

Safety Data Sheet

According to 1907/2006/EC Article 31

STARCOAT PMMA

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

1.1 Product identifier

Trade name: STARCOAT PMMA

1.2 Relevant identified uses of the substance or mixture and uses advised against (See Section 16)

Application of the substance / the mixture Sealing

1.3 Details of the supplier of the safety data sheet

Supplier:

Axter Ltd, Harbour Landing, Fox's Marina,
The Strand, Wherstead, Ipswich IP2 8NJ
Tel: +44 (0) 1473 724056
Email: info@axterltd.co.uk
Website: www.axter.co.uk

1.4 Emergency telephone:

Axter Ltd - +44 (0) 1473 724056
(this line is open from 8.00 am to 5.30 pm, Monday to Friday).
In the event of a medical enquiry involving this product, members of
the public should contact:
NHS 111
a doctor or
a local hospital accident and emergency department.
The NPIS (National Poisons Information Service) helpline is available
for enquiries from medical professionals only.
Tel: 0344 892 0111

Section 2: Hazards identification

2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3

H226 Flammable liquid and vapour.



GHS07

Skin Irrit. 2

Skin Sens. 1

STOT SE 3

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02



GHS07

Signal word Warning

Hazard-determining components of labelling:

methyl methacrylate

2-ethylhexyl acrylate

Hazard statements

H226

Flammable liquid and vapour.

H315

Causes skin irritation.

H317

May cause an allergic skin reaction.

H335

May cause respiratory irritation.

Precautionary statements

P261

Avoid breathing vapours.

P210

Keep away from heat/ sparks/ open flames/ hot surfaces.

No smoking.

P280

Wear protective gloves/ eye protection.

P312

Call a POISON CENTRE/ doctor if you feel unwell.

P303+P361+P353

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/shower.

P403+P235

Store in a well-ventilated place. Keep cool.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Does not meet the PBT-criteria of Annex XIII of REACH (self assessment).

vPvB: Does not meet the vPvB-criteria of Annex XIII of REACH (self assessment).

Section 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:			
CAS: 80-62-6 EINECS: 201-297-1 Reg.no: 01-2119452498-28-0000 01-2119452498-28-0025 01-2119452498-28-0028	methyl methacrylate	Flam. Liq. 2, H225; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	10-25%
CAS: 103-11-7 EINECS: 203-080-7 Reg.no: 01-2119453158-37	2-ethylhexyl acrylate	Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335; Aquatic Chronic 3, H412	≥10-<25%

Additional information: For the wording of the listed risk phrases refer to section 16.

Section 4: First aid measures

4.1 Description of first aid measures

General information:

Immediately remove any clothing soiled by the product.

Take affected persons out of danger area and lay down.

Involve doctor immediately.

After inhalation:

In case of unconsciousness place patient stably in side position for transportation.

Take affected persons into fresh air and keep them calm.

Seek medical treatment.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed

Headache

Dizziness

Skin sensitization

Irritant to skin, eyes and respiratory system

4.3 Indication of any immediate medical attention and special treatment needed

After inhalation, even in the absence of any sign of illness, give Corticoid (eg Ventolair) to be inhaled.

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: CO₂, sand, extinguishing powder, foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture

Can form explosive gas-air mixtures.

Formation of toxic gases is possible during heating or in case of fire. In case of fire, the following can be released: Carbon monoxide (CO) Nitrogen oxides (NOx). Vapours are heavier than air. Crawling vapours can spread far from the ignition.

5.3 Advice for firefighters

Protective equipment:

Wear fully protective suit.

Wear self-contained respiratory protective device.

Additional information

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation



Keep away from ignition sources.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

6.3 Methods and material for containment and cleaning up:

Do not flush with water or aqueous cleansing agents

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Section 7: Handling and storage

7.1 Precautions for safe handling

Cool down container when heated; cool containers exposed to heat with water. Keep containers of water near heat sources. Be prepared for emergency cooling in the case of fire nearby. Keep container tightly closed to prevent heat build-up. Avoid heat.

Do not refill residue into storage receptacles.

Ensure good ventilation/exhaustion at the workplace. At least 7-fold air changes per hour.

Prevent formation of aerosols.

Information about fire - and explosion protection:

Highly volatile, flammable constituents are released during processing.
Fumes can combine with air to form an explosive mixture.
Use only explosion-proof equipment.
Protect against electrostatic charges. Protect from heat.

7.2 Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:**

Store only in the original receptacle.
Store in a cool location.

