

SAFETY DATA SHEET

ARBO

AFS PRIMER

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

1.1 Product identifier

Product name : AFS PRIMER

Product description : Primer for use on porous substrates prior to the application of ARBO Membrane Adhesive and ARBO SAS.

Other means of identification : Not available.

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

Identified uses	
Primer for use on porous substrates prior to the application of ARBO Membrane Adhesive and ARBO SAS.	
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
Repr. 2, H361d
STOT SE 3, H336
STOT RE 2, H373
Aquatic Chronic 3, H412

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.

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SECTION 2: Hazards identification

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements :

- H225 - Highly flammable liquid and vapour.
- H315 - Causes skin irritation.
- H319 - Causes serious eye irritation.
- H336 - May cause drowsiness or dizziness.
- H361d - Suspected of damaging the unborn child.
- H373 - May cause damage to organs (central nervous system) through prolonged or repeated exposure.
- H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention :

- P201 - Obtain special instructions before use.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P260 - Do not breathe vapour or spray.

Response : P308 + P313 - IF exposed or concerned: Get medical advice/attention.

Storage : P403 + P235 - Store in a well-ventilated place. Keep cool.

Disposal : Not applicable.

Supplemental label elements : Contains methyl methacrylate and n-butyl methacrylate. 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 : Methanol may be released under the effect of humidity, water and protic agents.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
toluene	REACH #: 01-2119471310-51 EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	≥50 - ≤75	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 (central nervous system (CNS)) (inhalation)	[1] [2]

AFS PRIMER

SECTION 3: Composition/information on ingredients

butan-1-ol	REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6	<3	Asp. Tox. 1, H304 Aquatic Chronic 3, H412 Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
methyl methacrylate	EC: 201-297-1 CAS: 80-62-6 Index: 607-035-00-6	<1	STOT SE 3, H336 Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335	[1] [2]
n-butyl methacrylate	EC: 202-615-1 CAS: 97-88-1 Index: 607-033-00-5	<1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 See Section 16 for the full text of the H statements declared above.	[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** : 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.
- 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.
- 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.

SECTION 4: First aid measures**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:
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** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Hydrolysis product / impurity: Methanol (CAS 67-56-1) is readily and rapidly absorbed at all exposure routes and is toxic by all routes. Possible signs of methanol poisoning can include: daze, dizziness, nausea, colicky abdominal pain, respiratory disturbance. Symptoms upon increasing intoxication: loss of eyesight.
- Specific treatments** : Antidote for methanol poisoning is ethanol.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

- Suitable extinguishing media** : Use dry chemical, CO₂, 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. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- 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. 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). Water polluting material. May be harmful to the environment if released in large quantities.

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). 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 breathe vapour or mist. Do not ingest. Avoid release to the environment. 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.

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SECTION 7: Handling and storage**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**

Product/ingredient name	Exposure limit values
toluene	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 384 mg/m ³ 15 minutes. TWA: 191 mg/m ³ 8 hours. TWA: 50 ppm 8 hours. STEL: 100 ppm 15 minutes.
butan-1-ol	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 154 mg/m ³ 15 minutes. STEL: 50 ppm 15 minutes.
methyl methacrylate	EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 416 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 208 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
methanol	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 333 mg/m ³ 15 minutes. STEL: 250 ppm 15 minutes. TWA: 266 mg/m ³ 8 hours. TWA: 200 ppm 8 hours.

Biological exposure indices

No exposure indices known.

