



SAFETY DATA SHEET

ARBOKOL AG2 POROUS SURFACE PRIMER

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

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

1.1. Product identifier

Product name ARBOKOL AG2 POROUS SURFACE PRIMER

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

Identified uses Primer.

Uses advised against Restricted to professional users. This product is not intended to be used by the general public.

1.3. Details of the supplier of the safety data sheet

Supplier Adshead Ratcliffe & Co. Ltd.
Derby Road, Belper
Derbyshire.
DE56 1WJ
T: (+44) 01773 826661
F: (+44) 01773 821215
E: sds.carlisle@ccm-europe.com

1.4. Emergency telephone number

Emergency telephone NPIS (National Poisons Information Service): 0344 892 0111 (for medical professionals only).
For medical advice, members of the public should contact NHS 111 in England: 111; NHS 24 in Scotland: 111; NHS Direct in Wales: 111 or 0845 4647. In Northern Ireland: contact your local GP or pharmacist.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Flam. Liq. 2 - H225

Health hazards Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Carc. 2 - H351 Repr. 2 - H361d STOT SE 3 - H335, H336

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word

Danger

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Hazard statements	H225 Highly flammable liquid and vapour. H332 Harmful if inhaled. H315 Causes skin irritation. H319 Causes serious eye irritation. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H351 Suspected of causing cancer. H361d Suspected of damaging the unborn child. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 Avoid breathing vapours. P280 Wear protective clothing, gloves, eye and face protection. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor. P403+P235 Store in a well-ventilated place. Keep cool.
Supplemental label information	As from 24 August 2023 adequate training is required before industrial or professional use.
Contains	4-Methylpentan-2-one, Ethyl acetate, Toluene, 4-Isocyanatosulphonyltoluene, m-Tolyldiene diisocyanate

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

4-Methylpentan-2-one		25 - < 50%
CAS number: 108-10-1	EC number: 203-550-1	REACH registration number: 01-2119473980-30-XXXX
Classification Flam. Liq. 2 - H225 Acute Tox. 4 - H332 Eye Irrit. 2 - H319 Carc. 2 - H351 STOT SE 3 - H335, H336		
Ethyl acetate		10 - 30%
CAS number: 141-78-6	EC number: 205-500-4	REACH registration number: 01-2119475103-46-XXXX
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336		

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Toluene		3 - 7%
CAS number: 108-88-3	EC number: 203-625-9	REACH registration number: 01-2119473980-30-XXXX
Classification		
Flam. Liq. 2 - H225		
Skin Irrit. 2 - H315		
Repr. 2 - H361d		
STOT SE 3 - H336		
STOT RE 2 - H373		
Asp. Tox. 1 - H304		
Aquatic Chronic 3 - H412		
4-Isocyanatosulphonyltoluene		< 5%
CAS number: 4083-64-1	EC number: 223-810-8	
Classification		
Skin Irrit. 2 - H315		
Eye Irrit. 2 - H319		
Resp. Sens. 1 - H334		
STOT SE 3 - H335		
m-Tolyldiene diisocyanate		< 0.3%
CAS number: 26471-62-5	EC number: 247-722-4	
Classification		
Acute Tox. 1 - H330		
Skin Irrit. 2 - H315		
Eye Irrit. 2 - H319		
Resp. Sens. 1 - H334		
Skin Sens. 1 - H317		
Carc. 2 - H351		
STOT SE 3 - H335		
Aquatic Chronic 3 - H412		

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

Inhalation

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention. Place unconscious person on their side in the recovery position and ensure breathing can take place. In the event of any sensitisation symptoms developing, ensure further exposure is avoided.

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Ingestion	Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation. Get medical attention if symptoms are severe or persist.
Skin contact	Rinse with water.
Eye contact	Rinse with water. Do not rub eye. Remove any contact lenses and open eyelids wide apart. Get medical attention if any discomfort continues.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	May cause sensitisation or allergic reactions in sensitive individuals. May cause respiratory irritation. A single exposure may cause the following adverse effects: Headache. Nausea, vomiting. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Narcotic effect. Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.
Ingestion	May cause irritation. Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.
Skin contact	Redness. Irritating to skin. Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.
Eye contact	Causes serious eye irritation.