Information about storage in one common storage facility:

Store away from oxidising agents.
Store away from foodstuffs.

Further information about storage conditions:

Store in cool, dry conditions in well sealed containers.
Storage in a collecting room is required.
Store under lock and key and with access restricted to technical experts or their assistants only.
Max storage temperature 30°C.
Keep container tightly sealed.
Protect from heat and direct sunlight.

7.3 Specific end use(s) Building coating or sealing.**Section 8: Exposure controls/personal protection**

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:		
80-62-6 methyl methacrylate (10-25%)		
WEL		Short-term value: 416 mg/m ³ , 100 ppm Long-term value: 208 mg/m ³ , 50 ppm
DNELs		
80-62-6 methyl methacrylate		
Inhalative	DNEL (population)	74.3 mg/m ³ (Long-term - systemic effects) 105 mg/m ³ (Long-term - local effects) 210 mg/m ³ (Long-term - local effects)
	DNEL (worker)	210 mg/m ³ (Long-term - systemic effects) Long-term
103-11-7 2-ethylhexyl acrylate		
Dermal	DNEL	242 µg/cm ² (Employee / Industrial / Commercial) Long-term and short-term
Inhalative	DNEL	37.5 mg/m ³ (Employee / Industrial / Commercial) (Langzeit)

PNECs	
80-62-6 methyl methacrylate	
PNEC	0.094 mg/l (seawater); 0.94 mg/l (freshwater)
PNEC sediment	1.47 mg/kg dw (ground); 5.74 mg/kg dw (freshwater)
103-11-7 2-ethylhexyl acrylate	
Ground	2.3 mg/l (Soil microorganisms) 1 mg/l (ground)
PNEC	0.0023 mg/kg (oral intake)
Water	0.126 mg/l (sediment) 0.002727 mg/l (freshwater)

Additional information: The lists valid during the making were used as the basis.

8.2 Exposure controls

Personal protective equipment:



General protective and hygienic measures

Avoid contact with the eyes and skin.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Keep away from foodstuffs, beverages and feed.
Do not inhale gases / fumes / aerosols.

Respiratory protection

Ensure good ventilation.
In case of brief exposure or low pollution use A1 respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device A2.

Protection of hands

Protective gloves
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
Prior to each use check that protective gloves are in good condition.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of penetration times, rates of diffusion and degradation. Due Lack of test data no recommendation to the glove material can be given for the product/ preparation/chemical mixture.

Material of gloves

The selection of suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
Protective gloves according to EN 374.
Suitable material: nitrile.

Penetration time of glove material	Our recommendation is mainly for a one-time use as a short-term protection against liquid splashes. For other applications, you should contact a glove manufacturer. The exact break through time must be found out from the manufacturer of the protective gloves and must be observed.
For permanent contact in work areas without heightened risk of injury (e.g. Laboratory), gloves made of the following material are suitable	Butyl rubber, BR
For permanent contact, gloves made of the following materials are suitable	Butyl rubber, BR
Not suitable are gloves made of the following material	Leather
Eye protection	Tightly sealed goggles, EN-Standard: EN 166
Body protection	Protective work clothing

Section 9: Physical and chemical properties

Ingredients with limit values that require monitoring at the workplace:

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:	Fluid
Colour:	According to product specification
Odour:	Ester-like
Odour threshold:	Not determined
pH-value:	Not determined

Change in condition

Melting point/Melting range:	Undetermined
Boiling point/Boiling range:	101°C (MMA)
Flash point:	35°C (DIN EN ISO 3679:2015-06)
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	252°C (2-EHA)
Self-igniting:	Product is not self-igniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

Explosion limits:

Lower:	1.7 Vol % (MMA)
Upper:	12.5 Vol % (MMA)

Vapour pressure at 20°C: 38.7 hPa (MMA)

Density at 20°C: 1.21 g/cm³ (EN ISO 2811-1)

Evaporation rate Not determined

Solubility in / Miscibility with water: Not miscible or difficult to mix.

Partition coefficient (n-octanol/water): log Pow: 4,29 (2-EHA); (25 °C, OECD 107); log Pow: 1,38 (MMA)

Viscosity:

Dynamic at 20 °C: 2800 mPas (EN ISO 2555)

Solvent content:

Organic solvents: 0.1 %

VOC (EC) 0.09 %

Solids content: 66.0 %

9.2 Other information No further relevant information available

Section 10: Stability and reactivity

10.1 Reactivity see Section 10.2

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications

10.3 Possibility of hazardous reactions

Exothermic reaction.

