

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



SURFACE RUST REMOVER - 5 L

Version 6.0 Revision Date: 11.06.2023 SDS Number: 10677196-00010 Date of last issue: 11.11.2022
Date of first issue: 04.12.2015

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

1.1 Product identifier

Trade name : SURFACE RUST REMOVER - 5 L
Product code : 0890130
Unique Formula Identifier (UFI) : URM1-90PQ-700G-S7UD

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

Use of the Sub-stance/Mixture : Cleaning agent, Detergent
Professional use product
Recommended restrictions on use : Not applicable

1.3 Details of the supplier of the safety data sheet

Company : Adolf Wuerth GmbH & Co. KG
Reinhold-Würth-Str. 12-17
74653 Künzelsau
Telephone : +49 794015 0
Telefax : +49 794015 10 00
E-mail address of person responsible for the SDS : isi@wuerth.com

1.4 Emergency telephone number

+49 (0)6132 – 84463

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.

Long-term (chronic) aquatic hazard, Category 3 H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)


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- Hazard pictograms : 
- Signal word : Warning
- Hazard statements : H290 May be corrosive to metals.
H412 Harmful to aquatic life with long lasting effects.
- Precautionary statements : **Prevention:**
P234 Keep only in original packaging.
P273 Avoid release to the environment.
Response:
P390 Absorb spillage to prevent material damage.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labelling

EUH208 Contains But-2-yne-1,4-diol. May produce an allergic reaction.

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

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Hydrochloric acid	7647-01-0 231-595-7 017-002-01-X 01-2119484862-27	Met. Corr. 1; H290 Skin Corr. 1A; H314 Eye Dam. 1; H318 STOT SE 3; H335	>= 3 - < 5

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		<hr/> specific concentration limit Skin Corr. 1A; H314 >= 25 % Skin Irrit. 2; H315 10 - < 25 % Eye Irrit. 2; H319 10 - < 25 % STOT SE 3; H335 >= 10 %	
Ethoxylated octadecanamine	26635-92-7	Acute Tox. 4; H302 Eye Irrit. 2; H319 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 <hr/> M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1 <hr/> Acute toxicity estimate Acute oral toxicity: 1.260 mg/kg	>= 0,25 - < 1
But-2-yne-1,4-diol	110-65-6 203-788-6 603-076-00-9 01-2119489899-05	Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1; H317 STOT SE 3; H335 STOT RE 2; H373 (Kidney, Liver, spleen) <hr/> specific concentration limit Skin Corr. 1B; H314 >= 50 % Skin Irrit. 2; H315 25 - < 50 % Eye Irrit. 2; H319 25 - < 50 % <hr/> Acute toxicity estimate	>= 0,1 - < 1

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			Acute oral toxicity: 132 mg/kg Acute inhalation toxicity (dust/mist): 0,69 mg/l Acute dermal toxicity: 659 mg/kg
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For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.
- In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
- In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

- Risks : May produce an allergic reaction.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically and supportively.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Not applicable
Will not burn

Unsuitable extinguishing media : Not applicable
Will not burn

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Chlorine compounds

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can

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be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absor-
bent.

Local or national regulations may apply to releases and dis-
posal of this material, as well as those materials and items
employed in the cleanup of releases. You will need to deter-
mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding
certain local or national requirements.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- | | | |
|-------------------------|---|---|
| Technical measures | : | See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section. |
| Local/Total ventilation | : | Use only with adequate ventilation. |
| Advice on safe handling | : | Do not get on skin or clothing.
Avoid breathing mist or vapours.
Do not swallow.
Avoid contact with eyes.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-
sessment
Keep away from metals. Store in original container or corro-
sive resistant and/or lined container.
Keep only in original packaging.
Take care to prevent spills, waste and minimize release to the
environment. |
| Hygiene measures | : | If exposure to chemical is likely during typical use, provide eye
flushing systems and safety showers close to the working
place. When using do not eat, drink or smoke. Contaminated
work clothing should not be allowed out of the workplace.
Wash contaminated clothing before re-use. |

7.2 Conditions for safe storage, including any incompatibilities

- | | | |
|---|---|--|
| Requirements for storage areas and containers | : | Store in original container. Reacts with many metals to liber-
ate hydrogen gas which can form explosive mixtures with air.
Hydrogen, a highly flammable gas, can accumulate to explo-
sive concentrations inside drums, or any types of steel con-
tainers or tanks upon storage.

