SAFETY DATA SHEET

Rust Converter

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

1.1 Product identifier

Product name : Rust Converter

UFI : QGV1-U0TD-D006-9WTN

Product code : 151520

Color : Dark-Brown. Black.

Product description : Lubricating agent-Release products

Product type : Liquid.

Other means of identification : Not available.

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

Identified uses

Lubricating agent-Release products

Uses advised against

Not applicable.

1.3 Details of the supplier of the safety data sheet

WEICON GmbH & Co. KG
Königsberger Str. 255,
48157 Münster, Germany
phone:+49 251 93220,
email: info@weicon.de,
URL: www.weicon.de

e-mail address of person responsible for this SDS : msds@weicon.de

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : EMERGENCY CONTACT – UK, UAE, South Africa (24h): Tel: ++44 1865 407333 (English)
TRANSPORT EMERGENCY CONTACT - UK, UAE, South Africa (24h): Tel: ++44 1865 407333 (English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Met. Corr. 1, H290
Skin Irrit. 2, H315
Eye Dam. 1, H318
Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Ingredients of unknown toxicity : 37.5 percent of the mixture consists of component(s) of unknown acute oral toxicity
37.5 percent of the mixture consists of component(s) of unknown acute dermal toxicity
37.5 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

SECTION 2: Hazards identification

Ingredients of unknown ecotoxicity : Contains 37.5% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H290 - May be corrosive to metals.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.

Prevention : P264 - Wash hands thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear protective gloves. Wear eye or face protection.
P234 - Keep only in original packaging.

Response : P390 - Absorb spillage to prevent material damage.
P362 + P364 - Take off contaminated clothing and wash it before reuse.
P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Storage : Not applicable.

Disposal : P501 - Dispose of waste according to applicable legislation.

Hazardous ingredients : zinc nitrate and nitric acid

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Isopropyl alcohol	REACH #: 01-2119457558-25 EC: 200-661-7 CAS: 67-63-0 Index: 603-117-00-0	≥10 - ≤11	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	-	[1] [2]
1-ethoxypropan-2-ol	EC: 216-374-5 CAS: 1569-02-4 Index: 603-177-00-8	≥3 - ≤4.2	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1] [2]
zinc nitrate	EC: 231-943-8 CAS: 7779-88-6	≥3 - ≤4.2	Ox. Sol. 2, H272 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	ATE [Oral] = 500 mg/kg M [Acute] = 1	[1] [2]
Phosphoric acid	EC: 231-633-2 CAS: 7664-38-2	≥0.3 - ≤1	Met. Corr. 1, H290 Skin Corr. 1B, H314 Eye Dam. 1, H318	Skin Corr. 1B, H314: C ≥ 25%	[1] [2]
nitric acid	EC: 231-714-2 CAS: 7697-37-2	≥0.3 - ≤1	Ox. Liq. 3, H272 Met. Corr. 1, H290 Acute Tox. 3, H331 Skin Corr. 1A, H314 Eye Dam. 1, H318 EUH071	Ox. Liq. 3, H272: C ≥ 65% ATE [Inhalation (vapours)] = 2.65 mg/l Skin Corr. 1A, H314: C ≥ 20%	[1] [2]
zinc bis(dihydrogen phosphate)	EC: 237-067-2 CAS: 13598-37-3	≥0.3 - <1	Acute Tox. 4, H302 Aquatic Acute 1, H400 Aquatic Chronic 2, H411 **See Section 16 for the full text of the H statements declared above.**	ATE [Oral] = 500 mg/kg M [Acute] = 1	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a physical, health or environmental hazard
[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

SECTION 4: First aid measures

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Absorb spillage to prevent material damage. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local

SECTION 6: Accidental release measures

regulations.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in a corrosion resistant container with a resistant inner liner. Store locked up. Separate from alkalis. Keep away from metals. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Isopropyl alcohol	**DFG MAC-values list (Germany, 7/2024)** Develop C. TWA 8 hours: 200 ppm. PEAK 15 minutes: 400 ppm 4 times per shift [Interval: 1 hour]. TWA 8 hours: 500 mg/m³. PEAK 15 minutes: 1000 mg/m³ 4 times per shift [Interval: 1 hour]. **TRGS 900 OEL (Germany, 3/2025)** TWA 8 hours: 500 mg/m³. PEAK 15 minutes: 1000 mg/m³. TWA 8 hours: 200 ppm. PEAK 15 minutes: 400 ppm.
1-ethoxypropan-2-ol	**DFG MAC-values list (Germany, 7/2024)** Develop C. Absorbed through skin.

