

Safety Data Sheet

according to 1907/2006/EC Article 31

STARCOAT PMMA CLEANER

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

1.1 Product identifier

Trade name: STARCOAT PMMA CLEANER

CAS Number:

141-78-6

EC number:

205-500-4

Index number:

607-022-00-5

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

Application of the substance / the mixture Cleaning agent/Cleaner

1.3 Details of the supplier of the safety data sheet

Supplier:

Axter Ltd
West Road
Ransomes Europark
Ipswich IP3 9SX

t +44 1473 724056 (8.00 am to 5.30 pm, Monday to Friday)

e info@axterltd.co.uk; www.axter.co.uk

Emergency telephone number:

+44 1473 724056 (8.00 am to 5.30 pm, Monday to Friday, not 24 hours). In the event of a medical enquiry relating to this product, 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 Flammable liquid and vapour.



GHS07

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:

ethyl acetate

H225 Highly flammable liquid and vapour.

H336 May cause drowsiness or dizziness.

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 CENTER/ 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+P233	Store in a well-ventilated place. Keep container tightly closed.

Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

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

3.1 Substances Ethylacetat (Essigsäureethylester) C₄H₈O₂.

CAS No. Description

141-78-6 ethyl acetate

Identification number(s)

EC number: 205-500-4

Index number: 607-022-00-5

Additional information: * See Section 15

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.
Do not leave affected persons unattended.
Personal protection for the First Aider.

After inhalation:

In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.
Skin cream after prolonged skin contact. 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:** Rinse out mouth. Do not induce vomiting; call for medical help immediately.

Most important symptoms and effects, both acute and delayed

- 4.2 Headache
Dizziness, Unconsciousness
Nausea
Irritant to skin, eyes and respiratory system
Gastric or intestinal disorders

Hazards

Danger of pulmonary oedema
After swallowing and subsequent vomiting, aspiration into the lungs, which can lead to chemical pneumonia or suffocation.

- 4.3 **Indication of any immediate medical attention/special treatment needed:** May cause drowsiness and dizziness.

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant 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.
Because of the high vapor pressure, temperature increase risk of bursting of the vessels.
In case of fire, the following can be released:
Carbon monoxide (CO)
CO₂

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.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
If without risk, remove containers from the danger zone.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation



Keep away from ignition sources.

Avoid static electricity.

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

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

Suppress gases/fumes/haze with water spray

Inform respective authorities in case of seepage into water course or sewage system. Prevent seepage into sewage system, workpits and cellars.

6.3 Methods and material for containment and cleaning up

Ensure adequate ventilation

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Send for recovery or disposal in suitable receptacles.

6.4 Dispose of the material collected according to regulations.

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 receptacles tightly sealed. Avoid prolonged or repeated contact with skin.

Ensure good ventilation/exhaustion at the workplace.

Avoid splashes or spray in enclosed areas.

Ensure good interior ventilation, especially at floor level, fumes are heavier than air). at least 7-fold air changes/hour.

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.

Only explosion-proof equipment.

Use explosion-proof apparatus / fittings and spark-proof tools.

Protect against electrostatic charges.

Do not spray onto a naked flame or any incandescent material.

Handle only outside or in explosion protected rooms.

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.

Laws and regulations for storage and handling of water hazarding.

Regulations for storage of flammable liquids.

Store in a cool location.

Information about storage in one common storage facility: Store away from foodstuffs.

Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

For gaskets and sealants could use: PTFE.

Suitable storage materials are: Stainless carbon steel, stainless steel.

Keep container tightly sealed.

7.3 Specific end use(s) No further relevant information available.**Section 8: Exposure controls/personal protection**

Additional information about design of technical facilities: Ensure adequate ventilation at the workplace.

8.1 Control parameters**Ingredients with limit values that require monitoring at the workplace:****141-78-6 ethyl acetate (50-100%)**

WEL	Short-term value: 1468 mg/m ³ , 400 ppm Long-term value: 734 mg/m ³ , 200 ppm
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DNELs**141-78-6 ethyl acetate**

Oral	DNEL (population)	4.5 mg/kg bw/day (Long-term - systemic effects)
Dermal	DNEL	63 mg/kg bw/day (Long-term - systemic effects)
Inhalative	DNEL (population)	37 mg/m ³ (Long-term - systemic effects)
	DNEL (worker)	1468 mg/m ³ (Acute - local effects)
		1468 mg/m ³ (Acute - systemic effects)
		734 mg/m ³ (Long-term - systemic effects)
		734 mg/m ³ (Long-term - local effects)
		DNEL (population)
		734 mg/m ³ (Acute - systemic effects)
		367 mg/m ³ (Long-term - systemic effects)
		367 mg/m ³ (Long-term - local effects)

PNECs**141-78-6 ethyl acetate**

PNEC	0.22 mg/kg (ground) 0.34 mg/kg (sediment) 0.26 mg/l (water)
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Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls Ensure adequate ventilation at the workplace.**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.