Reacts with peroxides and other radical forming substances.

A hazardous polymerization may occur after the exhaustion of the inhibitor.

10.4 Conditions to avoid Avoid heat. Avoid direct sunlight.

10.5 Incompatible materials: Reactions with peroxides and other free radical generators.

10.6 Hazardous decomposition products:

No dangerous decomposition when product used according to specifications.

Additional information:

Emergency procedures will vary depending on individual circumstances. The customer should have a contingency plan available in the workplace

SECTION 11: Toxicological information

11.1 Information on toxicological effects There were no toxicological findings to the mixture.

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

LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Inhalative	LC50/4h	>432 mg/l (rat)
------------	---------	-----------------

80-62-6 methyl methacrylate

Oral	LD50 NOAEL	> 5000 mg/kg (rat) (OECD 401) 2000 ppm (rat) n drinking water, 6-2000 ppm Findings: No toxic effects
Dermal	LC50	> 5000 mg/kg (rabbit)
Inhalative	LC50/4h NOAEL	29.8 mg/l (rat) 25 ppm (rat) 25 - 400 ppm Findings: Damage to mucous membranes in the nose at 400 ppm

21645-51-2 aluminium hydroxide		
Oral	LD50 NOAEL	> 2000 mg/kg (rat) 30 mg/kg (rat)
Inhalative	LC50 NOAEC	chronic 7.6 mg/l (rat) 70 mg/m ³ (rat)
103-11-7 2-ethylhexyl acrylate		
Oral	LD50	4435 mg/kg (rat) (BASF-Test)
Dermal	LC50	7520 mg/kg (hare)

Primary irritant effect:**Skin corrosion/irritation**

Causes skin irritation.

Serious eye damage/irritation

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

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Other information (about experimental toxicology):

Due to the high vapour pressure is a harmful concentration in the air is quickly been reached. At high concentrations narcotic effects can occur.

Subacute to chronic toxicity:

Not tested.

Toxicokinetics, metabolism and distribution

The drug is metabolized rapidly (MMA).

Repeated dose toxicity

No data available.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Not tested.

Germ cell mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

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

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

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

Aspiration hazard

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

Section 12: Ecological information**12.1 Toxicity**

80-62-6 methylethyl acetate	
EC3/16h	100 mg/l (Pseudomonas putida) (Cell proliferation inhibition test, Bringmann-Kühn)
Aquatic toxicity:	
80-62-6 methylethyl acetate	
EC50/48h	69 mg/l (daphnia magna) (OECD 202)
EC50/72h	> 110 mg/l (Selenastrum capricornutum) (OECD 201)

ErC50/72h	> 110 mg/l (Pseudokirchneriella subcapitata) (OECD 201)
LC50/96h	> 79 mg/l (Rainbow trout) (OECD 203)
NOEC	9.4 mg/l (Danio rerio) (OECD 210) fish early life stage test, 35 days 37 mg/l (daphnia magna) (OECD 211) 21 days
NOEC/72h	> 110 mg/l (Selenastrum capricornutum) (OECD 201)
21645-51-2 aluminium hydroxide	
EC50	> 100 mg/l (daphnia magna) > 100 mg/l (Selenastrum capricornutum)
LC50	> 100 mg/l (Salmo trutta)
103-11-7 2-ethylhexyl acrylate	
EC50/48h (static) ErC50/72h (static)	1.3 mg/l (daphnia magna) (OECD 202, Part 1) 1.71 mg/l (scenedesmus subspicatus) (OECD 201) The details of the toxic effect relate to the analytically determined concentration. 1.81 mg/l (Rainbow trout) (OECD 203)
LC50/96h (static) NOEC/21d	0.19 mg/l (daphnia magna) The details of the toxic effect relate to the analytically determined concentration. The product has not been tested. The statement has been derived from products of a similar structure or composition.
other (28d)	> 1000 mg/kg (Soil microorganisms) (OECD 217). The product has not been tested. The statement has been derived from products of a similar structure or composition.

12.2 Persistence and degradability Easily biodegradable.
Other information: The product is easily biodegradable.

12.3 Bioaccumulative potential

2-EHA:

Can be accumulated in organisms.

Bioaccumulation potential:

Bioconcentration Factor: 282.4

(calculated)

12.4 Mobility in soil

MMA: A binding to the solid phase of soil, sediment and sewage sludge is not expected. From the water surface the substance is slowly evaporated into the atmosphere.

