



SAFETY DATA SHEET STAR RUST OFF HD

PRODUCT CODE: 00910017

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

1.1. Product identifier

Product name STAR RUST OFF HD

Product number 00910017

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

Identified uses STAR RUST OFF HD is designed for the removal of rust stains from paint and metal work. It can also be used as a descaler and for brightening of metals such as aluminium and stainless steel.

Applications

Rust / Scale Remover

Use at a dilution of 1 to 4 depending on the amount of rust/scale to be removed. Apply by brush, cloth or spray or use in a dip tank (plastic, rubber-lined or stainless steel). Remove loose rust/scale with a stiff wire brush, and all traces of oil and grease before treatment. For faster results, rub with steel wool. As soon as the surface is free of rust or scale rinse off with clean water.

For Cleaning and Brightening metals

Use at a dilution of 1 to 10. Leave it to dry and then rinse off with cold water.

Restoration of glazed surfaces

Use at a dilution of 1 to 10. Leave for 10 to 15 minutes then completely rinse with cold water.

1.3. Details of the supplier of the safety data sheet

Supplier STAR International
Star House
Turbine Business Park
Turbine Road
Birkenhead
Merseyside
CH41 9BA
Tel: +44 (0) 1244 504 500
www.star-international.co.uk

1.4. Emergency telephone number

Emergency telephone +44 (0) 1244 504 500 (Office hours only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Met. Corr. 1 - H290

Health hazards Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318

STAR RUST OFF HD

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word Danger

Hazard statements
 H290 May be corrosive to metals.
 H302 Harmful if swallowed.
 H314 Causes severe skin burns and eye damage.

Precautionary statements
 P260 Do not breathe vapour/ spray.
 P264 Wash contaminated skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P390 Absorb spillage to prevent material damage.
 P406 Store in a corrosion-resistant container with a resistant inner liner.
 P501 Dispose of contents/ container in accordance with national regulations.

Contains PHOSPHORIC ACID , SURFAC UN65/95

Supplementary precautionary statements
 P234 Keep only in original packaging.
 P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.
 P310 Immediately call a POISON CENTER/ doctor.
 P321 Specific treatment (see medical advice on this label).
 P363 Wash contaminated clothing before reuse.
 P405 Store locked up.

2.3. Other hazards

Not available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

PHOSPHORIC ACID	10-30%
CAS number: 7664-38-2	EC number: 231-633-2
	REACH registration number: 01-2119485924-24-XXXX
Classification	
Met. Corr. 1 - H290	
Acute Tox. 4 - H302	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	

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DGMBE SOLVENT		5-10%
CAS number: 112-34-5	EC number: 203-961-6	REACH registration number: 01-2119475104-44-XXXX
Classification		
Eye Irrit. 2 - H319		
SURFAC UN65/95		
CAS number: 68439-46-3		
Classification		
Acute Tox. 4 - H302 Eye Dam. 1 - H318		

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air at once. Keep affected person warm and at rest. Get medical attention immediately.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention immediately.
Skin contact	Remove contaminated clothing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Ingestion	Harmful if swallowed.
Skin contact	Causes severe skin burns and eye damage.
Eye contact	Causes severe skin burns and eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No information available.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media suitable for the surrounding fire.
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5.2. Special hazards arising from the substance or mixture

Specific hazards	Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m ³ .
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5.3. Advice for firefighters

Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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Personal precautions Follow precautions for safe handling described in this safety data sheet. Avoid contact with skin and eyes. Provide adequate ventilation.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Neutralise spilled material with crushed limestone, slaked lime (calcium hydroxide), soda ash (sodium carbonate) or sodium bicarbonate. Absorb spillage to prevent material damage. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Flush contaminated area with plenty of water. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Provide adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store at temperatures between 10°C and 40°C.

Storage class Corrosive storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

PHOSPHORIC ACID

Long-term exposure limit (8-hour TWA): WEL 1 mg/m³

Short-term exposure limit (15-minute): WEL 2 mg/m³

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Long-term exposure limit (8-hour TWA): WEL 10 ppm 67,5 mg/m³

Short-term exposure limit (15-minute): WEL 15 ppm 101,2 mg/m³

WEL = Workplace Exposure Limit

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DNEL

Workers - Inhalation; Short term local effects: 101.2 mg/m³
 Workers - Dermal; Long term systemic effects: 83 mg/kg/day
 Workers - Inhalation; Long term systemic effects: 67.5 mg/m³
 Workers - Inhalation; Long term local effects: 67.5 mg/m³
 Workers - Inhalation; Short term local effects: 60.7 mg/m³
 Consumer - Dermal; Long term systemic effects: 50 mg/kg/day
 Consumer - Inhalation; Long term systemic effects: 40.5 mg/m³
 Consumer - Oral; Long term systemic effects: 5 mg/kg/day
 Consumer - Inhalation; Long term local effects: 40.5 mg/m³

