

SAFETY DATA SHEET

FERRO-BET RUST-BORT

The safety data sheet is in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

Date issued	22.02.2021
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1.1. Product identifier

Product name	FERRO-BET RUST-BORT
UFI	3JE0-F1A4-P00K-DPR6
Article no.	260010,260011,260012,260013,260014
GTIN No.	7033695021312, 7033690055008, 7033692193814

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

Use of the substance / preparation	Corrosion inhibitor.
Industrial use	Yes
Professional use	Yes
Consumer use	Yes

1.3. Details of the supplier of the safety data sheet

Supplier

Company name	KREFTING & CO. AS
Postal address	PO Box 14
Postcode	NO 1314
City	Vøyenenga
Country	Norge
Telephone number	+47 67 52 60 85
Email	firmapost@krefting.no
Website	http://www.krefting.no/
Enterprise No.	912 447 839

1.4. Emergency telephone number

Emergency telephone	Description: In Norway: call the Poison Centre +47 22591300
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In UK: For medical advice call 111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Skin Corr. 1A; H314 Eye Dam. 1; H318
Additional information on classification	The full text for all hazard statements is displayed in section 16.

2.2. Label elements

Hazard pictograms (CLP)



Signal word	Danger
Hazard statements	H314 Causes severe skin burns and eye damage.
Precautionary statements	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P260 Do not breathe vapours/spray. 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): Remove / Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor / physician. P501 Dispose of contents / container to godkjent mottak for farlig avfall.
Tactile warnings	Yes
Child-protection	Yes

2.3. Other hazards

PBT / vPvB	Not Classified as PBT/vPvB by current EU criteria.
Health effect	Causes severe skin burns and eye damage.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Composition type	Mixture			
Substance	Identification	Classification	Contents	Notes
Orthophosphoric acid ...%	CAS No.: 7664-38-2 EC No.: 231-633-2 Index No.: 015-011-00-6 REACH Reg. No.:	Skin Corr. 1B; H314 CLP classification, notes: B	10 < 20 %	

1-Methoxy-2-propanol	01-2119485924-24		
	CAS No.: 107-98-2	Flam. Liq. 3; H226;	< 3 %
	EC No.: 203-539-1	STOT SE 3; H336;	
	Index No.: 603-064-00-3		
	REACH Reg. No.: 01-2119457435-35		
Substance comments	The full text for all hazard statements is displayed in section 16.		

SECTION 4: First aid measures

4.1. Description of first aid measures

General	If medical advice is needed, have product container or label at hand.
Inhalation	General first aid, rest, warmth and fresh air. Get medical attention if any discomfort continues.
Skin contact	Remove contaminated clothes and rinse skin thoroughly with water. Contact physician if irritation continues or sores develop.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately. Continue to rinse.
Ingestion	DO NOT INDUCE VOMITING! Rinse nose, mouth and throat with water. Drink plenty of water. Do not give victim anything to drink if he is unconscious. Do not try to neutralize what is drunk. Get medical attention.

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

General symptoms and effects	The product is corrosive. Irritation, itching, blisters, pain and sores may occur.
Acute symptoms and effects	Inhalation: Irritation of nose, throat and airway. Coughing. Difficulty in breathing. Skin contact: Redness, pain and severe burns. Eye contact: Irritation and redness followed by blurred vision. Strongly corrosive. Causes severe burns and serious eye damage. Immediate first aid is imperative. Ingestion: May cause chemical burns in mouth, oesophagus and stomach.
Delayed symptoms and effects	Same as acute symptoms and effects.