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

Notes for the doctor	Treat symptomatically. May cause sensitisation or allergic reactions in sensitive individuals.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up. Flammable liquid and vapour. Vapours may be ignited by a spark, a hot surface or an ember. Vapours may form explosive mixtures with air. Fire-water run-off in sewers may create fire or explosion hazard.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

5.3. Advice for firefighters

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Protective actions during firefighting	Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Evacuate area. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. Promptly remove any clothing that becomes contaminated. Avoid inhalation of vapours and spray/mists. Use suitable respiratory protection if ventilation is inadequate.
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6.2. Environmental precautions

Environmental precautions	Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all ignition sources if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Do not allow material to enter confined spaces, due to the risk of explosion. Absorb small quantities with paper towels and evaporate in a safe place. Once evaporation is complete, place paper in a suitable waste disposal container and seal securely. Large Spillages: Absorb spillage with sand or other inert absorbent. The contaminated absorbent may pose the same hazard as the spilled material. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.
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6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. The product is flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Suspected of causing cancer. Suspected of damaging the unborn child. Pregnant or breastfeeding women should not work with this product if there is any risk of exposure. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.
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Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Keep away from oxidising materials, heat and flames. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

Storage class Flammable liquids

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

4-Methylpentan-2-one

Long-term exposure limit (8-hour TWA): WEL 50 ppm 208 mg/m³

Short-term exposure limit (15-minute): WEL 100 ppm 416 mg/m³

Sk, BMGV

Ethyl acetate

Long-term exposure limit (8-hour TWA): WEL 200 ppm

Short-term exposure limit (15-minute): WEL 400 ppm

Toluene

Long-term exposure limit (8-hour TWA): WEL 50 ppm 191 mg/m³

Short-term exposure limit (15-minute): WEL 100 ppm 384 mg/m³

Sk

4-Isocyanatosulphonyltoluene

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m³

Short-term exposure limit (15-minute): WEL 0.07 mg/m³

as -NCO

Sen

m-Tolyldiene diisocyanate

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m³

Short-term exposure limit (15-minute): WEL 0.07 mg/m³

as -NCO

Sen

WEL = Workplace Exposure Limit.

Sk = Can be absorbed through the skin.

BMGV = Biological monitoring guidance value.

Sen = Capable of causing occupational asthma.

4-Methylpentan-2-one (CAS: 108-10-1)

Biological limit values BMGV: 20 µmol 4-methylpentan-2-one/L in urine. Sampling time: Post shift

DNEL Workers - Inhalation; Long term : 83 mg/m³
 Workers - Inhalation; Short term : 208 mg/m³
 Workers - Inhalation; Long term local effects: 83 mg/m³
 Workers - Inhalation; Short term local effects: 208 mg/m³
 Workers - Dermal; Long term systemic effects: 11.8 mg/kg/day

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PNEC	- Fresh water; 0.6 mg/l
	Fresh water, Intermittent release; 1.5 mg/l
	- marine water; 0.06 mg/l
	- Sediment (Freshwater); 8.27 mg/kg
	- Sediment (Marinewater); 0.83 mg/kg
	- STP; 27.5 mg/l
	- Soil; 1.3 mg/kg

Ethyl acetate (CAS: 141-78-6)

DNEL	Workers - Inhalation; Long term systemic effects: 734 mg/m ³
	Workers - Inhalation; Short term systemic effects: 1468 mg/m ³
	Workers - Inhalation; Long term local effects: 734 mg/m ³
	Workers - Inhalation; Short term local effects: 1468 mg/m ³
	Workers - Dermal; Long term systemic effects: 63 mg/kg/day

PNEC	Fresh water; 0.24 mg/l
	Fresh water, Intermittent release; 1.65 mg/l
	marine water; 0.024 mg/l
	STP; 650 mg/l
	Sediment (Freshwater); 1.15 mg/l
	Sediment (Marinewater); 0.115 mg/kg
	Soil; 0.148 mg/kg

Toluene (CAS: 108-88-3)

DNEL	Workers - Inhalation; Long term systemic effects: 192 mg/m ³
	Workers - Inhalation; Short term systemic effects: 384 mg/m ³
	Workers - Inhalation; Long term local effects: 192 mg/m ³
	Workers - Inhalation; Short term systemic effects: 384 mg/m ³
	Workers - Dermal; Long term systemic effects: 384 mg/kg/day

PNEC	- Fresh water; 0.68 mg/l
	- marine water; 0.68 mg/l
	- Intermittent release; 0.68 mg/l
	- STP; 13.61 mg/l
	- Sediment (Freshwater); 16.39 mg/kg
	- Sediment (Marinewater); 16.39 mg/kg
	- Soil; 2.89 mg/kg

4-Isocyanatosulphonyltoluene (CAS: 4083-64-1)

