



Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by UK REACH Regulation SI 2019/758

## SAFETY DATA SHEET

CRR-BK Ready Ribbon Flux 25LT

FOR REGULATORY AND SDS QUESTIONS (EUROPE)

**CALL THE PRODUCT STEWARDSHIP LINE**

(ENGLISH SPEAKING ONLY)

**+1-908-791-2336 (15:00 – 21:00 CET; MONDAY-FRIDAY)**

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

#### 1.1 Product identifier

**Product name** : CRR-BK Ready Ribbon Flux 25LT  
**Product code** : 262299.0025

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

##### Identified uses

soldering  
Industrial applications.

#### 1.3 Details of the supplier of the safety data sheet

**e-mail address of person responsible for this SDS** : Europeanregulatory@macdermid.com

**Supplier** : Fernox UK Ltd  
2 Genesis Business Park  
Albert Drive  
Sheerwater, Surrey  
Woking GU21 5RW

**Information contact** : Contact info: Tel: +44 (0) 330 100 7750  
e-mail: salesEU@AlphaAssembly.com

#### 1.4 Emergency telephone number

##### National advisory body/Poison Centre

**Telephone number** :

##### Supplier

**Telephone number** : Carechem24: (+44) 1865 407333; (+44) 1235 239 670 (across Europe)  
**Hours of operation** : 24/7

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to UK CLP/GHS

Flam. Liq. 2, H225

Eye Dam. 1, H318

STOT SE 3, H336

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

**Ingredients of unknown toxicity** : 4.7 (oral), 4.7 (dermal), 4.7 (inhalation) percent of the mixture consists of component (s) of unknown acute toxicity

**Ingredients of unknown ecotoxicity** : Contains 4.7% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : H225 - Highly flammable liquid and vapour.  
H318 - Causes serious eye damage.  
H336 - May cause drowsiness or dizziness.

#### Precautionary statements

**Prevention** : P280 - Wear eye or face protection.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Response** : P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

**Storage** : P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

**Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazardous ingredients** : propan-2-ol  
propan-1-ol

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

#### Special packaging requirements

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

**SECTION 3: Composition/information on ingredients****3.2 Mixtures**

: Mixture

Product/ingredient name	Identifiers	%	Classification	Type
propan-2-ol	REACH #: 01-2119457558-25 EC: 200-661-7 CAS: 67-63-0 Index: 603-117-00-0	≥75 - ≤90	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[1] [2]
propan-1-ol	REACH #: 01-2119486761-29 EC: 200-746-9 CAS: 71-23-8 Index: 603-003-00-0	≤10	Flam. Liq. 2, H225 Eye Dam. 1, H318 STOT SE 3, H336	[1] [2]
adipic acid	REACH #: 01-2119457561-38 EC: 204-673-3 CAS: 124-04-9 Index: 607-144-00-9	≤3	Eye Irrit. 2, H319  <b>See Section 16 for the full text of the H statements declared above.</b>	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures****4.1 Description of first aid measures****Eye contact**

- : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

**Inhalation**

- : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact**

- : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**

- : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or

## SECTION 4: First aid measures

waistband.

- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

### 5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

### 5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## SECTION 6: Accidental release measures

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

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

### 6.4 Reference to other sections

- : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

## SECTION 7: Handling and storage

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

**Recommendations** : No specific measures identified.

**Industrial sector specific solutions** : No specific measures identified.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
propan-2-ol	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> STEL: 1250 mg/m <sup>3</sup> 15 minutes. STEL: 500 ppm 15 minutes. TWA: 999 mg/m <sup>3</sup> 8 hours. TWA: 400 ppm 8 hours.
propan-1-ol	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b> STEL: 625 mg/m <sup>3</sup> 15 minutes. STEL: 250 ppm 15 minutes. TWA: 500 mg/m <sup>3</sup> 8 hours. TWA: 200 ppm 8 hours.

