Safety Data Sheet

According to 1907/2006/EC Article 31

STARCOAT PMMA SEALER

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

1.1 Product identifier
Trade name: STARCOAT PMMA SEALER

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

Manufacturer/Supplier

AXTER LTD, West Road, Ransomes Europark, Ipswich IP3 9SX UK
Tel: +44 (0) 1473 724056, 8.00 am to 5.30 pm, Monday to Friday
Email: info@axterltd.co.uk

1.4 Emergency telephone

+ 44 1473 724056 (NOT 24HRS - 8am - 5.30pm, Monday Friday)
In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department.

Section 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS02 flame

Flam. Liq. 2	H225 Highly flammable liquid and vapour.

GHS07

Skin Irrit.2	H315 Causes skin irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.
STOT SE 3	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 Danger

Hazard determining components of labelling:

methyl methacrylate
2-ethylhexyl acrylate

Hazard statements

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing vapours.
P280	Wear protective gloves/ eye protection.
P312	Call a POISON CENTRE/ doctor if you feel unwell.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P403 + P233	Store in a well ventilated, cool place.

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.nr. 01-2119452498-28-0028	methyl methacrylate Flam. Liq. 2, H225; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	50-100%
CAS: 103-11-7 EINECS: 203-080-7 Reg.nr.: 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 lie them 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 quiet.
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 signs of illness, give inhaled Corticoid (e.g. Ventolair).

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: CO_2, 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.
Vapours can spread to some distance from the source of fire.

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 the 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

Keep cool because of container polymerization when heated. Close to heat, keep containers with water available. Emergency cooling should be available in the case of nearby fire. Protect closed containers against heating (pressure rise). Avoid heat.
Do not refill residue into storage receptacles.
Ensure good ventilation and release of fumes in the workplace. At least 7 air changes.
Prevent formation of aerosols.

Information about fire - and explosion protection:
Highly volatile, flammable constituents are released during processing.
Keep ignition sources away / Do not smoke.
Fumes can combine with air to form an explosive mixture.
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 receptacles.
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 (25-50%)		
WEL	Short-term value: 416 mg/m³, 100 ppm Long-term value: 208 mg/m³, 50 ppm	
DNELs		
80-62-6 methyl methacrylate		
Inhalative	DNEL (worker)	210 mg/m³ (Long-term - local effects) 210 mg/m³ (Long-term - systemic effects) Long-term
	DNEL (population)	74.3 mg/m³ (Long-term - systemic effects) 105 mg/m³ (Long-term - local effects)
103-11-7 2-ethylhexyl acrylate		
Dermal	DNEL	242 µg/cm² (Employee / Industrial / Commercial) Long-term and short-term
Inhalative	DNEL	37.5 mg/m³ (Employee / Industrial / Commercial)

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

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

Respiratory protection

Ensure good ventilation.
In case of brief exposure or low pollution use respiratory filter device A1. In case of intensive or longer exposure use A2 self-contained respiratory protective device. A protective breathing hood can also be used.

Protection of hands

Protective gloves
Glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Select glove material on consideration of the penetration times, rates of diffusion and degradation.
Preventive skin protection by use of skin-protecting agents is recommended. After use of gloves apply skin-cleaning agents and skin cosmetics.
Check protective gloves prior to each use for their proper condition.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Material of gloves

Butyl rubber gloves - butyl e.g. KCL BUTOJET
Recommended thickness of the material: ≥ 0.7 mm
Breakthrough time: ≥ 480 min
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

9.1 Information on basic physical and chemical properties

General Information	
Appearance:	
Form:	Fluid
Colour:	Grey
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:	12°C (DIN EN ISO 3680)
Flammability (solid, gaseous):	Not determined
Ignition temperature:	252 °C (2-EHA)
Auto-ignition temperature:	Product is not self-igniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible. Not determined.
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:	0.97g/cm^3 (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:	Not determined
Kinematic at 20°C:	45s (ISO 6mm)
Solvent content:	
VOC (EC)	0.00%
Solids content:	31.5%

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: Heat and direct sunlight.

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

10.6 Hazardous decomposition products:
No dangerous decomposition of products used according to specifications.
No further information available.

Additional information:
Emergency procedures will vary depending on individual circumstances. The customer should have a contingency plan at the workplace where the product is present.