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

Medical treatment	If medical advice is needed, have product container or label at hand. Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Water spray, carbon dioxide, dry powder or polar resistant foam.
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5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	The product is non-combustible.
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5.3. Advice for firefighters

Fire fighting procedures	Move container from fire area if it can be done without risk. Containers close to fire should be removed or cooled with water. Self contained breathing apparatus and full protective clothing must be worn in case of fire.
Other information	Look out! The product is corrosive.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal protection measures	Look out! The product is corrosive. Use personal protective equipment as required. Avoid inhalation of vapours and aerosols and contact with skin and eyes. Take off contaminated clothing and wash before reuse. If leakage cannot be stopped, evacuate area. Keep public away from danger area.
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6.2. Environmental precautions

Environmental precautionary measures	Avoid discharge into drains, water courses or onto the ground.
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6.3. Methods and material for containment and cleaning up

Clean up	Small quantities may be flushed to drains with plenty of water. Large Spillages: Prevent discharge of larger quantity to drain. Contain spillages with sand, earth or any suitable absorbent material. Collect in containers and seal securely. Collect and reclaim or dispose in sealed containers in licensed waste.
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6.4. Reference to other sections

Other instructions	See section 8 and 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Look out! The product is corrosive. Observe good chemical hygiene practices. Wear necessary protective equipment. Provide good ventilation. Avoid inhalation of vapours and aerosols and contact with skin and eyes. Take off contaminated clothing and wash before reuse.
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Protective safety measures

Advice on general occupational hygiene	Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site. When using do not eat, drink or smoke.
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7.2. Conditions for safe storage, including any incompatibilities

Storage	Store in tightly closed original container in a well-ventilated place. Store locked up. Keep out of reach of children.
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7.3. Specific end use(s)

Specific use(s)	The identified uses for this product are detailed in Section 1.2.
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SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
Orthophosphoric acid ...%	CAS No.: 7664-38-2	Limit value (8 h) : 1 mg/m ³ Limit value (short term) Value: 2 mg/m ³	
1-Methoxy-2-propanol	CAS No.: 107-98-2	Limit value (8 h) : 100 ppm Limit value (8 h) : 375 mg/m ³ Limit value (short term) Value: 150 ppm Limit value (short term) Value: 560 mg/m ³ Exposure limit letter Letter code: Sk	
Control parameters comments	EH40/2005, Workplace exposure limits 2005, with amendments.		

DNEL / PNEC

Substance	Orthophosphoric acid ...%
DNEL	<p>Group: Professional Route of exposure: Long-term inhalation (local) Value: 1 mg/m³</p> <p>Group: Consumer Route of exposure: Long-term inhalation (local) Value: 0,36 mg/m³</p> <p>Group: Professional Route of exposure: Acute inhalation (local) Value: 2 mg/m³</p> <p>Group: Professional Route of exposure: Long-term inhalation (systemic) Value: 10,7 mg/m³</p> <p>Group: Consumer Route of exposure: Long-term inhalation (systemic) Value: 4,57 mg/m³</p> <p>Group: Consumer Route of exposure: Long-term dermal (systemic) Value: 0,1 mg/kg bw/day</p>

8.2. Exposure controls

Safety signs



Precautionary measures to prevent exposure

Instruction on measures to prevent exposure

Observe occupational exposure limits and minimize the risk of inhalation. Well-ventilated area. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Eye wash facilities and emergency shower must be available when handling this product.

Eye / face protection

Suitable eye protection

Wear tight-fitting goggles or face shield. EN 166

Hand protection

Suitable gloves type

Wear protective gloves. EN 374

Suitable materials

Nitrile. Viton rubber (fluor rubber).

Breakthrough time

Value: > 480 minute(s)

Thickness of glove material

Value: 0,4 mm

Hand protection, comments

The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Skin protection

Skin protection remark

Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection

Respiratory protection necessary at

In case of inadequate ventilation or risk of inhalation of vapours, use suitable respiratory equipment with combination filter (type B/P2). At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid.

Colour

Yellowish.

Odour

Slight odour.

pH

Status: In delivery state
Value: ~ 1

Melting point / melting range

Value: – 10 °C

Boiling point / boiling range

Value: 135 °C
Comments: Orthophosphoric acid

Flash point

Value: > 61 °C

Vapour pressure

Value: 0,04 hPa
Comments: Orthophosphoric acid

Density

Value: 1,14 g/ml

Solubility

Comments: Very soluble in: Water.

