

Safety Data Sheet

according to UK REACH Regulation

Yellow chromate conversion coating

Revision date: 07.11.2022

Product code: 0143

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

Yellow chromate conversion coating

UFI: 4F1S-6D1A-R00Q-ND3F

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

Metal surface treatment products

Uses advised against

No further relevant information available.

1.3. Details of the supplier of the safety data sheet

Company name:	MARAWE GmbH & Co. KG	
Street:	Donaustauer Str. 378 - Gebäude 64	
Place:	D-93055 Regensburg	
Telephone:	+49 941 / 29020439	Telefax: +49 941 / 29020593
e-mail:	info@marawe.de	
Contact person:	Product safety department	
Internet:	www.marawe.de	

1.4. Emergency telephone number:+49 941 / 29020439,
Mo-Do 9:00 - 16:00 Uhr; Fr 9:00 - 14:00 Uhr**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**Skin Irrit. 2; H315
Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

2.2. Label elements**GB CLP Regulation**

Signal word: Warning

Pictograms:

**Hazard statements**H315 Causes skin irritation.
H319 Causes serious eye irritation.**Precautionary statements**P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.**SECTION 3: Composition/information on ingredients****3.2. Mixtures**

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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
7782-61-8	iron(III) nitrate nonahydrate			1.9 - < 5 %
	233-899-5		01-2119978293-27	
	Skin Corr. 1B, Eye Dam. 1; H314 H318			
7697-37-2	nitric acid			< 1 %
	231-714-2		01-2119487297-23	
	Ox. Liq. 2, Met. Corr. 1, Acute Tox. 3, Skin Corr. 1A; H272 H290 H331 H314 EUH071			
7681-49-4	sodium fluoride			< 1 %
	231-667-8			
	Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2; H301 H315 H319 EUH032			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
7782-61-8	233-899-5	iron(III) nitrate nonahydrate	1.9 - < 5 %
		oral: LD50 = 3250 mg/kg	
7697-37-2	231-714-2	nitric acid	< 1 %
		inhalation: LC50 = 2,65 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists) Ox. Liq. 2; H272: >= 99 - 100 Ox. Liq. 3; H272: >= 70 - < 99 Skin Corr. 1A; H314: >= 20 - 100 Skin Corr. 1B; H314: >= 5 - < 20	
7681-49-4	231-667-8	sodium fluoride	< 1 %
		oral: LD50 = 148,5 mg/kg	

SECTION 4: First aid measures
4.1. Description of first aid measures
General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down. Change contaminated clothing. Be careful with contaminated clothes and shoes of the victim - they could still contain the product.

After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Remove contact lenses, if present and easy to do.

After ingestion

Rinse mouth immediately and drink 1 glass of water. Do NOT induce vomiting. Call a doctor if you feel unwell.

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

Causes skin irritation.
Causes serious eye irritation.

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

In case of oral uptake: do not use sodium hydrogen carbonate NaHCO₃ or calcium carbonate CaCO₃ for

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neutralisation, because the created carbon dioxide CO₂ can lead to perforation of the stomach. Make slowly drink magnesium oxide MgO suspended in water.

After inhalations of vapours, inhale dexamethasone spray (Auxiloson).

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Non-flammable.

Upon heating and in case of fire, the following may be released:

Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x).

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.

Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**For containment**

Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Provide adequate ventilation. Avoid contact with eyes and skin.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

7.2. Conditions for safe storage, including any incompatibilities

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Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up.

Hints on joint storage

The regulations of the Ordinance on Hazardous Substances with its respective technical rules (TRGS 510) have to be respected.

Keep away from: strong alkalis.

7.3. Specific end use(s)

Metal surface treatment products

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	WEL
1310-73-2	Sodium hydroxide	-	2		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
7697-37-2	nitric acid			
Worker DNEL, acute		inhalation	local	2,6 mg/m ³
Worker DNEL, long-term		inhalation	local	1,3 mg/m ³
Consumer DNEL, acute		inhalation	local	1,3 mg/m ³
Consumer DNEL, long-term		inhalation	local	0,65 mg/m ³
7681-49-4	sodium fluoride			
Worker DNEL, long-term		dermal	systemic	0,36 mg/kg bw/day
Worker DNEL, acute		inhalation	systemic	2,5 mg/m ³
Worker DNEL, long-term		inhalation	local	2,5 mg/m ³
1310-73-2	sodium hydroxide; caustic soda			
Worker DNEL, acute		dermal	local	< 2 %
Worker DNEL, long-term		inhalation	systemic	2,1 mg/m ³
Worker DNEL, long-term		inhalation	local	1 mg/m ³
Consumer DNEL, acute		inhalation	local	2,5 mg/m ³
Consumer DNEL, long-term		inhalation	systemic	5,7 mg/m ³

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PNEC values

CAS No	Substance	Value
Environmental compartment		
7681-49-4	sodium fluoride	
Freshwater		0,9 mg/l
Micro-organisms in sewage treatment plants (STP)		51 mg/l
Soil		11 mg/kg
1310-73-2	sodium hydroxide; caustic soda	
Freshwater		6,4 mg/l
Freshwater (intermittent releases)		3,1 mg/l
Marine water		0,64 mg/l
Freshwater sediment		23 mg/kg
Marine sediment		2,3 mg/kg
Micro-organisms in sewage treatment plants (STP)		51 mg/l
Soil		0,853 mg/kg

8.2. Exposure controls



Individual protection measures, such as personal protective equipment

Eye/face protection

Tight sealing protective goggles (DIN EN 166).