Keep in properly labelled containers. Store in accordance with
the particular national regulations. |
| Advice on common storage | : | No special restrictions on storage with other products. |
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Storage class (TRGS 510) : 12
Storage period : 24 Months
Recommended storage temperature : > 5 °C

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Hydrochloric acid	7647-01-0	TWA	5 ppm 8 mg/m ³	2000/39/EC
		Further information: Indicative		
		STEL	10 ppm 15 mg/m ³	2000/39/EC
		Further information: Indicative		
		AGW	2 ppm 3 mg/m ³	DE TRGS 900
		Peak-limit: excursion factor (category): 2;(I)		
		Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child		
But-2-yne-1,4-diol	110-65-6	TWA	0,5 mg/m ³	2017/164/EU
		Further information: Indicative		
		AGW (Vapour and aerosols)	0,1 ppm 0,36 mg/m ³	DE TRGS 900
		Peak-limit: excursion factor (category): 1;(I)		
		Further information: Skin absorption, When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child, Substance sensitizing through the skin		

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Hydrochloric acid	Workers	Inhalation	Long-term local effects	8 mg/m ³
	Workers	Inhalation	Acute local effects	15 mg/m ³
But-2-yne-1,4-diol	Workers	Inhalation	Long-term systemic effects	0,02 mg/m ³
	Workers	Inhalation	Acute systemic effects	2 mg/m ³
	Workers	Inhalation	Long-term local ef-	0,02 mg/m ³

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			ffects	
	Workers	Inhalation	Acute local effects	2 mg/m3
	Workers	Skin contact	Long-term systemic effects	0,01 mg/kg bw/day
	Workers	Skin contact	Acute local effects	4 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,01 mg/m3
	Consumers	Inhalation	Acute systemic effects	1 mg/m3
	Consumers	Inhalation	Long-term local effects	0,01 mg/m3
	Consumers	Inhalation	Acute local effects	1 mg/m3
	Consumers	Skin contact	Long-term systemic effects	0,008 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	2 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0,008 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
But-2-yne-1,4-diol	Fresh water	0,3 mg/l
	Marine water	0,03 mg/l
	Intermittent use/release	0,3 mg/l
	Sewage treatment plant	1990 mg/l
	Fresh water sediment	1,09 mg/kg
	Marine sediment	0,11 mg/kg
	Soil	0,043 mg/kg

8.2 Exposure controls

Engineering measures

Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.

Personal protective equipment

Eye/face protection : Please follow all applicable local/national requirements when selecting protective measures for a specific workplace.

Wear the following personal protective equipment:
Safety glasses
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.
Equipment should conform to DIN EN 166

Hand protection

Material : Nitrile rubber
Break through time : > 240 min
Glove thickness : 0,35 mm

Remarks : Choose gloves to protect hands against chemicals depending

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on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Skin and body protection	:	Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
Respiratory protection	:	If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection. Equipment should conform to DIN EN 14387
Filter type	:	Acidic gas/vapour type (E)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	clear
Odour	:	characteristic
Odour Threshold	:	No data available
Melting point/freezing point	:	ca. 0 °C
Initial boiling point and boiling range	:	100 °C
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	Will not burn
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	boils before flash
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available

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pH : 0,2 (20 °C)
Concentration: 100 %
concentrate

Viscosity
Viscosity, kinematic : No data available

Solubility(ies)
Water solubility : completely miscible

Solubility in other solvents : No data available

Partition coefficient: n-
octanol/water : Not applicable

Vapour pressure : 23 hPa (20 °C)

