

Version: 3.0

Product number: 212313

Revision Date: 22.04.2024

Print Date: 22.05.2024

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Product number 212313
Product name AZ AQUATAR-VIII-A 45

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

Use of the Sub- : Materials for use in technical applications
stance/Mixture

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

+49 6151 722440

CHEMTREC International Emergency Telephone Number +1 703-741-5970 [CCN 842835]

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Corrosive to metals, Category 1 H290: May be corrosive to metals.
Eye irritation, Category 2 H319: Causes serious eye irritation.
Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :



Signal word : Warning

Hazard statements : H290 May be corrosive to metals.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**
P280 Wear protective gloves.

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Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.

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

Hazardous components which must be listed on the label:

Polymer of 2,2,3,3,4,4-hexafluoro-4-[(trifluoroethenyl)oxy]butanoic acid

2.3 Other hazards

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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Aqueous solution

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Polymer of 2,2,3,3,4,4-hexafluoro-4-[(trifluoroethenyl)oxy]butanoic acid	661476-43-3	Acute Tox. 4; H302 Acute Tox. 3; H311 Skin Corr. 1A; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317	>= 3 - < 5
methanol	67-56-1 200-659-6 603-001-00-X 01-2119433307-44-XXXX	Flam. Liq. 2; H225 Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 STOT SE 1; H370 (Central nervous system, optic nerve) specific concentration limit STOT SE 1; H370 >= 10 % STOT SE 2; H371	>= 0,1 - < 1

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		3 - < 10 %	
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For explanation of abbreviations see section 16.

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.
Consult a physician.
- In case of eye contact : rinse out with plenty of water.
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 : irritant effects
Allergic reactions

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 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 fire-fighting : 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.

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Further information : 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 : Prevent further leakage or spillage if safe to do so.

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

For disposal considerations see section 13.

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Observe label precautions.

Hygiene measures : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Do not freeze.

No metal containers.

Store in original container.

Further information on stor- : Risks from decomposition products: see section 10.3

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age conditions

Tightly closed.

Recommended storage temperature : If there is a suitable storage temperature range to be complied with, product label contains the relevant information accordingly.

7.3 Specific end use(s)

Specific 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

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
methanol	Workers	dermal	Acute systemic effects	20 mg/kg
	Workers	dermal	Long-term systemic effects	20 mg/kg
	Workers	inhalation	Acute systemic effects	130 mg/m3
	Workers	inhalation	Acute local effects	130 mg/m3
	Workers	inhalation	Long-term systemic effects	130 mg/m3
	Workers	inhalation	Long-term local effects	130 mg/m3
	Consumers	dermal	Acute systemic effects	4 mg/kg
	Consumers	dermal	Long-term systemic effects	4 mg/kg
	Consumers	inhalation	Acute systemic effects	26 mg/m3
	Consumers	inhalation	Acute local effects	26 mg/m3
	Consumers	inhalation	Long-term systemic effects	26 mg/m3
	Consumers	inhalation	Long-term local effects	26 mg/m3
	Consumers	oral	Acute systemic effects	4 mg/kg
	Consumers	oral	Long-term systemic effects	4 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
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The Safety Data Sheets for catalogue items are available at www.merckgroup.com

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methanol	Fresh water	20,8 mg/l
	Marine water	2,08 mg/l
	Aquatic intermittent release	1540 mg/l
	Sewage treatment plant	100 mg/l
	Fresh water sediment	77 mg/kg
	Marine sediment	7,7 mg/kg
	Soil	100 mg/kg

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 : Safety glasses

Hand protection :

splash contact

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).

Respiratory protection : required when vapours/aerosols are generated.

Filter type : Filter A-(P2)

Protective measures : Protective clothing

Environmental exposure controls

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

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	colourless
Odour	:	slight, pungent
Melting point/freezing point	:	ca. 0 °C Water
Boiling point/boiling range	:	 Information on components: water 100 °C (1.013 hPa)
Flammability	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	does not flash
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
pH	:	1,6 (25 °C) Concentration: 100 %
Viscosity		
Viscosity, kinematic	:	No data available
Solubility(ies)		
Water solubility	:	miscible in all proportions
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	 Information on components: water 23 hPa (20 °C)
Density	:	1,016 g/cm ³
Relative vapour density	:	No data available

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9.2 Other information

Explosives	: Not classified as explosive.
Oxidizing properties	: none
Flammability (liquids)	: not combustible
Metal corrosion rate	: 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	: 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
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10.5 Incompatible materials

Materials to avoid	: Metals
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10.6 Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

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 Toxicity Estimate (ATE): > 20 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	: Acute Toxicity Estimate (ATE): > 2.000 mg/kg