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Use of protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	red
Odour:	odourless

Changes in the physical state

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	>100 °C
Flash point:	not determined

Flammability

Solid/liquid:	not applicable
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Gas: not applicable

Explosive properties

The product is not: Explosive.

Lower explosion limits: not determined

Upper explosion limits: not determined

Self-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

pH-Value (at 20 °C): 2,0 - 2,5

Water solubility: easily soluble

Solubility in other solvents

not determined

Partition coefficient n-octanol/water: not determined

Vapour pressure: not determined

Density (at 20 °C): 1,0 - 1,1 g/cm³

Relative vapour density: not determined

9.2. Other information**Information with regard to physical hazard classes**

Oxidizing properties

Not oxidising.

Other safety characteristics

Solid content: not determined

Evaporation rate: not determined

Further Information**SECTION 10: Stability and reactivity****10.1. Reactivity**

React violently with bases. When applied over large areas to aluminium, zinc, tin and alloys of these metals, significant amounts of nitric oxide (NO) may be released. Provide adequate ventilation.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

Exothermic reactions with: Base, Oxidizing agent, Peroxides.

10.4. Conditions to avoid

heat.

10.5. Incompatible materials

Keep away from: Base, Oxidizing agent, Peroxides.

10.6. Hazardous decomposition products

At normal storage- and application conditions, no dangerous decomposition products should be created. When exposed to high temperatures, dangerous decomposing substances can be released, like carbon monoxide or -dioxide, smoke, nitrogen oxides (NO_x).

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in GB CLP Regulation**

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Acute toxicity

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

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
7782-61-8	iron(III) nitrate nonahydrate					
	oral	LD50 mg/kg	3250	Rat	Manufacturer	
7697-37-2	nitric acid					
	inhalation (4 h) vapour	LC50	2,65 mg/l	Rat	Manufacturer	OECD 403
	inhalation dust/mist	ATE	0,5 mg/l			
7681-49-4	sodium fluoride					
	oral	LD50 mg/kg	148,5	Rat	OPPTS 870 1100	

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information
12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method
7697-37-2	nitric acid						
	Acute fish toxicity	LC50 mg/l	12,5	96 h	Oncorhynchus mykiss (Rainbow trout)	Manufacturer	
	Acute crustacea toxicity	EC50 mg/l	0,492	48 h	Daphnia magna (Big water flea)	Manufacturer	
7681-49-4	sodium fluoride						
	Acute fish toxicity	LC50	51 mg/l	96 h	unspecified	Manufacturer	
	Acute algae toxicity	ErC50 mg/l	43 - 122	96 h	unspecified	Manufacturer	
	Acute crustacea toxicity	EC50 mg/l	26 - 48	48 h	Daphnia magna (Big water flea)	Manufacturer	

12.2. Persistence and degradability

The product has not been tested.

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12.3. Bioaccumulative potential

The product has not been tested.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

The product has not been tested.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

200114 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); Acids; hazardous waste

List of Wastes Code - used product

200114 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); Acids; hazardous waste

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

SECTION 14: Transport information**Land transport (ADR/RID)**

<u>14.1. UN number or ID number:</u>	UN 1760
<u>14.2. UN proper shipping name:</u>	CORROSIVE LIQUID, N.O.S.
<u>14.3. Transport hazard class(es):</u>	8
<u>14.4. Packing group:</u>	III
Hazard label:	8



Classification code:	C9
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

Inland waterways transport (ADN)

<u>14.1. UN number or ID number:</u>	UN 1760
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14.2. UN proper shipping name: CORROSIVE LIQUID, N.O.S.

14.3. Transport hazard class(es): 8

14.4. Packing group: III

Hazard label: 8



Classification code: C9

Special Provisions: 274

Limited quantity: 5 L

Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number or ID number: UN 1760

14.2. UN proper shipping name: CORROSIVE LIQUID, N.O.S.

14.3. Transport hazard class(es): 8

14.4. Packing group: III

Hazard label: 8



Special Provisions: 223, 274

Limited quantity: 5 L

Excepted quantity: E1

EmS: F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1760

14.2. UN proper shipping name: CORROSIVE LIQUID, N.O.S.

14.3. Transport hazard class(es): 8

14.4. Packing group: III

Hazard label: 8



Special Provisions: A3 A803

Limited quantity Passenger: 1 L

Passenger LQ: Y841

Excepted quantity: E1

IATA-packing instructions - Passenger: 852

IATA-max. quantity - Passenger: 5 L

IATA-packing instructions - Cargo: 856

IATA-max. quantity - Cargo: 60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: strongly corrosive.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

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EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

Information according to 2012/18/EU
(SEVESO III):

Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D):

1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Abbreviations and acronyms**ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

UN: United Nations

DNEL: Derived No Effect Level

DMEL: Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

ATE: Acute toxicity estimate

LL50: Lethal loading, 50%

EL50: Effect loading, 50%

EC50: Effective Concentration 50%

ErC50: Effective Concentration 50%, growth rate

NOEC: No Observed Effect Concentration

BCF: Bio-concentration factor

PBT: persistent, bioaccumulative, toxic

vPvB: very persistent, very bioaccumulative

RID: Regulations concerning the international carriage of dangerous goods by rail

MARPOL: International Convention for the Prevention of Marine Pollution from Ships

IBC: Intermediate Bulk Container

SVHC: Substance of Very High Concern

For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)

EmS: Emergency Schedules

MFAG: Medical First Aid Guide

ICAO: International Civil Aviation Organization

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Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method

Relevant H and EUH statements (number and full text)

H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
EUH032	Contact with acids liberates very toxic gas.
EUH071	Corrosive to the respiratory tract.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)