

# SAFETY DATA SHEET

**ARBO**

ARBOKOL® AG2 POROUS SURFACE PRIMER

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

### 1.1 Product identifier

**Product name** : ARBOKOL® AG2 POROUS SURFACE PRIMER  
**Product description** : Primers  
**Other means of identification** : Not available.

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

Identified uses	
Primers	
Uses advised against	Reason
For professional users only.	-

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

Adshead Ratcliffe & Co. Ltd.  
 Derby Road, Belper  
 Derbyshire.  
 DE56 1WJ  
 +44 (0)1773 826661

**e-mail address of person responsible for this SDS** : SDSQueries@carlisleccm.com

### 1.4 Emergency telephone number

#### National advisory body/Poison Centre

**Telephone number** : National Poisons Information Service (NPIS)  
 Tel: 0344 892 0111 (for healthcare professionals only)  
 Website: <http://www.npis.org/>  
 Members of Public in England, Scotland and Wales can contact NHS 111/NHS 24 by dialling 111. In Northern Ireland contact your local GP.

#### Supplier


**Telephone number** : +44 (0)1773 826661  
 (Office hours: 8.30 - 17.00)

## 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  
 Skin Irrit. 2, H315  
 Eye Irrit. 2, H319  
 Resp. Sens. 1, H334  
 Carc. 2, H351  
 Repr. 2, H361d  
 STOT SE 3, H336

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

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

## SECTION 2: Hazards identification

### Hazard pictograms



### Signal word

: Danger

### Hazard statements

: H225 - Highly flammable liquid and vapour.  
 H315 - Causes skin irritation.  
 H319 - Causes serious eye irritation.  
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H336 - May cause drowsiness or dizziness.  
 H351 - Suspected of causing cancer.  
 H361d - Suspected of damaging the unborn child.

### Precautionary statements

#### Prevention

: P201 - Obtain special instructions before use.  
 P280 - Wear protective gloves, protective clothing and eye or face protection.  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P261 - Avoid breathing vapour.

#### Response

: P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor.

#### Storage

: Not applicable.

#### Disposal

: Not applicable.

### Supplemental label elements

: Contains isocyanates. May produce an allergic reaction.

### Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

: Not applicable.

### Special packaging requirements

#### Containers to be fitted with child-resistant fastenings

: Not applicable.

#### Tactile warning of danger

: Not applicable.

### 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

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

Product/ingredient name	Identifiers	%	Classification	Type
4-methylpentan-2-one	REACH #: 01-2119473980-30 EC: 203-550-1 CAS: 108-10-1 Index: 606-004-00-4	≥25 - ≤50	Flam. Liq. 2, H225 Acute Tox. 4, H332 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H336 EUH066	[1] [2]
ethyl acetate	REACH #: 01-2119475103-46 EC: 205-500-4 CAS: 141-78-6 Index: 607-022-00-5	≥10 - ≤25	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	[1] [2]
toluene	UK (GB) REACH #: UK- 01-8199965928-7 REACH #: 01-2119471310-51 EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	<10	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 (central nervous system (CNS)) (inhalation) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	[1] [2]
4-isocyanatosulphonyltoluene	EC: 223-810-8 CAS: 4083-64-1 Index: 615-012-00-7	≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 STOT SE 3, H335 EUH014	[1] [2]
m-tolyldiene diisocyanate	REACH #: 01-2119454791-34 EC: 247-722-4 CAS: 26471-62-5 Index: 615-006-00-4	<0.1	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 <b>See Section 16 for the full text of the H statements declared above.</b>	[1] [2]

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**

: 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. Get medical attention.

## SECTION 4: First aid measures

- Inhalation** : 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. Get medical attention. If necessary, call a poison center or physician. 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : 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. Get medical attention. If necessary, call a poison center or 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 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.

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

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** :  Adverse symptoms may include the following:  
wheezing and breathing difficulties  
asthma  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Skin contact** :  Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** :  Adverse symptoms may include the following:  
nausea or vomiting

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

- Notes to physician** :  Suspected of damaging the unborn child.  
In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- 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  
 nitrogen oxides  
 sulfur oxides

### 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. Avoid breathing 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.

## SECTION 6: Accidental release measures

- 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). Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. 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

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.