Biological limit values	Isocyanates BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine. Sampling time: At the end of the period of exposure.
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DNEL	Workers - Inhalation; Long term systemic effects: 3.24 mg/m ³
	Workers - Dermal; Long term systemic effects: 0.92 mg/kg/day

PNEC	Fresh water; 0.03 mg/l
	Fresh water, Intermittent release; 0.3 mg/l
	marine water; 0.003 mg/l
	STP; 0.4 mg/l
	Sediment (Freshwater); 0.172 mg/kg
	Sediment (Marinewater); 0.017 mg/kg
	Soil; 0.017 mg/kg

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m-Tolyidene diisocyanate (CAS: 26471-62-5)

Biological limit values	Isocyanates BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine. Sampling time: At the end of the period of exposure.
DNEL	Workers - Inhalation; Long term systemic effects: 0.035 mg/m ³ Workers - Inhalation; Short term systemic effects: 0.14 mg/m ³
PNEC	Fresh water; 0.013 mg/l Fresh water, Intermittent release; 0.125 mg/l marine water; 0.001 mg/l STP; 1 mg/l Soil; 1 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection

Wear protective gloves. It is recommended that gloves are made of the following material: Viton rubber (fluoro rubber). The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Gas Filter Type AB-P Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

Environmental exposure controls

Keep container tightly sealed when not in use. 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

9.1. Information on basic physical and chemical properties

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Appearance	Clear liquid.
Colour	Straw.
Odour	Solvent.
Odour threshold	No information available.
pH	Not applicable.
Melting point	No information available.
Initial boiling point and range	>35°C
Flash point	<23°C
Evaporation rate	Not available.
Evaporation factor	No information available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	0.95-1.05 @ 25°C
Solubility(ies)	Soluble in the following materials: Hydrocarbons.
Partition coefficient	Not applicable.
Auto-ignition temperature	No information available.
Decomposition Temperature	Not determined.
Viscosity	20 - 80 mPa s @ 25°C
Explosive properties	No specific test data are available.
Oxidising properties	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.

9.2. Other information

Other information Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity See the other subsections of this section for further details.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions The following materials may react strongly with the product: Oxidising agents. Vapours may form explosive mixtures with air.

10.4. Conditions to avoid

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Conditions to avoid Avoid heat, flames and other sources of ignition. Containers can burst violently or explode when heated, due to excessive pressure build-up. Static electricity and formation of sparks must be prevented.

10.5. Incompatible materials

Materials to avoid Oxidising materials. Acids - oxidising. Strong alkalis.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Carbon dioxide (CO₂). Carbon monoxide (CO). Oxides of nitrogen. Isocyanates.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Acute Tox. 4 Harmful if inhaled.

ATE inhalation (vapours mg/l) 19.16

Skin corrosion/irritation

Skin corrosion/irritation Skin Irrit. 2 Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Eye Irrit. 2 Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation Resp. Sens. 1 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitisation

Skin sensitisation May cause sensitisation or allergic reactions in sensitive individuals.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Carc. 2 Suspected of causing cancer.

IARC carcinogenicity

Contains a substance which may be potentially carcinogenic. IARC Group 2B Possibly carcinogenic to humans.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Repr. 2 - H361d Suspected of damaging the unborn child.

Specific target organ toxicity - single exposure

STOT - single exposure STOT SE 3 - H335, H336 May cause respiratory irritation. May cause drowsiness or dizziness.

Target organs Central nervous system

Specific target organ toxicity - repeated exposure

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STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Based on available data the classification criteria are not met.
General information	Avoid contact during pregnancy/while nursing. May cause cancer after repeated exposure. Risk of cancer depends on duration and level of exposure. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	May cause sensitisation or allergic reactions in sensitive individuals. May cause respiratory irritation. A single exposure may cause the following adverse effects: Headache. Nausea, vomiting. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Narcotic effect.
Ingestion	May cause irritation.
Skin contact	Redness. Irritating to skin.
Eye contact	Irritating to eyes.
Acute and chronic health hazards	The product contains small quantities of isocyanate. May cause respiratory allergy.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target organs	Central nervous system
Medical considerations	Chronic respiratory and obstructive airway diseases. Skin disorders and allergies.

Toxicological information on ingredients.

4-Methylpentan-2-one

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,080.0

Species Rat

ATE oral (mg/kg) 2,080.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ => 2000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 11.0

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation. Rabbit

Carcinogenicity

Carcinogenicity Suspected of causing cancer.

