶ For manufactured product having a viscosity of at least 250 cSt. (23 deg. C)</li> <li>▶ Manufactured product that requires stirring before use and having a viscosity of at least 20 cSt (25 deg. C): (i) Removable head packaging; (ii) Cans with friction closures and (iii) low pressure tubes and cartridges may be used.</li> </ul>
<b>Storage incompatibility</b>	<p>Dimethyl ether:</p> <ul style="list-style-type: none"> <li>▶ is a peroxidisable gas</li> <li>▶ may be heat and shock sensitive</li> <li>▶ is able to form unstable peroxides on prolonged exposure to air</li> <li>▶ reacts violently with oxidisers, aluminium hydride, lithium aluminium hydride</li> <li>▶ is incompatible with strong acids, metal salts</li> </ul> <p>Methyl acetate:</p> <ul style="list-style-type: none"> <li>▶ reacts violently with oxidisers</li> <li>▶ decomposes on contact with acid or bases forming methanol</li> <li>▶ is incompatible with nitrates</li> <li>▶ attacks some plastics</li> <li>▶ may generate electrostatic charges</li> <li>▶ Esters react with acids to liberate heat along with alcohols and acids.</li> </ul>

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- ▶ Strong oxidising acids may cause a vigorous reaction with esters that is sufficiently exothermic to ignite the reaction products.
- ▶ Heat is also generated by the interaction of esters with caustic solutions.
- ▶ Flammable hydrogen is generated by mixing esters with alkali metals and hydrides.
- ▶ Esters may be incompatible with aliphatic amines and nitrates.

## Ethers

- may react violently with strong oxidising agents and acids.
- can act as bases.- they form salts with strong acids and addition complexes with Lewis acids; the complex between diethyl ether and boron trifluoride is an example.
- are generally stable to water under neutral conditions and ambient temperatures.
- are hydrolysed by heating in the presence of halogen acids, particularly hydrogen iodide
- are relatively inert In other reactions, which typically involve the breaking of the carbon-oxygen bond
  - ▶ The tendency of many ethers to form explosive peroxides is well documented.
  - ▶ Ethers lacking non-methyl hydrogen atoms adjacent to the ether link are thought to be relatively safe.
  - ▶ When solvents have been freed from peroxides (by percolation through a column of activated alumina for example), the absorbed peroxides must promptly be desorbed by treatment with the polar solvents methanol or water, which should be discarded safely.
- Avoid reaction with water, alcohols and detergent solutions. Isocyanates are electrophiles, and as such they are reactive toward a variety of nucleophiles including alcohols, amines, and even water. Upon treatment with an alcohol, an isocyanate forms a urethane linkage. If a di-isocyanate is treated with a compound containing two or more hydroxyl groups, such as a diol or a polyol, polymer chains are formed, which are known as polyurethanes. Reaction between a di-isocyanate and a compound containing two or more amine groups, produces long polymer chains known as polyureas.
  - ▶ A range of exothermic decomposition energies for isocyanates is given as 20-30 kJ/mol.
  - ▶ The relationship between energy of decomposition and processing hazards has been the subject of discussion; it is suggested that values of energy released per unit of mass, rather than on a molar basis (J/g) be used in the assessment.
  - ▶ For example, in "open vessel processes" (with man-hole size openings, in an industrial setting), substances with exothermic decomposition energies below 500 J/g are unlikely to present a danger, whilst those in "closed vessel processes" (opening is a safety valve or bursting disk) present some danger where the decomposition energy exceeds 150 J/g.

BREThERICK: Handbook of Reactive Chemical Hazards, 4th Edition

**Hazard categories in accordance with Regulation (EC) No 2012/18/EU (Seveso III)**

P3b: Flammable Aerosols

**Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of**

P3b Lower- / Upper-tier requirements: 5 000 (net) / 50 000 (net)