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### EU DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
propan-2-ol	DNEL	Long term Oral	26 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	89 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	319 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	500 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	888 mg/kg bw/day	Workers	Systemic
propan-1-ol	DNEL	Long term Oral	61 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	80 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	81 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	136 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	268 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	1036 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Short term Inhalation	1723 mg/m <sup>3</sup>	Workers	Systemic



**SECTION 8: Exposure controls/personal protection**

adipic acid	DNEL	Long term Oral	7.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	7.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	13 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	21 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	74.1 mg/m <sup>3</sup>	Workers	Systemic

**EU PNECs**

Product/ingredient name	Compartment Detail	Value	Method Detail
adipic acid	Fresh water	126 µg/l	Assessment Factors
	Marine water	13 µg/l	Assessment Factors
	Sewage Treatment Plant	59.1 mg/l	Assessment Factors
	Fresh water sediment	484 µg/kg dwt	Equilibrium Partitioning
	Marine water sediment	48 µg/kg dwt	Equilibrium Partitioning
	Soil	23 µg/kg dwt	Equilibrium Partitioning

**8.2 Exposure controls****Appropriate engineering controls**

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Individual protection measures****Hygiene measures**

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

**Skin protection****Hand protection**

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection**

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Other skin protection**

- : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**

- : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**SECTION 8: Exposure controls/personal protection**

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties****Appearance**

**Physical state** : Liquid.  
**Colour** : Dark. Blue. to Black.  
**Odour** : There are no data available on the mixture itself.  
**Odour threshold** : There are no data available on the mixture itself.  
**Melting point/freezing point** : There are no data available on the mixture itself.  
**Initial boiling point and boiling range** : 82°C (179.6°F)  
**Flammability (solid, gas)** : There are no data available on the mixture itself.  
**Upper/lower flammability or explosive limits** : There are no data available on the mixture itself.  
**Flash point** : Closed cup: 12°C (53.6°F)  
**Auto-ignition temperature** :

Ingredient name	°C	°F	Method
propan-1-ol	400	752	DIN 51794

**Decomposition temperature** : There are no data available on the mixture itself.  
**pH** : 3.7 [Conc. (% w/w): 5%]  
**Viscosity** : There are no data available on the mixture itself.  
**Solubility(ies)** :

Media	Result
cold water	Soluble

**Solubility in water** : There are no data available on the mixture itself.  
**Partition coefficient: n-octanol/ water** : Not applicable.  
**Vapour pressure** :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
propan-2-ol	33	4.4				

**Evaporation rate** : There are no data available on the mixture itself.  
**Relative density** : There are no data available on the mixture itself.  
**Density** : 0.8 g/cm<sup>3</sup> [20°C (68°F)]  
**Vapour density** : There are no data available on the mixture itself.  
**Explosive properties** : There are no data available on the mixture itself.  
**Oxidising properties** : There are no data available on the mixture itself.  
**Particle characteristics**  
**Median particle size** : Not applicable.

**9.2 Other information**

**SAPT** : Not relevant/applicable due to nature of the product.



**SECTION 10: Stability and reactivity**

- 10.1 Reactivity** : Not available.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- 10.5 Incompatible materials** : Reactive or incompatible with the following materials:  
oxidising materials
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects**Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
propan-2-ol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
propan-1-ol	LD50 Dermal	Rabbit	5040 mg/kg	-
	LD50 Oral	Rat	2200 mg/kg	-
adipic acid	LD50 Dermal	Rabbit	>7940 mg/kg	-
	LD50 Oral	Rat	5050 mg/kg	-

**Conclusion/Summary** : Not tested

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
propan-2-ol	5000	12800	N/A	N/A	N/A
propan-1-ol	2200	5040	N/A	N/A	N/A
adipic acid	5050	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
propan-2-ol	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Severe irritant	Rabbit	-	100 mg	-
propan-1-ol	Skin - Mild irritant	Rabbit	-	500 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Mild irritant	Human	-	47 hours 100 %	-
	Skin - Mild irritant	Human	-	24 hours 100 %	-
adipic acid	Skin - Mild irritant	Rabbit	-	500 mg	-
	Eyes - Mild irritant	Rabbit	-	10 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Mild irritant	Rabbit	-	0.25 g	-