### Seveso Directive - Reporting thresholds

#### Danger criteria

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

### 7.3 Specific end use(s)

- Recommendations** : Not available.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

## SECTION 8: Exposure controls/personal protection

Product/ingredient name	Exposure limit values
4-methylpentan-2-one	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b> STEL: 416 mg/m <sup>3</sup> 15 minutes. STEL: 100 ppm 15 minutes. TWA: 208 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours.
ethyl acetate	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> STEL: 400 ppm 15 minutes. TWA: 200 ppm 8 hours.
toluene	STEL: 1468 mg/m <sup>3</sup> 15 minutes. TWA: 734 mg/m <sup>3</sup> 8 hours. <b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b> STEL: 384 mg/m <sup>3</sup> 15 minutes. TWA: 191 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours. STEL: 100 ppm 15 minutes.
4-isocyanatosulphonyltoluene	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). [isocyanates, all, except methyl isocyanate as –NCO] Inhalation sensitiser.</b> STEL: 0.07 mg/m <sup>3</sup> , (as -NCO) 15 minutes. TWA: 0.02 mg/m <sup>3</sup> , (as -NCO) 8 hours.
m-tolyldiene diisocyanate	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). [isocyanates, all, except methyl isocyanate as –NCO] Inhalation sensitiser.</b> STEL: 0.07 mg/m <sup>3</sup> , (as -NCO) 15 minutes. TWA: 0.02 mg/m <sup>3</sup> , (as -NCO) 8 hours.

### Biological exposure indices

Product/ingredient name	Exposure indices
4-methylpentan-2-one	<b>EH40/2005 BMGVs (United Kingdom (UK), 8/2018)</b> BGV: 20 µmol/l, 4-methylpentan-2-one [in urine]. Sampling time: post shift.
4-isocyanatosulphonyltoluene	<b>EH40/2005 BMGVs (United Kingdom (UK), 1/2020) [Isocyanates]</b> BMGV: 1 µmol/mol creatinine, diamine [in urine]. Sampling time: post task.
m-tolyldiene diisocyanate	<b>EH40/2005 BMGVs (United Kingdom (UK), 1/2020) [Isocyanates]</b> BMGV: 1 µmol/mol creatinine, diamine [in urine]. Sampling time: post task.

**Recommended monitoring procedures** : 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.

### DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
4-methylpentan-2-one	DNEL	Long term Dermal	4.2 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	11.8 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	14.7 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	14.7 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	83 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	83 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	155.2 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Inhalation	155.2 mg/m <sup>3</sup>	General population	Systemic

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

ethyl acetate	DNEL	Short term Inhalation	208 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	208 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Oral	4.2 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Oral	4.5 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	37 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	63 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	367 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Inhalation	367 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Short term Inhalation	734 mg/m <sup>3</sup>	General population	Local	
	DNEL	Short term Inhalation	734 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	734 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Inhalation	734 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Inhalation	1468 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	1468 mg/m <sup>3</sup>	Workers	Systemic	
	toluene	DNEL	Long term Oral	8.13 mg/kg bw/day	General population	Systemic
DNEL		Long term Inhalation	56.5 mg/m <sup>3</sup>	General population	Local	
DNEL		Long term Inhalation	56.5 mg/m <sup>3</sup>	General population	Systemic	
DNEL		Long term Inhalation	192 mg/m <sup>3</sup>	Workers	Local	
DNEL		Long term Inhalation	192 mg/m <sup>3</sup>	Workers	Systemic	
DNEL		Long term Dermal	226 mg/kg bw/day	General population	Systemic	
DNEL		Short term Inhalation	226 mg/m <sup>3</sup>	General population	Local	
DNEL		Short term Inhalation	226 mg/m <sup>3</sup>	General population	Systemic	
DNEL		Long term Dermal	384 mg/kg bw/day	Workers	Systemic	
DNEL		Short term Inhalation	384 mg/m <sup>3</sup>	Workers	Local	
DNEL		Short term Inhalation	384 mg/m <sup>3</sup>	Workers	Systemic	
4-isocyanatosulphonyltoluene		DNEL	Long term Oral	0.46 mg/kg bw/day	General population	Systemic
		DNEL	Long term Dermal	0.46 mg/kg bw/day	General population	Systemic
		DNEL	Long term Inhalation	0.8 mg/m <sup>3</sup>	General population	Systemic
		DNEL	Long term Dermal	0.92 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	3.24 mg/m <sup>3</sup>	Workers	Systemic	