Use skin protection cream for skin protection.

Keep away from foodstuffs, beverages and feed.

Do not carry product impregnated cleaning cloths in trouser pockets.

Do not eat, drink, smoke or sniff while working.

Avoid contact with the eyes.

Respiratory protection:

Short term filter device:

Filter A/P2



The use of respiratory protective hood is recommended because not wearing time limitations apply.

Protection of hands:

Solvent resistant gloves

Protective gloves

Check protective gloves prior to each use for their proper condition.

The 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 the degradation

Solvent resistant gloves.

Check the permeability prior to each renewed use of the gloves.

To avoid skin problems reduce the wearing of gloves to the required minimum.

Due to missing tests no recommendation regarding glove material can be given for the product/ the preparation/ the chemical mixture.

Material of gloves

Butyl rubber gloves - butyl

Recommended thickness of the material: ≥ 0.7 mm

e.g. KGL BUTOJET

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.

Penetration time of glove material

Our recommendation is mainly for 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 has to be found out by the manufacturer of the protective gloves and has to be observed.

At the first sign of wear protective gloves should be replaced.

Permeation / Breakthrough time: ≥ 120 min (EN 374)

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 materials:

Fluorocarbon rubber (Viton)

Natural rubber, NR

Chloroprene rubber, CR

Nitrile rubber, NBR

PVC

Leather

Eye protection:



Tightly sealed goggles, EN Standard EN 166

Body protection



Solvent resistant protective clothing

Protective work clothing

Limitation and supervision of exposure into the environment: Do not discharge into drains / surface water bodies / groundwater.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form: Fluid

Colour: Colourless

Odour: Fruit-like

Odour threshold: 0.006 - 0.686 mg/l (gas in air).

pH-value: Slightly alkaline.

Change in condition

Melting point/Melting range: -84 °C (DIN 51751)

Boiling point/Boiling range: 74 - 78 °C (DIN 53757)

Flash point: -4 - -1 °C (DIN 51755))

Flammability (solid, gaseous): No data available.

Ignition temperature: ≥ 425 °C (DIN 51794)

Self-igniting temperature: Product is not self-igniting.

Explosive properties: Not determined.

Explosion limits: 2.1 Vol %

Lower: 11.5 Vol %

Upper:

Oxidising properties not classified as oxidizing

Vapour pressure at 20 °C:	~100 hPa)
Density at 20 °C:	0.9 g/cm ³ (DIN 51757)
Evaporation rate	4.5 (n-BuAc = 1).
Solubility in / Miscibility with water:	~80 g/l Not miscible or difficult to mix.
Partition coefficient (n-octanol/water):	0.66 - 0.68 log POW
Viscosity:	
Dynamic at 20 °C:	~0.45 mPas (EN ISO 2555)
Kinematic:	No data available
Organic solvents:	100.0 %
VOC (EC)	0.09 %
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:

At atmospheric pressure distilled without decomposition.

Avoid: heat, flames, sparks.

No decomposition if used according to specifications.

Shock, avoid friction, heat, sparks, static electricity.

10.3 Possibility of hazardous reactions

Used empty containers may contain product gases which form explosive mixtures with air.

Develops readily flammable gases/fumes.

Danger of receptacles bursting because of high vapour pressure when heated.

10.4 Conditions to avoid No further relevant information available ·

10.5 Incompatible materials: Highly oxidizing agents, strong acids, alkalis (bases, alkalis), metals.

10.6 Hazardous decomposition products:

Carbon monoxide (CO) and carbon dioxide (CO₂)

Additional information:

Emergency procedures will vary depending on individual circumstances. The customer should have a contingency plan to the workplace may be 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:

141-78-6 ethyl acetate)

Oral	LD50	4934 mg/kg (rabbit) (OECD 401)
Dermal	LD50	>18000 mg/kg (rat)
Inhalative	LC50	>18000 mg/kg (rabbit)
	LC50/4h	56 mg/l (rat)

*See 'Specific symptoms in biological assay' at end of document.

Section 12: Ecological information

12.1 Toxicity

Aquatic toxicity	
141-78-6 ethyl acetate	
EC50/24h	3090 mg/l (daphnia magna) (DIN 38412, Part 11)
EC50/48h	164 mg/l (daphnia magna)
	3300 mg/l (scenedesmus subspicatus)
LC50/96h	230 mg/l (fish)
	455 mg/l (pimephales promelas)
NOEC/21d	2.4 mg/l (daphnia magna)
NOEC/72h	>100 mg/l (Alge (Desmodesmus subspicatus)) (OECD 201))

12.2 Persistence and degradability Easily biodegradable

Other information:

DOC: > 70 %

Biodegradability 100% in 28 days (OECD 301 D)

12.3 Bioaccumulative potential

log P (o/w): 0.66 - 0.68

Due to the distribution coefficient n-octanol/water an appreciable enrichment (bioaccumulation) in organisms is not to be expected (log P (o/w): 1-3).