## 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 acetate	Dermal 43 mg/kg bw/day (Systemic, Chronic) Inhalation 300 mg/m <sup>3</sup> (Systemic, Chronic) Inhalation 620 mg/m <sup>3</sup> (Local, Chronic) Inhalation 3 777 mg/m <sup>3</sup> (Systemic, Acute) Dermal 21.5 mg/kg bw/day (Systemic, Chronic) * Inhalation 64 mg/m <sup>3</sup> (Systemic, Chronic) * Oral 21.5 mg/kg bw/day (Systemic, Chronic) * Inhalation 133 mg/m <sup>3</sup> (Local, Chronic) * Dermal 203 mg/kg bw/day (Systemic, Acute) * Inhalation 3 777 mg/m <sup>3</sup> (Systemic, Acute) * Oral 203 mg/kg bw/day (Systemic, Acute) *	Not Available
4,4'-diphenylmethane diisocyanate (MDI)	Dermal 106 mg/kg bw/day (Systemic, Chronic) Inhalation 70 mg/m <sup>3</sup> (Systemic, Chronic) Inhalation 0.05 mg/m <sup>3</sup> (Local, Chronic) Inhalation 0.1 mg/m <sup>3</sup> (Local, Acute) Dermal 53 mg/kg bw/day (Systemic, Chronic) * Inhalation 35 mg/m <sup>3</sup> (Systemic, Chronic) * Oral 1.25 mg/kg bw/day (Systemic, Chronic) * Inhalation 0.025 mg/m <sup>3</sup> (Local, Chronic) * Oral 19 mg/kg bw/day (Systemic, Acute) * Inhalation 0.05 mg/m <sup>3</sup> (Local, Acute) *	3.7 µg/L (Water (Fresh)) 37 µg/L (Water - Intermittent release) 0.37 µg/L (Water (Marine)) 11.7 mg/kg sediment dw (Sediment (Fresh Water)) 1.17 mg/kg sediment dw (Sediment (Marine)) 2.33 mg/kg soil dw (Soil)

Continued...



## SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
p-toluenesulfonyl isocyanate	Dermal 0.92 mg/kg bw/day (Systemic, Chronic) Inhalation 3.24 mg/m <sup>3</sup> (Systemic, Chronic) Dermal 0.46 mg/kg bw/day (Systemic, Chronic) * Inhalation 0.8 mg/m <sup>3</sup> (Systemic, Chronic) * Oral 0.46 mg/kg bw/day (Systemic, Chronic) *	0.03 mg/L (Water (Fresh)) 0.3 mg/L (Water - Intermittent release) 0.003 mg/L (Water (Marine)) 0.172 mg/kg sediment dw (Sediment (Fresh Water)) 0.017 mg/kg sediment dw (Sediment (Marine)) 0.017 mg/kg soil dw (Soil) 0.4 mg/L (STP)
dimethyl ether	Inhalation 1 894 mg/m <sup>3</sup> (Systemic, Chronic) Inhalation 471 mg/m <sup>3</sup> (Systemic, Chronic) *	0.155 mg/L (Water (Fresh)) 1.549 mg/L (Water - Intermittent release) 0.016 mg/L (Water (Marine)) 0.681 mg/kg sediment dw (Sediment (Fresh Water)) 0.069 mg/kg sediment dw (Sediment (Marine)) 0.045 mg/kg soil dw (Soil) 160 mg/L (STP)

\* Values for General Population

## Occupational Exposure Limits (OEL)

## INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Ireland Occupational Exposure Limits - Intended Changes	4,4'-diphenylmethane diisocyanate (MDI)	4,4'-Methylene-diphenyl diisocyanate (MDI) (as - NCO)	Not Available	Not Available	Not Available	Under review by EU Commission
Europe ECHA Occupational exposure limits substance evaluations	4,4'-diphenylmethane diisocyanate (MDI)	Not Available	Not Available	Not Available	Not Available	Not Available
Europe ECHA Occupational exposure limits substance evaluations	p-toluenesulfonyl isocyanate	Not Available	Not Available	Not Available	Not Available	Not Available
EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	dimethyl ether	Dimethyl ether	1000 ppm / 1920 mg/m <sup>3</sup>	Not Available	Not Available	Not Available
Ireland Occupational Exposure Limits	dimethyl ether	Dimethyl ether	1000 ppm / 1920 mg/m <sup>3</sup>	Not Available	Not Available	IOELV

## Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
methyl acetate	250 ppm	1,700 ppm	10000* ppm
4,4'-diphenylmethane diisocyanate (MDI)	0.45 mg/m <sup>3</sup>	Not Available	Not Available
4,4'-diphenylmethane diisocyanate (MDI)	29 mg/m <sup>3</sup>	40 mg/m <sup>3</sup>	240 mg/m <sup>3</sup>
dimethyl ether	3,000 ppm	3800* ppm	7200* ppm

Ingredient	Original IDLH	Revised IDLH
methyl acetate	3,100 ppm	Not Available
4,4'-diphenylmethane diisocyanate (MDI)	75 mg/m <sup>3</sup>	Not Available
p-toluenesulfonyl isocyanate	Not Available	Not Available
dimethyl ether	Not Available	Not Available


## Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
methyl acetate	E	≤ 0.1 ppm
<b>Notes:</b>	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.	