**PNECs**



## SECTION 8: Exposure controls/personal protection

Product/ingredient name	Compartment Detail	Value	Method Detail	
4-methylpentan-2-one	Fresh water	0.6 mg/l	-	
	Fresh water	1.5 mg/l	-	
	Marine water	0.06 mg/l	-	
	Sewage Treatment Plant	27.5 mg/l	-	
ethyl acetate	Fresh water sediment	8.27 mg/kg	-	
	Marine water sediment	0.827 mg/kg	-	
	Soil	1.3 mg/kg	-	
	Fresh water	0.24 mg/l	-	
	Fresh water	1.65 mg/l	-	
	Marine water	0.024 mg/l	-	
	Sewage Treatment Plant	650 mg/l	-	
	Fresh water sediment	1.15 mg/kg	-	
	Marine water sediment	0.115 mg/kg	-	
	Soil	0.148 mg/kg	-	
toluene	Secondary Poisoning	200 mg/kg	-	
	Fresh water	0.68 mg/l	-	
	Fresh water	0.68 mg/l	-	
	Marine water	0.68 mg/l	-	
	Sewage Treatment Plant	13.61 mg/l	-	
	Fresh water sediment	16.39 mg/kg	-	
	Marine water sediment	16.39 mg/kg	-	
	Soil	2.89 mg/kg	-	
	4-isocyanatosulphonyltoluene	Fresh water	0.03 mg/l	-
		Fresh water	0.3 mg/l	-
Marine water		0.003 mg/l	-	
Sewage Treatment Plant		0.4 mg/l	-	
Fresh water sediment		0.172 mg/kg	-	
Marine water		0.0172 mg/kg	-	
m-tolyldiene diisocyanate	Soil	0.017 mg/kg	-	
	Fresh water	0.013 mg/l	-	
	Fresh water	0.125 mg/l	-	
	Marine water	0.001 mg/l	-	
	Sewage Treatment Plant	1 mg/l	-	
	Soil	1 mg/kg	-	

### 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.

##### Skin protection

**SECTION 8: Exposure controls/personal 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.
- 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** : Clear. Straw.
- Odour** : Characteristic.
- Odour threshold** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : >35°C (>95°F)
- Flammability (solid, gas)** : Not available.
- Upper/lower flammability or explosive limits** : Lower: 1.1%  
Upper: 7%
- Flash point** : Closed cup: -4°C (24.8°F) [Ethyl acetate]
- Auto-ignition temperature** :

Ingredient name	°C	°F	Method
ethyl acetate	426.67	800	
4-methylpentan-2-one	448	838.4	
toluene	480	896	
m-tolyidene diisocyanate	>595	>1103	EU A.15

- Decomposition temperature** : Not available.
- pH** : Not available.
- Viscosity** : Dynamic: 20 to 80 mPa·s
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : Not applicable.
- Vapour pressure** :

**SECTION 9: Physical and chemical properties**

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
ethyl acetate	81.59163	10.9				
toluene	23.17	3.1				
4-methylpentan-2-one	15.75128	2.1				
m-tolyldiene diisocyanate	0.0105	0.0014	EU A.4			
4-isocyanatosulphonyltoluene	0.00019	0.000025				

<b>Relative density</b>	: Not available.
<b>Density</b>	: 0.95 to 1.05 g/cm <sup>3</sup> [25°C (77°F)]
<b>Vapour density</b>	: Not available.
<b>Explosive properties</b>	: Not available.
<b>Oxidising properties</b>	: Not available.
<b>Particle characteristics</b>	
<b>Median particle size</b>	: Not applicable.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur. Reactive with oxidising agents Vapours may form explosive mixtures with air.
<b>10.4 Conditions to avoid</b>	: 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.
<b>10.5 Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidising materials strong acids strong acids
<b>10.6 Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced. Decomposition products may include the following materials: carbon monoxide carbon dioxide oxides of nitrogen sulfur oxides