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PNEC

- Fresh water; 1.1 mg/l
- Sediment (Freshwater); 4.4 mg/kg
- Intermittent release; 11 mg/l
- Sediment (Marinewater); 0.44 mg/kg
- marine water; 0.1 mg/l
- STP; 200 mg/l
- Soil; 0.32 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation.

Eye/face protection

The following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. filter A/P2 EN 136/140/141/145/143/149

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Odourless.
pH	pH (concentrated solution): <1
Relative density	~1.23 @ 20°C
Solubility(ies)	Miscible with water.

9.2. Other information

Other information	Not available.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	No information available.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not available.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid Strong acids.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 1,739.13

Skin corrosion/irritation

Skin corrosion/irritation Corrosive to skin.

Serious eye damage/irritation

Serious eye damage/irritation Risk of serious damage to eyes.

Respiratory sensitisation

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

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met

Inhalation May cause respiratory system irritation.

Ingestion Harmful if swallowed.

Skin contact Causes severe skin burns and eye damage.

Eye contact Causes severe skin burns and eye damage.

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Toxicological information on ingredients.

PHOSPHORIC ACID

Acute toxicity - oral

ATE oral (mg/kg) 500.0

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Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,000.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,000.0

Species Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) >29 ppm, Inhalation, Rat

Skin corrosion/irritation

Animal data Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Irritating to eyes.

Respiratory sensitisation

Respiratory sensitisation No specific test data are available.

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - : Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity No specific test data are available.

Reproductive toxicity

Reproductive toxicity - fertility This substance has no evidence of toxicity to reproduction.

Reproductive toxicity - development This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Prolonged or repeated exposure may cause the following adverse effects: Liver and/or kidney damage.

Aspiration hazard

Aspiration hazard Not available.

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Inhalation	May cause respiratory system irritation.
Ingestion	May cause discomfort if swallowed.
Skin contact	May be slightly irritating to skin.
Eye contact	Causes serious eye irritation.

SECTION 12: Ecological information

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

Ecological information on ingredients.

DGMBE SOLVENT

Ecotoxicity The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.1. Toxicity

Ecological information on ingredients.

DGMBE SOLVENT

Toxicity Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 2700 mg/l, Fish
 LC₅₀, 96 hours: 1300 mg/l, Lepomis macrochirus (Bluegill)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 101 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 96 hours: >100 mg/l, Freshwater plants

SURFAC UN65/95

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 1 - 10 mg/l, Fish

12.2. Persistence and degradability

Persistence and degradability No data available.

Ecological information on ingredients.

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Persistence and degradability The product is readily biodegradable.

Biodegradation - Degradation 80-90%: 28 days

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Persistence and degradability

This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request, or at the request of a detergent manufacturer.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Ecological information on ingredients.

DGMBE SOLVENT

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.
Partition coefficient : 0.56

12.4. Mobility in soil

Mobility Miscible with water.

Ecological information on ingredients.

DGMBE SOLVENT

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

DGMBE SOLVENT

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects Not available.

Ecological information on ingredients.

DGMBE SOLVENT

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 1805

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UN No. (IMDG)	1805
UN No. (ICAO)	1805
UN No. (ADN)	1805

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	PHOSPHORIC ACID, SOLUTION
Proper shipping name (IMDG)	PHOSPHORIC ACID, SOLUTION
Proper shipping name (ICAO)	PHOSPHORIC ACID, SOLUTION
Proper shipping name (ADN)	PHOSPHORIC ACID, SOLUTION

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C1
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

Transport labels**14.4. Packing group**

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III
ADN packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

IMDG Code segregation group	1. Acids
EmS	F-A, S-B
ADR transport category	3
Emergency Action Code	2R
Hazard Identification Number (ADR/RID)	80
Tunnel restriction code	(E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

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Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

EU legislation Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.

15.2. Chemical safety assessment

Not available.

SECTION 16: Other information

General information Only trained personnel should use this material.

Key literature references and sources for data Source: European Chemicals Agency, <http://echa.europa.eu/> Health and Safety Executive (HSE).

Revision date 20/01/2020

SDS number 21485

Hazard statements in full H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.

Signature Auguste Little