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

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Type	Exposure	Value	Population	Effects	
toluene	DNEL	Long term Oral	8.13 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	56.5 mg/m ³	General population	Local	
	DNEL	Long term Inhalation	56.5 mg/m ³	General population	Systemic	
	DNEL	Long term Inhalation	192 mg/m ³	Workers	Local	
	DNEL	Long term Inhalation	192 mg/m ³	Workers	Systemic	
	DNEL	Long term Dermal	226 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Inhalation	226 mg/m ³	General population	Local	
	DNEL	Short term Inhalation	226 mg/m ³	General population	Systemic	
	DNEL	Long term Dermal	384 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	384 mg/m ³	Workers	Local	
	DNEL	Short term Inhalation	384 mg/m ³	Workers	Systemic	
	butan-1-ol	DNEL	Long term Oral	1.5625 mg/kg bw/day	General population	Systemic
DNEL		Long term Dermal	3.125 mg/kg bw/day	General population	Systemic	
DNEL		Long term Inhalation	55.357 mg/m ³	General population	Systemic	
DNEL		Long term Inhalation	155 mg/m ³	General population	Local	
DNEL		Long term Inhalation	310 mg/m ³	Workers	Local	
methyl methacrylate	DNEL	Short term Dermal	1.5 mg/cm ²	General population	Local	
	DNEL	Long term Dermal	1.5 mg/cm ²	General population	Local	
	DNEL	Short term Dermal	1.5 mg/cm ²	Workers	Local	
	DNEL	Long term Dermal	1.5 mg/cm ²	Workers	Local	
	DNEL	Long term Oral	8.2 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	8.2 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	13.67 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	74.3 mg/m ³	General population	Systemic	
	DNEL	Long term Inhalation	104 mg/m ³	General population	Local	
	DNEL	Short term Inhalation	208 mg/m ³	General population	Local	
	DNEL	Long term Inhalation	208 mg/m ³	Workers	Local	
	DNEL	Long term Inhalation	348.4 mg/m ³	Workers	Systemic	
	DNEL	Short term Inhalation	416 mg/m ³	Workers	Local	
	n-butyl methacrylate	DNEL	Long term Dermal	3 mg/kg bw/day	General population	Systemic
		DNEL	Long term Dermal	5 mg/kg bw/day	Workers	Systemic
DNEL		Long term Inhalation	66.5 mg/m ³	General population	Systemic	

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SECTION 8: Exposure controls/personal protection

	DNEL	Long term Inhalation	366.4 mg/m ³	General population	Local
	DNEL	Long term Inhalation	409 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	415.9 mg/m ³	Workers	Systemic
	DNEL	Short term Dermal	1 %	General population	Local
	DNEL	Long term Dermal	1 %	General population	Local
	DNEL	Short term Dermal	1 %	Workers	Local
	DNEL	Long term Dermal	1 %	Workers	Local

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
toluene	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	-
methyl methacrylate	Fresh water	0.94 mg/l	-
	Fresh water	0.69 mg/l	-
	Marine water	0.094 mg/l	-
	Sewage Treatment Plant	10 mg/l	-
	Fresh water sediment	10.2 mg/kg dwt	-
	Marine water sediment	1.02 mg/kg dwt	-
	Soil	1.48 mg/kg dwt	-

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

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. Recommended glove types:
Protective gloves made of fluorinated rubber
thickness of the material: > 0.7 mm
Breakthrough time: > 480 min

SECTION 8: Exposure controls/personal protection

Protective gloves made of 5-layer laminate of PE and EVOH (4H)
 thickness of the material: 0.062 mm
 Breakthrough time: > 480 min

- 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. Recommended: Suitable respiratory equipment: Respirator with a full face mask, according to acknowledged standards such as EN 136.
 Recommended Filter type: Gas filter type ABEK (certain inorganic, organic and acidic gases and vapours; ammonia/amines), according to acknowledged standards such as EN 14387.
- In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit. Suitable respiratory equipment: Respirator with a full face mask, according to acknowledged standards such as EN 136. Recommended Filter type: Combined filter type ABEK-P2 (certain inorganic, organic and acidic gases and vapours; ammonia/amines; particles), according to acknowledged standards such as EN 14387.
- For long or intense exposure, use respiratory protective equipment. Suitable respiratory equipment: Positive pressure self contained breathing apparatus, according to acknowledged standards such as EN 137.
- 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** : Colourless.
- Odour** : Strong.
- Odour threshold** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : 111°C (231.8°F)
- Flammability (solid, gas)** : Not available.
- Upper/lower flammability or explosive limits** : Lower: 1.2%
Upper: 7%
- Flash point** : Closed cup: 8°C (46.4°F) [DIN 51755]
- Auto-ignition temperature** : 420°C (788°F) [DIN 51794]
- Decomposition temperature** : Not available.
- pH** : Not applicable.
- Viscosity** : Dynamic: 100 to 300 mPa·s
- Solubility in water** : Insoluble

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SECTION 9: Physical and chemical properties

Partition coefficient: n-octanol/ water	: Not applicable.
Vapour pressure	: 2.9 kPa (21.75 mm Hg)
Relative density	: Not available.
Density	: 0.95 g/cm ³ [25°C (77°F)]
Vapour density	: Not available.
Explosive properties	: Not available.
Oxidising properties	: Not available.
Particle characteristics	
Median particle size	: Not applicable.
Additional information	: Explosion limits for released methanol: 5.5 - 44%(V).

SECTION 10: Stability and reactivity

10.1 Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: The product is stable.
10.3 Possibility of hazardous reactions	: Reactive with water, acids, alkalis, moisture. Reaction results in the formation of methanol.
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 water acids alkalis moisture
10.6 Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced. Decomposition products may include the following materials: carbon oxides (CO, CO ₂) Toxic gases Reacts with water or moisture to form methanol.