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Method: Calculation method

Acute toxicity (other routes of administration) : No data available

Components:

Polymer of 2,2,3,3,4,4-hexafluoro-4-[(trifluoroethenyl)oxy]butanoic acid:

Acute oral toxicity : LD50 Oral (Rat, female): > 300 - 2.000 mg/kg
Method: OECD Test Guideline 423
GLP: yes

Acute inhalation toxicity : Assessment: Toxic effects cannot be excluded

Acute dermal toxicity : LD50 (Rat): > 400 mg/kg
Method: OECD Test Guideline 402

methanol:

Acute oral toxicity : (Human): Method: Expert judgement
Remarks: The component/mixture is toxic after single ingestion.
(ECHA)

Acute inhalation toxicity : (Human): Method: Expert judgement
Remarks: The component/mixture is toxic after short term inhalation.
(ECHA)

Acute dermal toxicity : LD50 (Rabbit): 300 mg/kg
Method: Converted acute toxicity point estimate

(Human): Method: Expert judgement
Remarks: The component/mixture is toxic after single contact with skin.
(ECHA)

Skin corrosion/irritation

Product:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Components:

Polymer of 2,2,3,3,4,4-hexafluoro-4-[(trifluoroethenyl)oxy]butanoic acid:

Result : Causes severe burns.

methanol:

Species : Rabbit

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Result	:	No skin irritation
Remarks	:	(ECHA)

Serious eye damage/eye irritation

Product:

Result	:	Eye irritation
Remarks	:	Expert judgement

Components:

Polymer of 2,2,3,3,4,4-hexafluoro-4-[(trifluoroethenyl)oxy]butanoic acid:

Result	:	Severe eye irritation
Remarks	:	(External SDS)

methanol:

Species	:	Rabbit
Result	:	No eye irritation
Remarks	:	(ECHA)

Respiratory or skin sensitisation

Product:

No data available

Components:

Polymer of 2,2,3,3,4,4-hexafluoro-4-[(trifluoroethenyl)oxy]butanoic acid:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	The product is a skin sensitiser, sub-category 1A.

methanol:

Test Type	:	Sensitisation test:
Exposure routes	:	dermal
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitisation.
Remarks	:	(ECHA)

Germ cell mutagenicity

Product:

Genotoxicity in vitro	:	No data available
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Genotoxicity in vivo	:	No data available
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Components:

Polymer of 2,2,3,3,4,4-hexafluoro-4-[(trifluoroethenyl)oxy]butanoic acid:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Result: negative

Test Type: Chromosome aberration test in vitro
Metabolic activation: without metabolic activation
Method: OECD Test Guideline 473
Result: positive

Genotoxicity in vivo : Test Type: Micronucleus test
Method: OECD Test Guideline 474
Result: negative

methanol:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: (ECHA)

Test Type: In vitro mammalian cell gene mutation test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
Remarks: (ECHA)

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Cell type: Bone marrow
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative
Remarks: (ECHA)

Carcinogenicity

Product:

No data available

Reproductive toxicity

Product:

Effects on fertility : No data available

Effects on foetal development : No data available

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STOT - single exposure

Product:

No data available

Components:

methanol:

Target Organs	:	Central nervous system, optic nerve
Assessment	:	Causes damage to organs.

STOT - repeated exposure

Product:

No data available

Repeated dose toxicity

Product:

No data available

Components:

Polymer of 2,2,3,3,4,4-hexafluoro-4-[(trifluoroethenyl)oxy]butanoic acid:

Species	:	Rat
NOAEL	:	25 mg/kg
Remarks	:	Subacute oral toxicity

methanol:

Species	:	Rat, male and female
NOAEL	:	6,66 mg/l
Application Route	:	Inhalation
Test atmosphere	:	vapour
Exposure time	:	28 d
Number of exposures	:	daily
Method	:	OECD Test Guideline 412
Remarks	:	Subacute toxicity

Species	:	Rat, male and female
NOAEL	:	0,13 mg/l
LOAEL	:	1,3 mg/l
Application Route	:	Inhalation
Exposure time	:	365 d
Number of exposures	:	daily
Method	:	OECD Test Guideline 453

Aspiration toxicity

Product:

No data available

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11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : 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:

No data available

Components:

Polymer of 2,2,3,3,4,4-hexafluoro-4-[(trifluoroethenyl)oxy]butanoic acid:

Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 100 mg/l
aquatic invertebrates
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100
plants
mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

methanol:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 15.400 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: US-EPA
Remarks: (ECHA)