Explosive properties	None.
Oxidising properties	None.

9.2. Other information

9.2.2. Other safety characteristics

Comments	No information.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

Stability	Stable under the prescribed storage conditions.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	In contact with metals generates hydrogen gas, which together with air can form explosive mixtures.
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10.4. Conditions to avoid

Conditions to avoid	Avoid contact with: Strong alkalis. Metals.
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10.5. Incompatible materials

Materials to avoid	Metals. Strong alkalis.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Fire creates: Phosphine (PH ₃). Phosphorus oxides.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Substance	Orthophosphoric acid ...%
Acute toxicity	Effect tested: LC50 Route of exposure: Inhalation. Duration: 2 hour(s) Value: 850 mg/l Animal test species: Rat Effect tested: LD50 Route of exposure: Dermal Value: 2,74 g/kg Animal test species: Rabbit

Other information regarding health hazards

Assessment of skin corrosion / irritation, classification	Causes severe skin burns and eye damage.
Assessment of eye damage or irritation, classification	Causes severe skin burns and eye damage.

11.2 Other information

Endocrine disruption	None.
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SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity	The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.
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12.2. Persistence and degradability

Persistence and degradability description/evaluation	The product is readily biodegradable.
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12.3. Bioaccumulative potential

Bioaccumulation, evaluation	Bioaccumulation: Is not expected to be bioaccumulable.
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12.4. Mobility in soil

Mobility	The product is soluble in water.
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12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This product does not contain any PBT or vPvB substances.
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12.6. Endocrine disrupting properties

Endocrine disrupting properties	None.
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12.7. Other adverse effects

Additional ecological information	The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate methods of disposal for the chemical	Absorb in vermiculite or dry sand and dispose of at a licenced hazardous waste collection point.
EWC waste code	EWC waste code: 060104 phosphoricand phosphorous acid Classified as hazardous waste: Yes
Other information	EWC-koden är vägledande. Användaren måste ange rätt EWC-kod om

	användningsområdet avviker.
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SECTION 14: Transport information

Dangerous goods	Yes
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14.1. UN number

ADR/RID/ADN	1805
IMDG	1805
ICAO/IATA	1805

14.2. UN proper shipping name

Proper shipping name English	PHOSPHORIC ACID, SOLUTION
ADR/RID/ADN	
ADR/RID/ADN	PHOSPHORIC ACID, SOLUTION
IMDG	PHOSPHORIC ACID SOLUTION
ICAO/IATA	PHOSPHORIC ACID, SOLUTION

14.3. Transport hazard class(es)

ADR/RID/ADN	8
IMDG	8
ICAO/IATA	8

14.4. Packing group

ADR/RID/ADN	III
IMDG	III
ICAO/IATA	III

14.5. Environmental hazards

IMDG Marine pollutant	No
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14.6. Special precautions for user

Special safety precautions for user	Look out! The product is corrosive.
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14.7. Maritime transport in bulk according to IMO instruments

ADR/RID Other information

Tunnel restriction code	E
Hazard No.	80

IMDG Other information

EmS	F-A, S-B
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SECTION 15: Regulatory information

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

Legislation and regulations	Forskrift om klassifisering, merking og emballering av stoffer og stoffblandinger (CLP) av 16.06.2012 med senere endringer. Forskrift om deklarerer av kjemikalier til produktregisteret (deklareringsforskriften) FOR 2009-04-01 nr 384: Forskrift om landtransport av farlig gods med senere endringer, Direktoratet for samfunnssikkerhet og beredskap. The List of Wastes (England) (Amendment) Regulations 2005. (SI 2005 No. 895). EH40/2005, Workplace exposure limits 2005, with amendments.
Declaration No.	Norway: 7084

15.2. Chemical safety assessment

Chemical safety assessment performed	Yes
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SECTION 16: Other information

List of relevant H-phrases (Section 2 and 3)	H226 Flammable liquid and vapour. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H336 May cause drowsiness or dizziness.
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