Target organ for carcinogenicity Kidneys Liver

Specific target organ toxicity - single exposure

STOT - single exposure May cause drowsiness or dizziness.

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Target organs Central nervous system

Ethyl acetate

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 4,934.0

Species Rabbit

ATE oral (mg/kg) 4,934.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 20,000.0

Species Rabbit

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Specific target organ toxicity - single exposure

STOT - single exposure May cause drowsiness or dizziness.

Target organs Central nervous system

Toluene

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,000.0

Species Rat

Notes (oral LD₅₀) LD₅₀ >5000 mg/kg, Oral, Rat

ATE oral (mg/kg) 5,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,000.0

Species Rabbit

Notes (dermal LD₅₀) LD₅₀ >2000 mg/kg, Dermal, Rabbit

ATE dermal (mg/kg) 5,000.0

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ >20 mg/l, Inhalation, Rat

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Animal data Moderately irritating. Rabbit

Reproductive toxicity

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Reproductive toxicity - development Suspected of damaging the unborn child. Developmental toxicity: - NOAEC: 2261 mg/m³, Inhalation, Rat

Specific target organ toxicity - single exposure

STOT - single exposure May cause drowsiness or dizziness.

Target organs Central nervous system

Specific target organ toxicity - repeated exposure

STOT - repeated exposure LOAEC 2261 mg/m³, Inhalation, Rat May cause damage to organs (Central nervous system).

Target organs Central nervous system

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

4-Isocyanatosulphonyltoluene

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,330.0

Species Rat

ATE oral (mg/kg) 2,330.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >2000 mg/kg, Oral, Rat

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Specific target organ toxicity - single exposure

STOT - single exposure May cause respiratory irritation.

Target organs Respiratory tract

m-Tolyldiene diisocyanate

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ >2000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >2000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Summary Fatal if inhaled.

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Acute toxicity inhalation (LC₅₀ vapours mg/l)	0.1
Species	Rat
ATE inhalation (vapours mg/l)	0.1
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Causes skin irritation.
Animal data	Rabbit
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye irritation. Rabbit
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<u>Skin sensitisation</u>	
Skin sensitisation	May cause an allergic skin reaction. Local Lymph Node Assay (LLNA) - Mouse: Sensitising.
<u>Carcinogenicity</u>	
Carcinogenicity	Suspected of causing cancer.
IARC carcinogenicity	IARC Group 2B Possibly carcinogenic to humans.

SECTION 12: Ecological information

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity Based on available data the classification criteria are not met.

Ecological information on ingredients.

4-Methylpentan-2-one

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: >179 mg/l, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >200 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 7 days: > 146 mg/l, Freshwater plants

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 30-35 mg/l, Daphnia magna

Ethyl acetate

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 230 mg/l, Pimephales promelas (Fat-head Minnow)

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Acute toxicity - aquatic invertebrates	EC ₈₀ , 48 hours: 165 mg/l, Freshwater invertebrates
Acute toxicity - aquatic plants	NOEC, 72 hours: >100 mg/l, Desmodemus subspicatus
<u>Chronic aquatic toxicity</u>	
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 2.4 mg/l, Daphnia magna

Toluene

<u>Acute aquatic toxicity</u>	
Acute toxicity - fish	LC ₅₀ , 96 hours: 5.5 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC ₈₀ , 48 hours: 3.78 mg/l, Freshwater invertebrates
Acute toxicity - aquatic plants	EC ₈₀ , 3 hours: 134 mg/l, Freshwater algae
<u>Chronic aquatic toxicity</u>	
Summary	Harmful to aquatic life with long lasting effects.

4-Isocyanatosulphonyltoluene

<u>Acute aquatic toxicity</u>	
Acute toxicity - fish	LC ₅₀ , 96 hours: >45 mg/l, Oncorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 72 hours: >100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 30 mg/l, Pseudokirchneriella subcapitata

m-Tolyldiene diisocyanate

<u>Acute aquatic toxicity</u>	
Acute toxicity - fish	LC ₅₀ , 96 hours: 133 mg/l, Freshwater fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 12.5 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 96 hours: 3230 mg/l, Algae
<u>Chronic aquatic toxicity</u>	
Summary	Harmful to aquatic life with long lasting effects.
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 1.1 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Ecological information on ingredients.

4-Methylpentan-2-one

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Biodegradation - 83%: 28 days

Ethyl acetate

Biodegradation - Degradation 94%: 28 days

Toluene

Biodegradation The substance is readily biodegradable.

m-Tolyldiene diisocyanate

Stability (hydrolysis) Reacts with water.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not applicable.