Continued...

## SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

### 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.</p> <p>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.</p>
<b>8.2.2. Individual protection measures, such as personal protective equipment</b>	
<b>Eye and face protection</b>	<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.</li> </ul>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<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>For esters:</p> <ul style="list-style-type: none"> <li>▶ Do NOT use natural rubber, butyl rubber, EPDM or polystyrene-containing materials.</li> <li>▶ Isocyanate resistant materials include Teflon, Viton, nitrile rubber and some PVA gloves.</li> <li>▶ Protective gloves and overalls should be worn as specified in the appropriate national standard.</li> <li>▶ Contaminated garments should be removed promptly and should not be re-used until they have been decontaminated.</li> <li>▶ NOTE: Natural rubber, neoprene, PVC can be affected by isocyanates</li> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<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> <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 and 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.</li> </ul>

### Respiratory protection

Type AX 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

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	AX-AUS / Class 1	-
up to 50	1000	-	AX-AUS / Class 1
up to 50	5000	Airline *	-
up to 100	5000	-	AX-2
up to 100	10000	-	AX-3
100+		-	Airline**

\*\* - Continuous-flow or positive pressure demand.

Continued...

## SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

A(All classes) = Organic vapours, B AUS or B1 = Acid gases, 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 deg C)

### 8.2.3. Environmental exposure controls

See section 12

## SECTION 9 Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Coloured		
<b>Physical state</b>	Dissolved Gas	<b>Relative density (Water = 1)</b>	1.08
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Available
<b>pH (as supplied)</b>	Not Available	<b>Decomposition temperature (°C)</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	>20.5 @ 40C
<b>Initial boiling point and boiling range (°C)</b>	57	<b>Molecular weight (g/mol)</b>	Not Available
<b>Flash point (°C)</b>	-13	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Available	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	HIGHLY FLAMMABLE.	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	16	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Available
<b>Lower Explosive Limit (%)</b>	3	<b>Volatile Component (%vol)</b>	Not Available
<b>Vapour pressure (kPa)</b>	Not Available	<b>Gas group</b>	Not Available
<b>Solubility in water</b>	Immiscible	<b>pH as a solution (1%)</b>	Not Available
<b>Vapour density (Air = 1)</b>	Not Available	<b>VOC g/L</b>	746.05
<b>Nanoform Solubility</b>	Not Available	<b>Nanoform Particle Characteristics</b>	Not Available
<b>Particle Size</b>	Not Available		

### 9.2. Other information

Not Available

## SECTION 10 Stability and reactivity

<b>10.1.Reactivity</b>	See section 7.2
<b>10.2. Chemical stability</b>	<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>
<b>10.3. Possibility of hazardous reactions</b>	See section 7.2
<b>10.4. Conditions to avoid</b>	See section 7.2
<b>10.5. Incompatible materials</b>	See section 7.2
<b>10.6. Hazardous decomposition products</b>	See section 5.3

## SECTION 11 Toxicological information

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

Continued...

**SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER**

<p align="center"><b>Inhaled</b></p>	<p>Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce toxic effects.</p> <p>The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.</p> <p>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>The main effects of simple esters are irritation, stupor and insensibility. Headache, drowsiness, dizziness, coma and behavioural changes may occur.</p> <p>Exposure to methyl acetate fumes may lead to shortness of breath and an irregular heartbeat. Inhalation of methyl acetate causes severe headache and sleepiness.</p> <p>Following inhalation, ethers cause lethargy and stupor. Inhaling lower alkyl ethers results in headache, dizziness, weakness, blurred vision, seizures and possible coma.</p> <p>Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.</p> <p>Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas. The vapour may displace and replace air in breathing zone, acting as a simple asphyxiant. This may happen with little warning of overexposure. 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> <p>Inhalation of the vapour is hazardous and may even be fatal</p>
<p align="center"><b>Ingestion</b></p>	<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>Ingestion of alkyl ethers may produce stupor, blurred vision, headache, dizziness and irritation of the nose and throat. Respiratory distress and asphyxia may result.</p> <p>Methanol may produce a burning or painful sensation in the mouth, throat, chest, and stomach. This may be accompanied by nausea, vomiting, headache, dizziness, shortness of breath, weakness, fatigue, leg cramps, restlessness, confusion, drunken behaviour, visual disturbance, drowsiness, coma and death. 60-200 ml of methanol is a fatal dose for most adults with as little as 10 ml producing blindness. In massive overdose, liver, kidney, heart and muscle injury have been described. Even ingestion of small amounts of methanol is enough to seriously damage parts of the central nervous system, leading to permanent brain and/or nerve problems.</p> <p>Swallowing large doses of methyl acetate may result in severe cramping, intoxication and depression of the central nervous system.</p> <p>Not normally a hazard due to physical form of product.</p> <p>Considered an unlikely route of entry in commercial/industrial environments</p> <p>Considered an unlikely route of entry in commercial/industrial environments. The liquid may produce gastrointestinal discomfort and may be harmful if swallowed.</p> <p>Accidental ingestion of the material may be damaging to the health of the individual.</p>
<p align="center"><b>Skin Contact</b></p>	<p>The material may accentuate any pre-existing dermatitis condition</p> <p>Methyl acetate has proven to cause only weak skin irritation in humans and in rabbits (no oedema, erythema with maximum grade 1 reversible within 48 hours).</p> <p>Alkyl ethers may defat and dehydrate the skin producing dermatoses. Absorption may produce headache, dizziness, and central nervous system depression.</p> <p>Material on the skin evaporates rapidly and may cause tingling, chilling and even temporary numbness</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>Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.</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>
<p align="center"><b>Eye</b></p>	<p>Overexposure to methyl acetate vapour may result in a condition known as amylopiia (dimming of vision) due to withering of the optic nerve. Methyl acetate may resemble methanol in this respect. Animal testing showed that methyl acetate causes severe eye irritation, but this is reversible after exposure ends.</p> <p>Eye contact with alkyl ethers (vapour or liquid) may produce irritation, redness and tears.</p> <p>This material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure.</p>
<p align="center"><b>Chronic</b></p>	<p>There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems.</p> <p>Inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.</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>Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.</p> <p>Chronic effects of exposure to methyl acetate may be similar to those of methanol exposure, because methyl acetate can break down in water to form methanol and acetic acid. The main hazard is damage to the optic nerve.</p> <p>Persons with a history of asthma or other respiratory problems or are known to be sensitised, should not be engaged in any work involving the handling of isocyanates.</p>

**SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER**

	<p>The chemistry of reaction of isocyanates, as evidenced by MDI, in biological milieu is such that in the event of a true exposure of small MDI doses to the mouth, reactions will commence at once with biological macromolecules in the buccal region and will continue along the digestive tract prior to reaching the stomach. Reaction products will be a variety of polyureas and macromolecular conjugates with for example mucus, proteins and cell components.</p> <p>This is corroborated by the results from an MDI inhalation study. Following an inhalation exposure of rats to radiolabelled MDI, 79% of the dose was excreted in faeces.</p> <p>Chronic exposure to alkyl ethers may result in loss of appetite, excessive thirst, fatigue, and weight loss.</p> <p>Long-term exposure to methanol vapour, at concentrations exceeding 3000 ppm, may produce cumulative effects characterised by gastrointestinal disturbances (nausea, vomiting), headache, ringing in the ears, insomnia, trembling, unsteady gait, vertigo, conjunctivitis and clouded or double vision. Liver and/or kidney injury may also result.</p> <p>Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.</p>		
<b>SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER</b>	<b>TOXICITY</b>	<b>IRRITATION</b>	
	Not Available	Not Available	
<b>methyl acetate</b>	<b>TOXICITY</b>	<b>IRRITATION</b>	
	dermal (rat) LD50: >2000 mg/kg <sup>[2]</sup>	Eye (rabbit):100 mg/24h-moderate	
	Oral (Rabbit) LD50; 3700 mg/kg <sup>[2]</sup>	Skin (rabbit): 20 mg/24h - mild Skin (rabbit): 500 mg/24h - mild	
<b>4,4'-diphenylmethane diisocyanate (MDI)</b>	<b>TOXICITY</b>	<b>IRRITATION</b>	
	Dermal (rabbit) LD50: >6200 mg/kg <sup>[2]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>	
	Inhalation (Rat) LC50: 0.368 mg/L4h <sup>[1]</sup>	Skin (rabbit): 500 mg /24 hours Dermal Sensitiser *Respiratory Sensitiser (g.pig) *[ * = Bayer CCINFO 2133615]	
<b>p-toluenesulfonyl isocyanate</b>	<b>TOXICITY</b>	<b>IRRITATION</b>	
	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Not Available	
	Inhalation (Rat) LC50: >320 ppm4h <sup>[2]</sup>		
<b>dimethyl ether</b>	<b>TOXICITY</b>	<b>IRRITATION</b>	
	Inhalation (Rat) LC50: >20000 ppm4h <sup>[1]</sup>	Not Available	
<b>Legend:</b>	<p>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</p>		
<b>SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER</b>	<p>Generally, linear and branched-chain alkyl esters are hydrolysed to their component alcohols and carboxylic acids in the intestinal tract, blood and most tissues throughout the body. Following hydrolysis the component alcohols and carboxylic acids are metabolized</p> <p>Oral acute toxicity studies have been reported for 51 of the 67 esters of aliphatic acyclic primary alcohols and aliphatic linear saturated carboxylic acids. The very low oral acute toxicity of this group of esters is demonstrated by oral LD50 values greater than 1850 mg/kg bw</p> <p>Genotoxicity studies have been performed in vitro using the following esters of aliphatic acyclic primary alcohols and aliphatic linear saturated carboxylic acids: methyl acetate, butyl acetate, butyl stearate and the structurally related isoamyl formate and demonstrates that these substances are not genotoxic.</p> <p>The JEFCA Committee concluded that the substances in this group would not present safety concerns at the current levels of intake the esters of aliphatic acyclic primary alcohols and aliphatic linear saturated carboxylic acids are generally used as flavouring substances up to average maximum levels of 200 mg/kg. Higher levels of use (up to 3000 mg/kg) are permitted in food categories such as chewing gum and hard candy. In Europe the upper use levels for these flavouring substances are generally 1 to 30 mg/kg foods and in special food categories like candy and alcoholic beverages up to 300 mg/kg foods</p> <p><b>International Program on Chemical Safety: the Joint FAO/WHO Expert Committee on Food Additives (JECFA)</b> <b>Esters of Aliphatic acyclic primary alcohols with aliphatic linear saturated carboxylic acids.; 1998</b></p>		
	<b>METHYL ACETATE</b>	<p>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.</p>	
	<b>4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI)</b>	<p>Inhalation (human) TCLo: 0.13 ppm/30 mins Eye (rabbit): 0.10 mg moderate</p> <p>The substance is classified by IARC as Group 3: <b>NOT</b> classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.</p>	

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	<p>Aromatic and aliphatic diisocyanates may cause airway toxicity and skin sensitization. Monomers and prepolymers exhibit similar respiratory effect. Of the several members of diisocyanates tested on experimental animals by inhalation and oral exposure, some caused cancer while others produced a harmless outcome. This group of compounds has therefore been classified as cancer-causing.</p>
<b>P-TOLUENESULFONYL ISOCYANATE</b>	<p>Isocyanate vapours are irritating to the airways and can cause their inflammation, with wheezing, gasping, severe distress, even loss of consciousness and fluid in the lungs. Nervous system symptoms that may occur include headache, sleep disturbance, euphoria, inco-ordination, anxiety, depression and paranoia.</p> <p>For p-toluenesulfonyl isocyanate: The acute semi-lethal dose is 2600mg/kg by mouth. Because PTSA is rapidly broken down to PTSA and carbon dioxide, its repeated dose, reproductive, developmental and genetic toxicity are best described by PTSA.</p> <p>For p-toluenesulfonamide (PTSA):</p> <p>Animal testing shows that PTSA at high doses may cause changes in blood count and blood chemistry, with changes in the epithelium of the bladder and accelerated degeneration of the thymus. Sufficient doses may cause developmental effects, early delivery of foetuses or disorders in breast feeding. PTSA does not seem to cause mutations or genetic damage.</p>
<b>SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER &amp; 4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI) &amp; P-TOLUENESULFONYL ISOCYANATE</b>	<p>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.</p> <p>Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Some people may be genetically more prone than others, and exposure to other irritants may aggravate symptoms. Allergy causing activity is due to interactions with proteins.</p> <p>Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure.</p>
<b>SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER &amp; 4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI)</b>	<p>The following information refers to contact allergens as a group and may not be specific to this product.</p> <p>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.</p>
<b>SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER &amp; METHYL ACETATE</b>	<p>For methyl acetate:</p> <p>Acute toxicity: Methyl acetate is a water-soluble substance with high volatility. In animal testing, the substance has narcotic properties at high concentration; this is soon reversible after exposure ends.</p> <p>Methyl acetate is absorbed via the lungs. After absorption, it is broken down to methanol and acetic acid. The main breakdown product is methanol, which is itself metabolized to formic acid. Methanol is highly toxic, so methyl acetate is of concern for acute toxicity.</p>
<b>METHYL ACETATE &amp; 4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI)</b>	<p>The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p>