Density : 1,02 g/cm³ (20 °C)

Relative vapour density : No data available

Particle characteristics
Particle size : Not applicable

9.2 Other information

Explosives : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Metal corrosion rate : Corrosive to metals

Evaporation rate : No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : May be corrosive to metals.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : Bases

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10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

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

Information on likely routes of exposure :
Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Components:

Hydrochloric acid:

Acute inhalation toxicity : LC50 (Rat): 8,3 mg/l
Exposure time: 30 min
Test atmosphere: dust/mist

Ethoxylated octadecanamine:

Acute oral toxicity : LD50 (Rat): 1.260 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

But-2-yne-1,4-diol:

Acute oral toxicity : LD50 (Rat): 132 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0,69 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): 659 mg/kg
Method: OECD Test Guideline 402

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Skin corrosion/irritation

Not classified based on available information.

Components:

Hydrochloric acid:

Species	:	reconstructed human epidermis (RhE)
Method	:	OECD Test Guideline 431
Result	:	Corrosive after 3 minutes or less of exposure

But-2-yne-1,4-diol:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Corrosive after 3 minutes to 1 hour of exposure

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Hydrochloric acid:

Species	:	Bovine cornea
Method	:	OECD Test Guideline 437
Result	:	Irreversible effects on the eye

Ethoxylated octadecanamine:

Result	:	Irritation to eyes, reversing within 21 days
Remarks	:	Based on data from similar materials

But-2-yne-1,4-diol:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Irreversible effects on the eye

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Hydrochloric acid:

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact

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Species : Guinea pig
Method : OECD Test Guideline 406
Result : negative

Ethoxylated octadecanamine:

Test Type : Maximisation Test
Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : negative
Remarks : Based on data from similar materials

But-2-yne-1,4-diol:

Exposure routes : Skin contact
Result : positive
Remarks : Based on national or regional regulation.

Assessment : Probability or evidence of skin sensitisation in humans

Germ cell mutagenicity

Not classified based on available information.

Components:

Hydrochloric acid:

Genotoxicity in vitro : Test Type: Saacharomyces cerevisiae, mitotic recombination assay (in vitro)
Result: negative

But-2-yne-1,4-diol:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Not classified based on available information.

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Components:

Hydrochloric acid:

Species : Rat
Application Route : Inhalation
Exposure time : 128 weeks
Result : negative

Reproductive toxicity

Not classified based on available information.

Components:

But-2-yne-1,4-diol:

Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 415
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

STOT - single exposure

Not classified based on available information.

Components:

Hydrochloric acid:

Assessment : May cause respiratory irritation.

But-2-yne-1,4-diol:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Components:

But-2-yne-1,4-diol:

Exposure routes : Ingestion
Target Organs : Kidney, Liver, spleen
Assessment : Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

Aspiration toxicity

Not classified based on available information.

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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.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Ethoxylated octadecanamine:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 0,1 - 1 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0,1 - 1 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae)): > 0,001 - 0,01 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

But-2-yne-1,4-diol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 53,6 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 26,8 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 1.058 mg/l
Exposure time: 72 h

EC10 (Desmodesmus subspicatus (green algae)): 346 mg/l
Exposure time: 72 h

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Toxicity to microorganisms : EC10 (Pseudomonas putida): 1.990 mg/l
Exposure time: 17 h

12.2 Persistence and degradability

Components:

Ethoxylated octadecanamine:

Biodegradability : Result: Readily biodegradable.
Biodegradation: > 60 %
Exposure time: 28 d
Remarks: Based on data from similar materials

But-2-yne-1,4-diol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 91 %
Exposure time: 19 d

12.3 Bioaccumulative potential

Components:

But-2-yne-1,4-diol:

Partition coefficient: n- : log Pow: -0,73
octanol/water

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.