12.4 Mobility in soil No further relevant information available.

Additional ecological information:

COD-value: 1816 mg O₂/g

BOD5-value: 293 mg O₂/g

General notes:

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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, waste must be removed in compliance with local regulations.

Recommendation

Uncured product residues are special waste.

Cured product residues are not hazardous waste.

Must be specially treated adhering to official regulations



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

Waste disposal key:

Please get in touch to arrange the waste code contact with the disposal of your choice

The following Waste Codes of the European Waste Catalogue (EWC), are considered a recommendation.

The 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

The allocation of waste identity numbers to EWC have to branch and process specific.

Unclean packaging:

Recommendation:

Disposal must be made according to official regulations.

Section 14: Transport information

14.1	UN-Number ADR, IMDG, IATA	UN1173
14.2	UN proper shipping name ADR IMDG, IATA	1173 ETHYL ACETATE ETHYL ACETATE
14.3	Transport hazard class(es) ADR, IMDG, IATA	
	Class 3 Label	Flammable liquids. 3
14.4	Packing Group ADR, IMDG, IATA	II
14.5	Environmental hazards: Marine pollutant:	No
14.6	Special precautions for user Danger code (Kemler): EMS Number:	Warning: Flammable liquids. 33 F-E,S-D
14.7	Transport in bulk according to Annex II of Marpol and the IBC Code	
	Transport/Additional information	Not applicable

ADR**Limited Quantities (LQ)**

1L

Excepted Quantities (EQ)

Code E2

Maximum net quantity per inner packaging 30ml

Maximum net quantity per outer packaging 500ml

Transport category

2

Tunnel restriction code

D/E

IMDG**Limited Quantities (LQ)**

1L

Excepted Quantities (EQ)

Code E2

Maximum net quantity per inner packaging 30ml

Maximum net quantity per outer packaging 500ml

UN "Model Regulation":

UN 1173 ETHYL ACETATE, 3, II

Section 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Labelling according to Regulation (EC) No 1272/2008** GHS label elements**Directive 2012/18/EU****Named dangerous substances - ANNEX I** Substance is not listed.

Seveso category P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements 5000t

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

Teaching about hazards and precautions to handle product must take place before the start of employment 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 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

vPvB: very Persistent and very Bioaccumulative Flam. Liq. 2: Flammable liquids – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Sources www.gestis.de www.echa.eu logkow.cisti.nrc.ca

Data compared to the previous version altered.

*** Section 11: Toxicological Information - Specific symptoms in biological assay:**

Mice that were exposed for 7 days 6 hours per 4300 ppm developed, slight blood changes, and loss of appetite. Rabbits that were exposed for 40 days one hour per day 4400 ppm, developed secondary anemia, blood effects and minor spleen enlargement. There was no evidence of carcinogenicity in mice were observed.

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

Prolonged or repeated skin contact may defat the skin and result in skin irritation.

Serious eye damage/irritation: Short-term, reversible irritation. Causes serious eye irritation.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Other information (about experimental toxicology): Ames test: negative

Subacute to chronic toxicity:

In vitro mutagenicity:

Ames test: negative - with and without metabolic activation method: OECD 471

Cytogenicity assay in Chinese hamster cells: negative - with and without metabolic activation - Method: OECD 473

Mouse lymphoma cell gene mutation: negative - with and without metabolic activation - Method: OECD 476 (Reference substance: Ethanol).

in vivo Mutagenicity:

Mammalian Erythrocyte Micronucleus test in Chinese hamster and male mice: negative - Method: OECD 474

Carcinogenic effects: No evidence of carcinogenicity, reproductive toxicity: No effects on fertility.

(Reference substance: Ethanol)

Routes of exposure oral gavage (species mouse, Method OECD 416)

NOAEL: 26400 mg / kg bw / day (for ethyl acetate on a molar basis)

Rat species, type of study Two-generation study

Development Damaging effects: No teratogenic, maternally or developmental effects (Reference substance: Ethanol)

Rat species, method OECD 414, NOAEC: 73,300 m³ mg / Type of study Prenatal Developmental

Repeated exposure: No negative impact.

Routes of exposure oral gavage: rat species, method EPA OTS 795.2600, NOAEL: 900 mg / kg bw / day

Repeated exposure: No negative impact

Inhalation routes of exposure: rat species, method EPA OTS 798.2450, NOEC 1.28 mg / l, 90-day inhalation study

Subchronic toxicity study

Additional toxicological information:

Inhalation of concentrated vapours may lead to anesthesia-like conditions and headache, dizziness, etc.

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Based on current information known no CMR effects.

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 drowsiness or dizziness.

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