**Conclusion/Summary**

**SECTION 11: Toxicological information****Skin** : Not tested**Eyes** : Not tested**Respiratory** : Not tested**Sensitisation****Conclusion/Summary****Skin** : Not tested**Respiratory** : Not tested**Mutagenicity****Conclusion/Summary** : Not tested**Carcinogenicity****Conclusion/Summary** : Not tested**Reproductive toxicity****Conclusion/Summary** : Not tested**Teratogenicity****Conclusion/Summary** : Not tested**Specific target organ toxicity (single exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
propan-2-ol	Category 3	-	Narcotic effects
propan-1-ol	Category 3	-	Narcotic effects

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Information on likely routes of exposure** : Not tested**Potential acute health effects****Eye contact** : Causes serious eye damage.**Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.**Skin contact** : No known significant effects or critical hazards.**Ingestion** : Can cause central nervous system (CNS) depression.**Symptoms related to the physical, chemical and toxicological characteristics****Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness**Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness**Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur**Ingestion** : Adverse symptoms may include the following:  
stomach pains

## SECTION 11: Toxicological information

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

**Conclusion/Summary** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

**Other information** : No known significant effects or critical hazards.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
propan-2-ol	Acute EC50 7550 mg/l Fresh water	Daphnia - Water flea - Daphnia magna - Neonate	48 hours
	Acute LC50 1400000 µg/l Marine water	Crustaceans - Common shrimp, sand shrimp - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Harlequinfish, red rasbora - Rasbora heteromorpha	96 hours
propan-1-ol	Acute EC50 4480000 µg/l Fresh water	Algae - Green algae - Selenastrum sp.	96 hours
	Acute LC50 1000000 µg/l Fresh water	Crustaceans - Scud - Gammarus pulex	48 hours
	Acute LC50 2950000 µg/l Fresh water	Daphnia - Water flea - Daphnia pulex	48 hours
	Acute LC50 3800000 µg/l Marine water	Fish - Bleak - Alburnus alburnus	96 hours

**Conclusion/Summary** : Ecological testing has not been conducted on this product.

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
adipic acid	-	83 % - 30 days	-	-

**Conclusion/Summary** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
adipic acid	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
propan-2-ol	0.05	-	low
propan-1-ol	0.2	-	low
adipic acid	0.093	3.162	low

## SECTION 12: Ecological information

### 12.4 Mobility in soil

**Soil/water partition coefficient ( $K_{oc}$ )** : Not available.

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**12.6 Other adverse effects** : No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.




**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	IMDG	IATA
<b>14.1 UN number</b>	UN1219	UN1219	UN1219
<b>14.2 UN proper shipping name</b>	ISOPROPANOL (ISOPROPYL ALCOHOL)	ISOPROPANOL (ISOPROPYL ALCOHOL)	ISOPROPANOL (ISOPROPYL ALCOHOL)
<b>14.3 Transport hazard class(es)</b>	3 	3 	3 
<b>14.4 Packing group</b>	II	II	II
<b>14.5 Environmental hazards</b>	No.	No.	No.

#### Additional information

**SECTION 14: Transport information**

**ADR/RID** : **Hazard identification number** 33  
**Tunnel code** D/E

**IMDG** : **Emergency schedules** F-E; S-D

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not applicable - not transported in bulk

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
**UK (GB) /REACH**

**Annex XIV - List of substances subject to authorisation**

**Annex XIV**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Seveso Directive - Reporting thresholds**

**Danger criteria**

Category	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonne	50000 tonne

**EU regulations**

**Industrial emissions (integrated pollution prevention and control) - Air** : Not listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Not listed

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments are still required.

**SECTION 16: Other information**

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments  
DMEL = Derived Minimal Effect Level  
DNEL = Derived No Effect Level  
EUH statement = GB CLP-specific Hazard statement  
N/A = Not available

**SECTION 16: Other information**

PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 vPvB = Very Persistent and Very Bioaccumulative

**Procedure used to derive the classification**

<b>Classification</b>	<b>Justification</b>
Flam. Liq. 2, H225 Eye Dam. 1, H318 STOT SE 3, H336	On basis of test data Calculation method Calculation method

**Full text of abbreviated H statements**

H225	Highly flammable liquid and vapour.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

**Full text of classifications**

Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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**Notice to reader**

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

MacDermid Alpha SDS CLP Europe