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

No data available

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

- | | | |
|------------------------|---|--|
| Product | : | Dispose of in accordance with local regulations.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
Do not dispose of waste into sewer. |
| Contaminated packaging | : | Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product. |
| Waste Code | : | The following Waste Codes are only suggestions:

used product
20 01 29, detergents containing hazardous substances

unused product
20 01 29, detergents containing hazardous substances

uncleaned packagings
15 01 10, packaging containing residues of or contaminated by hazardous substances

Acc. Packaging Act properly emptied packaging:
Properly emptied, non-contaminated packaging of non-hazardous products can be supplied to a system for the collection of sales packaging. |

SECTION 14: Transport information

14.1 UN number or ID number

- | | | |
|------|---|---------|
| ADN | : | UN 1789 |
| ADR | : | UN 1789 |
| RID | : | UN 1789 |
| IMDG | : | UN 1789 |
| IATA | : | UN 1789 |

14.2 UN proper shipping name

- | | | |
|------|---|-----------------------------|
| ADN | : | HYDROCHLORIC ACID, SOLUTION |
| ADR | : | HYDROCHLORIC ACID, SOLUTION |
| RID | : | HYDROCHLORIC ACID, SOLUTION |
| IMDG | : | HYDROCHLORIC ACID, SOLUTION |

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IATA : Hydrochloric acid, solution

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADN	: 8	
ADR	: 8	
RID	: 8	
IMDG	: 8	
IATA	: 8	

14.4 Packing group

ADN
Packing group : III
Classification Code : C1
Hazard Identification Number : 80
Labels : 8

ADR
Packing group : III
Classification Code : C1
Hazard Identification Number : 80
Labels : 8
Tunnel restriction code : (E)

RID
Packing group : III
Classification Code : C1
Hazard Identification Number : 80
Labels : 8

IMDG
Packing group : III
Labels : 8
EmS Code : F-A, S-B

IATA (Cargo)
Packing instruction (cargo aircraft) : 856
Packing instruction (LQ) : Y841
Packing group : III
Labels : Corrosive

IATA (Passenger)
Packing instruction (passenger aircraft) : 852
Packing instruction (LQ) : Y841
Packing group : III
Labels : Corrosive

14.5 Environmental hazards

ADN
Environmentally hazardous : no

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ADR

Environmentally hazardous : no

RID

Environmentally hazardous : no

IMDG

Marine pollutant : no

14.6 Special precautions for user

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.

14.7 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable for product as supplied.

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : If you intend to use this product as tattoo ink, please contact your vendor.

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 pollutants (recast) : Not applicable

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

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

Water hazard class (Germa- : WGK 1 slightly hazardous to water

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ny) Classification according to AwSV, Annex 1 (5.2)

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 0 %, 0 g/l
Remarks: VOC content excluding water

Regulation (EC) No. 648/2004, as amended : less than 5 %: Non-ionic surfactants

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Other information : Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements

H290 : May be corrosive to metals.
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.
H319 : Causes serious eye irritation.
H331 : Toxic if inhaled.
H335 : May cause respiratory irritation.
H373 : May cause damage to organs through prolonged or repeated exposure.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard
Eye Dam. : Serious eye damage
Eye Irrit. : Eye irritation
Met. Corr. : Corrosive to metals
Skin Corr. : Skin corrosion
Skin Sens. : Skin sensitisation
STOT RE : Specific target organ toxicity - repeated exposure
STOT SE : Specific target organ toxicity - single exposure
2000/39/EC : Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
2017/164/EU : Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
DE TRGS 900 : Germany. TRGS 900 - Occupational exposure limit values.

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2000/39/EC / TWA	:	Limit Value - eight hours
2000/39/EC / STEL	:	Short term exposure limit
2017/164/EU / TWA	:	Limit Value - eight hours
DE TRGS 900 / AGW	:	Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - 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 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

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Classification of the mixture:

Met. Corr. 1	H290
Aquatic Chronic 3	H412

Classification procedure:

Based on product data or assessment
Calculation method

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for

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safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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