

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

MERCK

Version: 1.0

Product number: 212238

Date of first issue: 31.07.2018

Print Date: 01.08.2018

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

1.1 Product identifier

Product number 212238

Product name AZ Aquatar Coating

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

Identified uses Materials for use in technical applications

1.3 Details of the supplier of the safety data sheet

Company Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0
Responsible Department PM-OQR * e-mail: PM_SDS_Supply@merckgroup.com

1.4 Emergency telephone number

Please contact the regional company representation in your country.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Serious eye damage, Category 1 H318: Causes serious eye damage.
Calculation method

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements : H318 Causes serious eye damage.

Precautionary statements : **Prevention:**
P280 Wear eye protection/ face protection.

Response:
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313 Get medical advice/ attention.

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Hazardous components which must be listed on the label:
Quarternary Ammoniumperfluoroalkyl carboxylate

2.3 Other hazards

None known.

SECTION 3: Composition/information on ingredients

Chemical nature : Aqueous solution of organic compounds.

3.1 Substance

Not applicable

3.2 Mixtures

Hazardous components

| Chemical name | CAS-No. Registration number | Classification | Concentration (% w/w) |
|--|-------------------------------------|--|--------------------------|
| Quarternary Ammoniumperfluoroalkyl carboxylate | 32609-65-7 01-0000017268-65-xxxx | Acute Tox. 3; H301 Eye Dam. 1; H318 Aquatic Chronic 3; H412 | >= 3 - < 10 |

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled : fresh air.

In case of skin contact : Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact : rinse out with plenty of water.
Immediately call in ophthalmologist.
Remove contact lenses.

If swallowed : immediately make victim drink water (two glasses at most).
Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Irritation and corrosion
Risk of serious damage to eyes.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local

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circumstances and the surrounding environment.

Unsuitable extinguishing media : For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Not combustible.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Special protective equipment for firefighters : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information : Suppress (knock down) gases/vapours/mists with a water spray jet.
Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Advice for non-emergency personnel:
Do not breathe vapours, aerosols.
Avoid substance contact.
Ensure adequate ventilation.
Evacuate the danger area, observe emergency procedures, consult an expert.
Advice for emergency responders:
Protective equipment see section 8.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Cover drains. Collect, bind, and pump off spills.
Observe possible material restrictions (see sections 7 and 10).
Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® H⁺, Merck Art. No. 101595). Dispose of properly.
Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Advice on safe handling : Observe label precautions.
- Hygiene measures : Change contaminated clothing. Wash hands after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Store in original container.
- Further information on storage conditions : Tightly closed.
- Protected from light. Protect against frost. The product after freezing is no longer usable.
- Risks from decomposition products: see section 10.3
- Recommended storage temperature : Recommended storage temperature see product label.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Personal protective equipment

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled and must meet the specifications of a standard EN/ISO/DIN. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye protection : Tightly fitting safety goggles

Hand protection :
splash contact

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Glove material : Nitrile rubber

Glove thickness : 0,4 mm

Break through time : 10 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example:KCL 730 Camatril® -Velours(splash contact);.

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Protective measures : Protective clothing

Respiratory protection : required when vapours/aerosols are generated.

Recommended Filter type: : Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|-----------------------------|---------------------------|
| Form | liquid |
| Colour | colourless |
| Odour | slight characteristic |
| Odour Threshold | No information available. |
| pH | 4 at 20 °C |
| Melting point | No information available. |
| Boiling point/boiling range | ca. 100 °C |
| Flash point | Not applicable |
| Evaporation rate | No data available |

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| | |
|--|---------------------------------|
| Flammability (solid, gas) | The product is not flammable. |
| Lower explosion limit | No information available. |
| Upper explosion limit | No information available. |
| Vapour pressure | Not applicable |
| Relative vapour density | No data available |
| Density | 1 g/cm ³ at 20 °C |
| Solubility(ies) | No information available. |
| Water solubility | miscible |
| Partition coefficient: n-octanol/water | No information available. |
| Auto-ignition temperature | No information available. |
| Decomposition temperature | No information available. |
| Viscosity, kinematic | No information available. |
| Explosive properties | Not classified as explosive. |
| Oxidizing properties | none |

9.2 Other data

| | |
|--------------------|----------------------------------|
| Viscosity, dynamic | approximately 2 mPas at 20 °C |
| Corrosion | Not corrosive to metals |

SECTION 10: Stability and reactivity

10.1 Reactivity

See section 10.3

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Hazardous reactions : Reacts with the following substances:
Strong oxidizing agents
Strong bases

Violent reactions possible with:
The generally known reaction partners of water.

