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 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

Eye Irrit. 2	H319 Causes serious eye irritation.
STOT SE 3	H336 May cause drowsiness or dizziness.

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.
H319	Causes serious eye irritation.
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.

4.2 Most important symptoms and effects, both acute and delayed

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:

CO_2 , 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)

CO_2

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.

Dispose of the material collected according to regulations.

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 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/m3, 400 ppm Long-term value: 734 mg/m3, 200 ppm

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)
	DNEL (population)	37 mg/m³ (Long-term - systemic effects)
Inhalative	DNEL (worker)	1468 mg/m³ (Acute - local effects)
		1468 mg/m³ (Acute - systemic effects)
		734 mg/m³ (Long-term - systemic effects)
		734 mg/m³ (Long-term - local effects)
	DNEL (population)	734 mg/m³ (Acute - local effects)
		734 mg/m³ (Acute - systemic effects)
		367 mg/m³ (Long-term - systemic effects)
		367 mg/m³ (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)

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

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 Recommended thickness of the material: ≥ 0.7 mm e.g. KCL 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 material	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:	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, gas):	No data available
Ignition temperature:	>425 °C (DIN 51794)
Self-igniting temperature	Product is not self-igniting.
Explosive properties:	Not determined
Explosion limits:	
Lower:	2.1 Vol %
Upper:	11.5 Vol %
Oxidising properties:	Not classified as oxidizing
Vapour pressure at 20 °C:	~100 hPa)
Density:	0.9 g/cm³ (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:	~0.45 mPas (EN ISO 2555)
Kinematic:	No data available
Organic solvents:	100.0 %
VOC (EC):	100.0 %

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:
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 (CO_2)

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	NOAEL	>18000 mg/kg (rabbit)
Inhalative	LC50	> 18000 mg/kg (rat)
	LC50/4h	56 mg/l (rat)

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 O_2/g
BOD5-value: 293 mg O_2/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 (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 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	1173 ETHYL ACETATE
IMDG, IATA	ETHYL ACETATE

14.3 Transport hazard class(es)

ADR, IMDG, IATA

Class 3	Flammable liquids.

	Label	III
14.5	**Environmental hazards:**	No
	Marine pollutant:	
14.6	**Special precautions for user**	Warning: Flammable liquids.
	Danger code (Kemler):	33
	EMS Number:	F-E,S-D
	Stowage category:	B
14.7	**Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable

Transport/Additional information

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

Training hints
Teaching about hazards and precautions to hand the operating instructions (Technical Rule 555).
Instruction 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
ELINCS: European List of Notified Chemical Substances
VOC: Volatile Organic Compounds (USA, EU)
CAS: Chemical Abstracts Service (division of the American Chemical Society)
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.** PBT: Persistent, Bioaccumulative and Toxic

*** 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 teratogenetic, maternally or developmental effects (Reference substance: Ethanol)
Rat species, method OECD 414, NOAEC: 73,300 m^3 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.