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

**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

Continued...

## SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
methyl acetate	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	72h	Algae or other aquatic plants	>=120mg/l	1
	EC50	72h	Algae or other aquatic plants	>120mg/l	1
	EC50	48h	Crustacea	1026.7mg/l	1
LC50	96h	Fish	250mg/l	1	
4,4'-diphenylmethane diisocyanate (MDI)	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96h	Fish	95.24-134.37mg/l	Not Available
	EC50	48h	Crustacea	>100mg/l	2
	NOEC(ECx)	504h	Crustacea	>=10mg/l	2
BCF	672h	Fish	61-150	7	
p-toluenesulfonyl isocyanate	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	72h	Algae or other aquatic plants	10mg/l	2
	EC50	72h	Algae or other aquatic plants	25mg/l	2
	EC50	48h	Crustacea	>100mg/l	2
LC50	96h	Fish	>45mg/l	2	
dimethyl ether	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96h	Fish	1783.04mg/l	2
	EC50	48h	Crustacea	>4400mg/L	2
	NOEC(ECx)	48h	Crustacea	>4000mg/l	1
EC50	96h	Algae or other aquatic plants	154.917mg/l	2	
<b>Legend:</b>	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				

for methyl acetate:

#### Environmental fate:

##### Biodegradation

The substance can be classified as "readily biodegradable" on the basis of an available study according to OECD-guideline 301 D. This closed bottle test indicates 74% biodegradation after 14 days, 75% after 19 days and 70% after 28 days. There is no information on possible intermediates before ultimate degradation of methyl acetate. Probably methanol and acetic acid could be intermediates of the biodegradation. The degradation of the possible intermediates is included in the results of the biodegradation test.

Most ethers are very resistant to hydrolysis, and the rate of cleavage of the carbon-oxygen bond by abiotic processes is expected to be insignificant.

Direct photolysis will not be an important removal process since aliphatic ethers do not absorb light at wavelengths >290 nm

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

## 12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
methyl acetate	LOW	LOW
4,4'-diphenylmethane diisocyanate (MDI)	LOW (Half-life = 1 days)	LOW (Half-life = 0.24 days)
p-toluenesulfonyl isocyanate	HIGH	HIGH
dimethyl ether	LOW	LOW

## 12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
methyl acetate	LOW (LogKOW = 0.18)
4,4'-diphenylmethane diisocyanate (MDI)	LOW (BCF = 15)
p-toluenesulfonyl isocyanate	LOW (LogKOW = 2.3424)

Continued...

## SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

Ingredient	Bioaccumulation
dimethyl ether	LOW (LogKOW = 0.1)

### 12.4. Mobility in soil

Ingredient	Mobility
methyl acetate	MEDIUM (Log KOC = 3.324)
4,4'-diphenylmethane diisocyanate (MDI)	LOW (Log KOC = 376200)
p-toluenesulfonyl isocyanate	LOW (Log KOC = 882.1)
dimethyl ether	HIGH (Log KOC = 1.292)

### 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?			
vPvB			
			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>▶ 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

### Land transport (ADR-RID)

<b>14.1. UN number or ID number</b>	3501	
<b>14.2. UN proper shipping name</b>	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.	
<b>14.3. Transport hazard class(es)</b>	Class	2.1
	Subsidiary Hazard	Not Applicable



### SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Hazard identification (Kemler)	23
	Classification code	8F
	Hazard Label	2.1
	Special provisions	274 659
	Limited quantity	0
	Tunnel Restriction Code	B/D