2-EHA: The product floats on water and does not dissolve. Absorption in soil is not likely.

Additional ecological information:

COD-value: 2-EHA: Theoretical oxygen demand (TOD) = 5.6 g/g

BOD5-value: 0.14 g/g (MMA)

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow product to reach ground water, water course or sewage system

12.5 Results of PBT and vPvB assessment

PBT: Does not meet the PBT-criteria of Annex XIII of REACH (self assessment).

vPvB: Does not meet the vPvB-criteria of Annex XIII of REACH (self assessment).

12.6 Other adverse effects No further relevant information available.

Section 13: Disposal considerations

13.1 Waste treatment methods

Hazardous waste according to Waste Catalogue (EW C). If recycling is not possible, waste must be removed in compliance with local regulations.

Recommendation

Uncured product residues are special waste.
Cured product residues are not hazardous waste.



Must not be disposed together with household rubbish. Do not allow product to reach sewage system.

Waste disposal key:

The following Waste Codes of the European Waste Catalogue (EWC), are considered a recommendation. Disposal must be coordinated with the local waste disposal company.

Liquid product:

080111 * paint and varnish containing organic solvents or other dangerous substances

080199 waste nec

Cured product residues:

080112 paint and varnish wastes other than those mentioned in 080111

080410 adhesive waste adhesives and sealants other than those mentioned in 080409


European waste catalogue 080111 * (recommended)

Unclean packaging:

Recommendation:

This material and its container must be disposed of as hazardous waste. Disposal must be made according to official regulations.

Section 14: Transport information

14.1	UN-Number	
	ADR, ADN, IMDG	Void
	IATA	UN1263
14.2	UN proper shipping name	
	ADR, ADN, IMDG	Void
	IATA	PAINT
14.3	Transport hazard class(es)	
	ADR, ADN, IMDG	
	Class	Void
	IATA	
		
	Class	3 Flammable liquids.
	Label	3
14.4	Packing group	
	ADR, IMDG	Void
	IATA	IIII

14.5	Environmental hazards:	
	Marine pollutant:	No
14.6	Special precautions for user	Not applicable
14.7	Transport in bulk according to Annex II of MARPOL and the IBC Code	Not applicable
	Transport/Additional information:	
	ADR	
	Remarks:	Classification according to viscosity clause (2.2.3.1.5) > 450 l: 3 F1, III
	IMDG	
	Remarks:	Classification according to viscosity clause (2.3.2.5) > 30 l: 3, III
	UN "Model Regulation":	Void

Section 15: Regulatory information

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

Seveso category P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000t

Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000t

REGULATION (EC) No. 1907/2006 ANNEX XVII Conditions of restriction 3

National regulations:

Information about limitation of use:

Employment restrictions under the Maternity Protection Directive (94/33/EC).

Employment restrictions for maternity Directive (92/85/EEC) for expectant and nursing mothers.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These figures relate to the product as delivered.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Sector of Use

Relevant identified uses of the mixture

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU19 Building and construction work

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

SU21 Consumer uses: Private households / general public / consumers

Relevant phrases

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Training hints

Instruction about hazards, precautions and handling must take place before the start of employment and at least annually thereafter.

Department issuing MSDS: Division product safety

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Aquatic Chronic 3: Hazardous to the aquatic environment - Long-term aquatic hazard, Category 3

Sources

www.gestis.de

www.echa.eu

logkow.cisti.nrc.ca

The data contained in this SDS has been supplied as required by the EC REACH Regulation No. 1907/2006 and the EC Regulation No. 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) for the purpose of protecting the health and safety of industrial and commercial users who are deemed capable of understanding and acting on the information provided. Please ensure that it is passed to the appropriate person(s) in your company who are capable of acting on the information.

Disclaimer:

Axter Ltd reserves the right to modify and update this data at any time without prior notice. Only the latest version of this document is valid, available for download at www.axter.co.uk/downloads. Once downloaded, documents are uncontrolled. Users should always confirm they are referring to the latest version prior to use. Further assistance is available from Axter Ltd's Technical Support Team, email: technical@axterltd.co.uk, telephone: 01473 935008.

The intended use of this product should be verified with Axter Ltd prior to adoption to ensure its suitability and compliance with specifications, project requirements, industry regulations, legislation, good practice, installation techniques and all other relevant guidance. The user should ensure all necessary precautions are taken during handling, storage, installation and disposal of the product, and all regulations to guarantee safety of people and the environment are observed. Axter Ltd accepts no liability for non-compliant use of this product.