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:		
80-62-6 methyl methacrylate		
Oral	LD50 NOAEL	> 5000 mg/kg (rat) (OECD 401) 2000 ppm (rat) In drinking water, 6-2000 ppm Findings: no toxic effects
Dermal	LC50	> 5000 mg/kg (rabbit)
Inhalative	NOAEL	25 ppm (rat) 25-400 ppm Findings: Damage to mucous membranes in the nose at 400 ppm
	LC50/4h	29.8 mg/l (rat)

103-11-7 2-ethylhexyl acrylate		
Oral Dermal	LD50 LC50	4435 mg/kg (rat) (BASF-Test) 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 sensitization May cause an allergic skin reaction.

Other information (about experimental toxicology):
Due to the high vapour pressure a harmful concentration in the air is quickly reached. At high concentrations a narcotic effect 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 methyl methacrylate	
EC3/16h	100 mg/l (Pseudomonas putida) (Cell proliferation inhibition test, Bringamm-Kuehn)
Aquatic toxicity:	
80-62-6 methyl methacrylate	
EC50/48h LC50/96h EC50/72h NOEC/72h EC50/72h NOEC	69 mg/l (daphnia magna) (OECD 202) >79 mg/l (Rainbow trout) (OECD 203) > 110 mg/l (Pseudokirchneriella subcapitata) (OECD 201) > 110 mg/l (Selenastrum capricornutum) (OECD 201) > 110 mg/l (Selenastrum capricornutum) (OECD 201) 9.4 mg/l (Danio rerio) (OECD 210) Fish early life stage test, 35 days 37 mg/l (daphnia magna) (OECD 211) 21 days

103-11-7 2-ethylhexyl acrylate	
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.
EC50/48h (static)	1.3 mg/l (daphnia magna) (OECD 202, Part 1)
LC50/96h (static)	1.8 mg/l (Rainbow trout) (OECD 203)
NOEC/21d	0.19 mg/l (daphnia magna) The details of the toxic effect relates to the analytically determined concentration. The products has not been tested. The statement has been derived from products of a similar structure or composition.
EC50/72h (static)	1.71 mg/l (scenedesmus subspicatus) (OECD 201) The details of the toxic effect relate to the analytically determined concentration.

12.2 Persistence and degradability Easily biodegradable. No further relevant information available

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.

Additional ecological information:
COD-value: 2-EHA: Theoretical oxygen demand (TOD) - 5.6g/g
BOD5-value: 0.14 g/g (MMA)
2-EHA: the product floats on water and does not dissolve. Absorption on soil is not likely.

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 (EWC). If recycling is not possible, removal of waste must be in compliance with local regulations.

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

Must not be disposed of 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 recommended.
Disposal must be coordinated with a 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)

Uncleaned packaging:
Recommendation:
This material and its container must be disposed of as hazardous waste. Disposal must be made in compliance with official regulations.

Section 14: Transport information

14.1 1	**UN-Number**	
	ADR, IMDG, IATA	UN1263
14.2	**UN proper shipping name**	
	ADR	1263 PAINT
	IMDG, IATA	PAINT
14.3	**Transport hazard class(es)**	
	ADR, IMDG, IATA	

	Class	3 Flammable liquids.
	Label	3
14.4	**Packing group**	
	ADR, IMDG, IATA	III
14.5	**Environmental hazards:**	
	Marine pollutant:	No
14.6	**Special precautions for user**	Warning: Flammable liquids.
	Danger code (Kemler):	
	EMS Number:	F-E,S-E
	Stowage category	A
14.7	**Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
	Transport/Additional information:	
	ADR	
	Limited quantities (LQ)	5L
	Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
	Transport category	3
	Tunnel restriction code	E
	Remarks:	Classification according to viscosity clause (2.2.3.1.4) >450 litres Packing Group II

IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30ml Maximum net quantity per inner packaging: 1000ml
Remarks	Classification according to viscosity clause (2.3.2.2) >450 litres Packing Group II
UN "Model Regulation":	UN 1263 PAINT, 3, III

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 50000t
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.

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

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.

Relevant phrases

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Training hints

Instruction on handling and precautions must be given prior to first use and at least annually thereafter.

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
LD50: Lethal dose, 50 percent
PBT: Persistent, Biocumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit.2: Serious eye damage/eye irritation - Category 2
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity - Single exposure - 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

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