#### Air transport (ICAO-IATA / DGR)

14.1. UN number	3501	
14.2. UN proper shipping name	Chemical under pressure, flammable, n.o.s. *	
14.3. Transport hazard class(es)	ICAO/IATA Class	2.1
	ICAO / IATA Subsidiary Hazard	Not Applicable
	ERG Code	10L
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Special provisions	A1 A187
	Cargo Only Packing Instructions	218
	Cargo Only Maximum Qty / Pack	75 kg
	Passenger and Cargo Packing Instructions	Forbidden
	Passenger and Cargo Maximum Qty / Pack	Forbidden
	Passenger and Cargo Limited Quantity Packing Instructions	Forbidden
	Passenger and Cargo Limited Maximum Qty / Pack	Forbidden

#### Sea transport (IMDG-Code / GGVSee)

14.1. UN number	3501	
14.2. UN proper shipping name	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.	
14.3. Transport hazard class(es)	IMDG Class	2.1
	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	F-D , S-U
	Special provisions	274 362
	Limited Quantities	0

#### Inland waterways transport (ADN)

14.1. UN number	3501	
14.2. UN proper shipping name	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.	
14.3. Transport hazard class(es)	2.1	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
	Classification code	8F

## SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

<b>14.6. Special precautions for user</b>	Special provisions	274; 659
	Limited quantity	0
	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**

Product name	Group
methyl acetate	Not Available
4,4'-diphenylmethane diisocyanate (MDI)	Not Available
p-toluenesulfonyl isocyanate	Not Available
dimethyl ether	Not Available

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

Product name	Ship Type
methyl acetate	Not Available
4,4'-diphenylmethane diisocyanate (MDI)	Not Available
p-toluenesulfonyl isocyanate	Not Available
dimethyl ether	Not Available

**SECTION 15 Regulatory information****15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture****methyl acetate is found on the following regulatory lists**

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Europe EC Inventory

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

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

**4,4'-diphenylmethane diisocyanate (MDI) is found on the following regulatory lists**

EU European Chemicals Agency (ECHA) Community Rolling Action Plan (CoRAP) List of Substances

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Europe EC Inventory

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

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

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

Ireland Occupational Exposure Limits - Intended Changes

**p-toluenesulfonyl isocyanate is found on the following regulatory lists**

Europe EC Inventory

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

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

**dimethyl ether is found on the following regulatory lists**

EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Europe EC Inventory

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

Continued...

## SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI  
Ireland Occupational Exposure Limits

### 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):

<b>Seveso Category</b>	P3b
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### 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 acetate; 4,4'-diphenylmethane diisocyanate (MDI); p-toluenesulfonyl isocyanate; dimethyl ether)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	No (p-toluenesulfonyl isocyanate)
Vietnam - NCI	Yes
Russia - FBEPH	Yes
<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

<b>Revision Date</b>	03/05/2024
<b>Initial Date</b>	25/03/2022

### Full text Risk and Hazard codes

<b>H220</b>	Extremely flammable gas.
<b>H225</b>	Highly flammable liquid and vapour.
<b>H280</b>	Contains gas under pressure; may explode if heated.
<b>H315</b>	Causes skin irritation.
<b>H332</b>	Harmful if inhaled.
<b>H335</b>	May cause respiratory irritation.
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.

### SDS Version Summary

Version	Date of Update	Sections Updated
7.8	03/05/2024	Hazards identification - Classification, Firefighting measures - Fire Fighter (fire/explosion hazard), Composition / information on ingredients - Ingredients

Continued...

## SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

### Other information

As from 24 August 2023 adequate training is required before industrial or professional use.

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. 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

### Definitions and abbreviations

- PC - TWA: Permissible Concentration-Time Weighted Average
- PC - STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit,
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
  
- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	Classification Procedure
Aerosols Category 1, H222+H229	Expert judgement
Sensitisation (Skin) Category 1, H317	Calculation method
Serious Eye Damage/Eye Irritation Category 2, H319	Calculation method
Sensitisation (Respiratory)	Minimum classification

Continued...

## SPRAY-APPLIED PVC MEMBRANE CONTACT ADHESIVE CLEAR CANISTER

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	Classification Procedure
Category 1, H334	
Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, H336	Calculation method
Carcinogenicity Category 2, H351	Calculation method
, EUH066	On basis of test data
, EUH204	Expert judgement

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