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10.4 Conditions to avoid

Conditions to avoid : no information available

10.5 Incompatible materials

Materials to avoid : no information available

10.6 Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Acute Toxicity Estimate (ATE): > 2.000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Symptoms: Possible symptoms:, mucosal irritations

Acute dermal toxicity : (Human): Remarks: absorption

Components:

Quarternary Ammoniumperfluoroalkyl carboxylate:

Acute oral toxicity : LD50: 100 - 160 mg/kg

Acute inhalation toxicity : No data available

Acute dermal toxicity : (Human): Remarks: absorption

Skin corrosion/irritation

Product:

No data available

Components:

Quarternary Ammoniumperfluoroalkyl carboxylate:

Species: Rabbit

Exposure time: 4 h

Method: OECD Test Guideline 404

Result: No skin irritation

Serious eye damage/eye irritation

Product:

Remarks: Risk of blindness!

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Components:

Quarternary Ammoniumperfluoroalkyl carboxylate:

Species: Rabbit

Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

Product:

No data available

Components:

Quarternary Ammoniumperfluoroalkyl carboxylate:

Test Type: Maximisation Test

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Product:

No data available

Components:

Quarternary Ammoniumperfluoroalkyl carboxylate:

Germ cell mutagenicity-

: Not mutagenic in Ames Test

Assessment

Carcinogenicity

Product:

This information is not available.

Components:

This information is not available.

STOT - single exposure

Product:

No data available

Components:

No data available

STOT - repeated exposure

Product:

No data available

Components:

No data available

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Repeated dose toxicity

Product:

No data available

Components:

No data available

Aspiration toxicity

Product:

No data available

Components:

No data available

11.2 Other information

Product:

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): > 300 mg/l
Exposure time: 96 h

Toxicity to algae : (Scenedesmus capricornutum (fresh water algae)): > 300 mg/l
Exposure time: 96 h

Components:

Quarternary Ammoniumperfluoroalkyl carboxylate:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 16,35 mg/l
Exposure time: 48 h
Method: Regulation (EC) No. 440/2008, Annex, C.2

Toxicity to microorganisms : EC50 (activated sludge): > 1.000 mg/l
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

12.2 Persistence and degradability

Product:

Biochemical Oxygen Demand (BOD) : 730 mg/l

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Components:

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Biodegradability : Result: Not readily biodegradable.
Biodegradation: 20 - 50 %
Exposure time: 28 d
Method: Tested according to Annex V of Directive 67/548/EEC.
Remarks: According to the results of tests of biodegradability this product is not readily biodegradable.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

Quarternary Ammoniumperfluoroalkyl carboxylate:

Partition coefficient: n- : log Pow: 0
octanol/water : Remarks: Bioaccumulation is not expected.
(Lit.)

12.4 Mobility in soil

Product:

Mobility : Remarks: No data available

Distribution among : No data available
environmental compartments

Stability in soil : No data available

Components:

Quarternary Ammoniumperfluoroalkyl carboxylate:

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

Components:

Quarternary Ammoniumperfluoroalkyl carboxylate:

No data available

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12.6 Other adverse effects

Product:

Additional ecological information : Discharge into the environment must be avoided.

Components:

Quarternary Ammoniumperfluoroalkyl carboxylate:

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

Air transport(IATA)

14.1.-14.6 : Not dangerous goods

Sea transport(IMDG)

14.1.-14.6 : Not dangerous goods

Land transport(ADR/RID)

14.1.-14.6 : Not dangerous goods

SECTION 15: Regulatory information

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

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

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REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Storage class : 10 - 13

Other regulations : Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

Training advice

Provide adequate information, instruction and training for operators.

Full text of H-Statements

H301 : Toxic if swallowed.
H318 : Causes serious eye damage.
H412 : Harmful to aquatic life with long lasting effects.

Key or legend to abbreviations and acronyms used in the safety data sheet

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AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Disclaimer

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.