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Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 18.260 mg/l Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 202 Remarks: (ECHA)
Toxicity to algae/aquatic plants	: EC50 (Pseudokirchneriella subcapitata (green algae)): 22.000 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 201 Remarks: (ECHA)
Toxicity to microorganisms	: EC50 (activated sludge): > 1.000 mg/l Exposure time: 3 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 209 Remarks: (ECHA)
Toxicity to fish (Chronic toxicity)	: NOEC: 7.900 mg/l Exposure time: 200 h Species: Oryzias latipes (Orange-red killifish) Remarks: (External SDS)

12.2 Persistence and degradability

Product:

No data available

Components:

Polymer of 2,2,3,3,4,4-hexafluoro-4-[(trifluoroethenyl)oxy]butanoic acid:

Biodegradability : Result: Not readily biodegradable.
Method: OECD Test Guideline 301C

methanol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 99 %
Exposure time: 30 d
Method: OECD Test Guideline 301D

Biochemical Oxygen Demand (BOD) : 600 - 1.120 mg/g
Incubation time: 5 d
Remarks: (IUCLID)

Chemical Oxygen Demand (COD) : 1.420 mg/g
Remarks: (IUCLID)

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BOD/COD	:	BOD/COD: 76 % Remarks: (IUCLID)
ThOD	:	1,500 mg/g Remarks: (Lit.)
BOD/ThOD	:	76 % Remarks: Closed Bottle test (IUCLID)
Stability in water	:	Degradation half life: 2,2 y Test substance: Water Remarks: reaction with hydroxyl radicals (IUCLID)

12.3 Bioaccumulative potential

Product:

No data available

Components:

Polymer of 2,2,3,3,4,4-hexafluoro-4-[(trifluoroethenyl)oxy]butanoic acid:

Bioaccumulation : Concentration: <= 2,7 mg/l
Bioconcentration factor (BCF): 3,8

methanol:

Partition coefficient: n-octanol/water : log Pow: -0,77
Method: (experimental)
Remarks: (Lit.)
Bioaccumulation is not expected.

12.4 Mobility in soil

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.

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Components:

methanol:

Assessment : Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Waste should not be disposed of by release to sewers.

SECTION 14: Transport information

Air transport (IATA)

14.1. UN/ID No. : UN 3265
14.2. Proper shipping name : Corrosive liquid, acidic, organic, n.o.s.
(Polymer of 2,2,3,3,4,4-hexafluoro-4-[(trifluoroethenyl)oxy]butanoic acid, Alkyl sulfonic acid)
14.3. Class : 8
14.4. Packing group : III
14.5 Environmentally hazardous : --
14.6 Special precautions for user : no

Sea transport (IMDG)

14.1. UN number : UN 3265
14.2. Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Polymer of 2,2,3,3,4,4-hexafluoro-4-[(trifluoroethenyl)oxy]butanoic acid, Alkyl sulfonic acid)

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14.3. Class	:	8
14.4. Packing group	:	III
14.5 Environmentally hazardous	:	--
14.6 Special precautions for user	:	yes
EmS Code	:	F-A, S-B
Segregation group	:	1: Acids

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

Land transport (ADR/RID)

14.1. UN number	:	UN 3265
14.2. Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Polymer of 2,2,3,3,4,4-hexafluoro-4- [(trifluoroethenyl)oxy]butanoic acid, Alkyl sulfonic acid)
14.3. Class	:	8
14.4. Packing group	:	III
14.5 Environmentally hazardous	:	--
14.6 Special precautions for user	:	yes
Tunnel restriction code	:	(E)

Inland waterway transport (ADN)

ADN Classification : Not Assigned

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 75, 3 2-propanol
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollu-	:	Not applicable

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tants (recast)

REACH - List of substances subject to authorisation (Annex XIV) : 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 (TRGS 510) : 10 - 13, Other liquids and solids

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

Full text of H-Statements

H225 : Highly flammable liquid and vapour.
H301 : Toxic if swallowed.
H302 : Harmful if swallowed.
H311 : Toxic in contact with skin.
H314 : Causes severe skin burns and eye damage.
H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H331 : Toxic if inhaled.
H370 : Causes damage to organs.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Eye Dam. : Serious eye damage
Flam. Liq. : Flammable liquids
Skin Corr. : Skin corrosion
Skin Sens. : Skin sensitisation
STOT SE : Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; 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; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air

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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; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Decimal notation: "Thousands" places are identified with a dot (example: 2.000 mg/kg means "two thousand mg/kg"). Decimal places are identified with a comma (example: 1,35 g/cm³).

Revision Note

Safety datasheet sections which have been updated : SECTION 1 (Unique Formula Identifier)
General revision

Classification of the mixture:

Met. Corr. 1	H290
Eye Irrit. 2	H319
Skin Sens. 1	H317

Classification procedure:

Based on product data or assessment
Based on product data or assessment
Calculation method

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. This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

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