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

Product/ingredient name	Result	Species	Dose	Exposure
toluene	LC50 Inhalation Vapour	Rat	49 g/m ³	4 hours
	LD50 Oral	Rat	636 mg/kg	-
butan-1-ol	LC50 Inhalation Vapour	Rat	24000 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-
methyl methacrylate	LC50 Inhalation Vapour	Rat	78000 mg/m ³	4 hours
	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	7872 mg/kg	-
n-butyl methacrylate	LC50 Inhalation Gas.	Rat	4910 ppm	4 hours
	LD50 Oral	Rat	16 g/kg	-

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

Acute toxicity estimates

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SECTION 11: Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
AFS PRIMER	26421.4	N/A	N/A	N/A	N/A
toluene	N/A	N/A	N/A	49	N/A
butan-1-ol	790	3400	N/A	24	N/A
methyl methacrylate	7872	N/A	N/A	78	N/A
n-butyl methacrylate	16000	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes	-
	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Eyes - Severe irritant	Rabbit	-	870 ug	-
				24 hours 2	-
	Skin - Mild irritant	Pig	-	mg	-
				24 hours 250 uL	-
butan-1-ol	Skin - Mild irritant	Rabbit	-	435 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20	-
				mg	-
	Skin - Moderate irritant	Rabbit	-	500 mg	-
	Eyes - Severe irritant	Rabbit	-	0.005 MI	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2	-
n-butyl methacrylate				mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20	-
				mg	-
	Skin - Mild irritant	Rabbit	-	500 uL	-

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

Mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

- Conclusion/Summary** : Repr. 2 Suspected of damaging the unborn child.

Teratogenicity

- Conclusion/Summary** : Repr. 2 Suspected of damaging the unborn child.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
toluene	Category 3	-	Narcotic effects
butan-1-ol	Category 3	-	Respiratory tract irritation
methyl methacrylate	Category 3	-	Narcotic effects
	Category 3	-	Respiratory tract irritation
n-butyl methacrylate	Category 3	-	Respiratory tract irritation

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SECTION 11: Toxicological information

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.
- 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:
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** : Irritating to eyes, respiratory system and skin.
drowsiness/fatigue
dizziness/vertigo
- 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** : May cause damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : Suspected of damaging the unborn child.

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SECTION 11: Toxicological information

Other information : Hydrolysis product / impurity: Methanol (CAS 67-56-1) is readily and rapidly absorbed at all exposure routes and is toxic by all routes. Possible signs of methanol poisoning can include: daze, dizziness, nausea, colicky abdominal pain, respiratory disturbance. Symptoms upon increasing intoxication: loss of eyesight.

SECTION 12: Ecological information**12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
toluene	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
butan-1-ol	Acute EC50 1983 mg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>	48 hours
	Acute LC50 1730000 µg/l Fresh water	Fish - Fathead minnow - <i>Pimephales promelas</i>	96 hours
methyl methacrylate	Acute LC50 130000 µg/l Fresh water	Fish - Fathead minnow - <i>Pimephales promelas</i> - Adult	96 hours
n-butyl methacrylate	Chronic NOEC 2.6 mg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate	21 days

Conclusion/Summary : Aquatic Chronic 3

12.2 Persistence and degradability

Conclusion/Summary : Not available.

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

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
toluene	2.73	90	Low
butan-1-ol	1	-	Low
methyl methacrylate	1.38	-	Low
n-butyl methacrylate	2.99	-	Low

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.

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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.

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	ADN	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	Paint related material
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 163, 640D, 650, 367
Tunnel code (D/E)

ADN : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.
Special provisions 163, 367, 640D, 650

IMDG : **Emergency schedules** F-E, _S-E_
Special provisions 163, 367

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, A72, A192

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SECTION 14: Transport information

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.

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

Product/ingredient name	%	Designation [Usage]
AFS PRIMER	≥90	3
toluene	≥50 - ≤75	48

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 : Not 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

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SECTION 15: Regulatory information

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Eurasian Economic Union	: Russian Federation inventory : Not determined.
Japan	: Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
New Zealand	: Not determined.
Philippines	: All components are listed or exempted.
Republic of Korea	: Not determined.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: All components are listed or exempted.
Viet Nam	: Not determined.
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
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Procedure used to derive the classification

Classification	Justification
Flam. Liq. 2, H225	On basis of test data
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Repr. 2, H361d	Calculation method
STOT SE 3, H336	Calculation method
STOT RE 2, H373	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

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SECTION 16: Other information

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
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.

Full text of classifications

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
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
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
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

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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.