Ecological information on ingredients.

4-Methylpentan-2-one

Partition coefficient log Pow: 1.9

Ethyl acetate

Partition coefficient log Pow: 0.73

Toluene

Partition coefficient log Kow: 2.73

4-Isocyanatosulphonyltoluene

Bioaccumulative potential Bioaccumulation is unlikely.

12.4. Mobility in soil

Mobility No data available.

Ecological information on ingredients.

Toluene

Adsorption/desorption coefficient - Koc: 205 @ 20°C

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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General information	The generation of waste should be minimised or avoided wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.
Disposal methods	Do not empty into drains. Waste is classified as hazardous waste. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.
Waste class	14 06 03*

SECTION 14: Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

14.1. UN number

UN No. (ADR/RID)	1866
UN No. (IMDG)	1866
UN No. (ICAO)	1866
UN No. (ADN)	1866

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	RESIN SOLUTION, flammable
Proper shipping name (IMDG)	RESIN SOLUTION, flammable
Proper shipping name (ICAO)	RESIN SOLUTION, flammable
Proper shipping name (ADN)	RESIN SOLUTION, flammable

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels



14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II

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ADN packing group II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

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.

EmS F-E, S-E

ADR transport category 2

Emergency Action Code •3YE

Hazard Identification Number (ADR/RID) 33

Tunnel restriction code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

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

National regulations The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, UK SI 2019/758, UK SI 2019/858 and UK SI 2019/1144. The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020, UK SI 2020/1577.
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, UK SI 2019/720. The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020, UK SI 2020/1567.
Health and Safety at Work etc. Act 1974 (as amended).
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
EH40/2005 Workplace exposure limits.

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Restrictions (Annex XVII Regulation 1907/2006) Entry number: 48 Entry number: 74

Seveso Directive - Control of major accident hazards P5c Lower-tier 5000 tonnes Upper-tier 50000 tonnes.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

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SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	<p>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.</p> <p>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.</p> <p>RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.</p> <p>IATA: International Air Transport Association.</p> <p>ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.</p> <p>IMDG: International Maritime Dangerous Goods.</p> <p>CAS: Chemical Abstracts Service.</p> <p>ATE: Acute Toxicity Estimate.</p> <p>LC₅₀: Lethal Concentration to 50 % of a test population.</p> <p>LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).</p> <p>EC₅₀: 50% of maximal Effective Concentration.</p> <p>PBT: Persistent, Bioaccumulative and Toxic substance.</p> <p>vPvB: Very Persistent and Very Bioaccumulative.</p>
Classification abbreviations and acronyms	<p>Flam. Liq. = Flammable liquid</p> <p>Acute Tox. = Acute toxicity</p> <p>Carc. = Carcinogenicity</p> <p>Eye Irrit. = Eye irritation</p> <p>Resp. Sens. = Respiratory sensitisation</p> <p>Repr. = Reproductive toxicity</p> <p>Skin Irrit. = Skin irritation</p> <p>STOT SE = Specific target organ toxicity-single exposure</p>
Classification procedures according to Regulation (EC) 1272/2008	<p>Acute Tox. 4 - H332: STOT SE 3 - H336: Skin Irrit. 2 - H315: Eye Irrit. 2 - H319: Resp. Sens. 1 - H334: STOT SE 3 - H335: Carc. 2 - H351: Repr. 2 - H361d: : Calculation method. Flam. Liq. 2 - H225: : Expert judgement.</p>
Training advice	<p>Only trained personnel should use this material.</p>
Revision comments	<p>Revised classification.</p>
Revision date	<p>07/01/2022</p>
Revision	<p>4</p>
Supersedes date	<p>15/05/2017</p>
SDS number	<p>10195</p>
SDS status	<p>Approved.</p>
Hazard statements in full	<p>H225 Highly flammable liquid and vapour.</p> <p>H304 May be fatal if swallowed and enters airways.</p> <p>H315 Causes skin irritation.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H319 Causes serious eye irritation.</p> <p>H330 Fatal if inhaled.</p> <p>H332 Harmful if inhaled.</p> <p>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.</p> <p>H335 May cause respiratory irritation.</p> <p>H336 May cause drowsiness or dizziness.</p> <p>H351 Suspected of causing cancer.</p> <p>H361d Suspected of damaging the unborn child.</p> <p>H373 May cause damage to organs through prolonged or repeated exposure.</p> <p>H412 Harmful to aquatic life with long lasting effects.</p>

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This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.