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

Product/ingredient name	Result	Species	Dose	Exposure
4-methylpentan-2-one	LD50 Oral	Rat	2080 mg/kg	-
ethyl acetate	LD50 Oral	Rat	5620 mg/kg	-
toluene	LC50 Inhalation Vapour	Rat	49 g/m <sup>3</sup>	4 hours
4-isocyanatosulphonyltoluene	LD50 Oral	Rat	2234 mg/kg	-
m-tolyldiene diisocyanate	LC50 Inhalation Vapour	Rat - Male, Female	0.107 mg/l	4 hours
	LD50 Oral	Rat	4130 mg/kg	-

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

**SECTION 11: Toxicological information****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)
ARBOKOL® AG2 POROUS SURFACE PRIMER	N/A	N/A	N/A	29.9	N/A
4-methylpentan-2-one	2080	N/A	N/A	11	N/A
ethyl acetate	5620	N/A	N/A	N/A	N/A
toluene	N/A	N/A	N/A	49	N/A
4-isocyanatosulphonyltoluene	2234	N/A	N/A	N/A	N/A
m-tolylidene diisocyanate	4130	N/A	N/A	0.107	N/A

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
4-methylpentan-2-one	Eyes - Moderate irritant	Rabbit	-	24 hours 100 uL	-
	Eyes - Severe irritant	Rabbit	-	40 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 mg	-
	Eyes - Mild irritant	Rabbit	-	870 ug	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 mg	-
	Skin - Mild irritant	Pig	-	24 hours 250 uL	-
	Skin - Mild irritant	Rabbit	-	435 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
4-isocyanatosulphonyltoluene	Skin - Moderate irritant	Rabbit	-	500 mg	-
	Eyes - Moderate irritant	Rabbit	-	100 uL	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 uL	-
m-tolylidene diisocyanate	Skin - Severe irritant	Rabbit	-	500 mg	-

**Conclusion/Summary**

- Skin** : Skin Irrit. 2  
**Eyes** : Eye Irrit. 2  
**Respiratory** : Based on available data, the classification criteria are not met.

**Sensitisation****Conclusion/Summary**

- Skin** : Based on available data, the classification criteria are not met.  
**Respiratory** : Resp. Sens. 1

**Mutagenicity****Conclusion/Summary**

- : Based on available data, the classification criteria are not met.

**Carcinogenicity****Conclusion/Summary**

- : Carc. 2

**Reproductive toxicity****Conclusion/Summary**

- : Repr. 2 Suspected of damaging the unborn child.

**Teratogenicity****Conclusion/Summary**

- : Based on available data, the classification criteria are not met.

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

## SECTION 11: Toxicological information

Product/ingredient name	Category	Route of exposure	Target organs
4-methylpentan-2-one	Category 3	-	Narcotic effects
ethyl acetate	Category 3	-	Narcotic effects
toluene	Category 3	-	Narcotic effects
4-isocyanatosulphonyltoluene	Category 3	-	Respiratory tract irritation
m-tolyldiene diisocyanate	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
toluene	Category 2	inhalation	central nervous system (CNS)

### Aspiration hazard

Product/ingredient name	Result
toluene	ASPIRATION HAZARD - Category 1

**Information on likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** :  Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Causes skin irritation.
- 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 or irritation  
watering  
redness
- Inhalation** :  Adverse symptoms may include the following:  
wheezing and breathing difficulties  
asthma  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Skin contact** :  Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** :  Adverse symptoms may include the following:  
nausea or vomiting

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

#### Short term exposure

- Potential immediate effects** : wheezing and breathing difficulties  
nausea or vomiting  
drowsiness/fatigue  
headache  
Irritating to eyes and skin.
- Potential delayed effects** : Not available.

## SECTION 11: Toxicological information

### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**Conclusion/Summary** : Not available.

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

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

**Reproductive toxicity** : Suspected of damaging the unborn child.

**Other information** : Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
4-methylpentan-2-one	Acute LC50 505000 µg/l Fresh water	Fish - Fathead minnow - <i>Pimephales promelas</i>	96 hours
	Chronic NOEC 78 mg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>	21 days
	Chronic NOEC 168 mg/l Fresh water	Fish - Fathead minnow - <i>Pimephales promelas</i> - Embryo	33 days
ethyl acetate	Acute EC50 2500000 µg/l Fresh water	Algae - Green algae - <i>Selenastrum sp.</i>	96 hours
	Acute LC50 750000 µg/l Fresh water	Crustaceans - Scud - <i>Gammarus pulex</i>	48 hours
	Acute LC50 154000 µg/l Fresh water	Daphnia - Water flea - <i>Daphnia cucullata</i>	48 hours
	Acute LC50 212500 µg/l Fresh water	Fish - Indian catfish - <i>Heteropneustes fossilis</i>	96 hours
	Chronic NOEC 2.4 mg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>	21 days
toluene	Chronic NOEC 75.6 mg/l Fresh water	Fish - Fathead minnow - <i>Pimephales promelas</i> - Embryo	32 days
	Acute EC50 >433 ppm Marine water	Algae - Diatom - <i>Skeletonema costatum</i>	96 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Scud - <i>Gammarus pseudolimnaeus</i> - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Coho salmon, silver salmon - <i>Oncorhynchus kisutch</i> - Fry	96 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>	21 days

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

**SECTION 12: Ecological information**

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
ethyl acetate	-	-	Readily
toluene	-	-	Readily

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
4-methylpentan-2-one	1.9	-	Low
ethyl acetate	0.68	30	Low
toluene	2.73	90	Low
m-tolylidene diisocyanate	3.43	-	Low

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : 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** : Yes.

**Waste catalogue**

Waste code	Waste designation
14 06 03*	other solvents and solvent mixtures





**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 spilled material and runoff and contact with soil, waterways, drains and sewers.

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**SECTION 14: Transport information**

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1866	UN1866	UN1866	UN1866
14.2 UN proper shipping name	RESIN SOLUTION	RESIN SOLUTION	RESIN SOLUTION	Resin solution
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	No.	Yes.	No.	No.

**Additional information****ADR/RID**

: **Hazard identification number** 33  
**Limited quantity** 5 L  
**Special provisions** 640D  
**Tunnel code** (D/E)

**ADN**

: The product is only regulated as an environmentally hazardous substance when transported in tank vessels.  
**Special provisions** 640D

**IMDG**

: **Emergency schedules** F-E, \_S-E\_

**IATA**

: **Quantity limitation** Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.  
**Special provisions** A3

**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 available.

**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.

**Ozone depleting substances**

Not listed.

**Prior Informed Consent (PIC)**

Not listed.

**Persistent Organic Pollutants**

Not listed.



ARBOKOL® AG2 POROUS SURFACE PRIMER

**SECTION 15: Regulatory information****Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

Product/ingredient name	%	Designation [Usage]
<input checked="" type="checkbox"/> ARBOKOL® AG2 POROUS SURFACE PRIMER	≥90	3
toluene	<10	48
m-tolylidene diisocyanate	<0.1	74

**Labelling** :  Not applicable.

**Seveso Directive**

This product is controlled under the Seveso Directive.

**Danger criteria**

Category
P5c

**EU regulations**

**Industrial emissions (integrated pollution prevention and control) - Air** : Listed

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

**International regulations****Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**Inventory list**

**Australia** : Not determined.  
**Canada** : Not determined.  
**China** : Not determined.  
**Eurasian Economic Union** : **Russian Federation inventory**: Not determined.  
**Japan** : **Japan inventory (CSCL)**: Not determined.  
**Japan inventory (ISHL)**: Not determined.  
**New Zealand** : Not determined.  
**Philippines** : Not determined.  
**Republic of Korea** : Not determined.  
**Taiwan** : Not determined.  
**Thailand** : Not determined.  
**Turkey** : Not determined.  
**United States** : Not determined.  
**Viet Nam** : Not determined.

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## SECTION 15: Regulatory information

**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
- 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

Classification	Justification
✔ Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Carc. 2, H351 Repr. 2, H361d STOT SE 3, H336	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

### Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
EUH014	Reacts violently with water.
EUH066	Repeated exposure may cause skin dryness or cracking.

### Full text of classifications

Acute Tox. 1	ACUTE TOXICITY - Category 1
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Carc. 2	CARCINOGENICITY - Category 2
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Resp. Sens. 1	RESPIRATORY SENSITISATION - Category 1
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

**Date of printing** : 19 March 2024

ARBOKOL® AG2 POROUS SURFACE PRIMER

## SECTION 16: Other information

**Date of issue/ Date of revision** : 19 March 2024

**Date of previous issue** : 22 September 2023

**Version** : 2

### 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.