SECTION 8: Exposure controls/personal protection

	TWA 8 hours: 86 mg/m³. PEAK 15 minutes: 172 mg/m³ 4 times per shift [Interval: 1 hour]. TWA 8 hours: 20 ppm. PEAK 15 minutes: 40 ppm 4 times per shift [Interval: 1 hour]. **TRGS 900 OEL (Germany, 3/2025)** Absorbed through skin. TWA 8 hours: 86 mg/m³. PEAK 15 minutes: 172 mg/m³. TWA 8 hours: 20 ppm. PEAK 15 minutes: 40 ppm.
zinc nitrate	**DFG MAC-values list (Germany, 7/2024) [Zinc and its inorganic compounds]** Develop C. PEAK 15 minutes: 0.4 mg/m³ 4 times per shift [Interval: 1 hour]. Form: respirable fraction. TWA 8 hours: 2 mg/m³. Form: inhalable fraction. TWA 8 hours: 0.1 mg/m³. Form: respirable fraction. PEAK 15 minutes: 4 mg/m³ 4 times per shift [Interval: 1 hour]. Form: inhalable fraction.
Phosphoric acid	**DFG MAC-values list (Germany, 7/2024)** Develop C. TWA 8 hours: 2 mg/m³. Form: inhalable fraction. PEAK 15 minutes: 4 mg/m³ 4 times per shift [Interval: 1 hour]. Form: inhalable fraction. **TRGS 900 OEL (Germany, 3/2025)** TWA 8 hours: 2 mg/m³. Form: inhalable fraction. PEAK 15 minutes: 4 mg/m³. Form: inhalable fraction. **EU OEL (Europe, 1/2022)** TWA 8 hours: 1 mg/m³. STEL 15 minutes: 2 mg/m³.
nitric acid	**TRGS 900 OEL (Germany, 3/2025)** STEL 15 minutes: 1 ppm. STEL 15 minutes: 2.6 mg/m³. **EU OEL (Europe, 1/2022)** STEL 15 minutes: 2.6 mg/m³. STEL 15 minutes: 1 ppm.
zinc bis(dihydrogen phosphate)	**DFG MAC-values list (Germany, 7/2024) [Zinc and its inorganic compounds]** Develop C. PEAK 15 minutes: 0.4 mg/m³ 4 times per shift [Interval: 1 hour]. Form: respirable fraction. TWA 8 hours: 2 mg/m³. Form: inhalable fraction. TWA 8 hours: 0.1 mg/m³. Form: respirable fraction. PEAK 15 minutes: 4 mg/m³ 4 times per shift [Interval: 1 hour]. Form: inhalable fraction.

Biological exposure indices

Product/ingredient name	Exposure indices
Isopropyl alcohol	**DFG BEI-values list (Germany, 7/2024)** BEI: 25 mg/l, acetone [in blood]. Sampling time: end of exposure or end of shift. BEI: 25 mg/l, acetone [in urine]. Sampling time: end of exposure or end of shift. **TRGS 903 - BEI Values (Germany, 10/2024)** BEI: 25 mg/l, acetone [in whole blood]. Sampling time: end of exposure or end of shift. BEI: 25 mg/l, acetone [in urine]. Sampling time: end of exposure or end of shift.
1-ethoxypropan-2-ol	**DFG BEI-values list (Germany, 7/2024)** Notes: danger from percutaneous absorption (see p. 211 and p. 228). BEI: See Section XII.2: Substances for which no BAT values are currently be derived, but documentaries in the "work Medico-toxicological justifications for BAT values, EKA and BLW",

SECTION 8: Exposure controls/personal protection

	1-ethoxy-2-propanol [in urine]. Sampling time: end of exposure or end of shift.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Result
Isopropyl alcohol	**DNEL - General population - Long term - Oral** 26 mg/kg bw/day Effects: Systemic **DNEL - General population - Short term - Oral** 51 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 89 mg/m³ Effects: Systemic **DNEL - General population - Short term - Inhalation** 178 mg/m³ Effects: Systemic **DNEL - General population - Long term - Dermal** 319 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Inhalation** 500 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Dermal** 888 mg/kg bw/day Effects: Systemic **DNEL - Workers - Short term - Inhalation** 1000 mg/m³ Effects: Systemic
1-ethoxypropan-2-ol	**DNEL - General population - Long term - Oral** 14 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Dermal** 44.3 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Dermal** 74 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Inhalation** 106 mg/m³ Effects: Systemic

SECTION 8: Exposure controls/personal protection

	DNEL - General population - Long term - Inhalation 127 mg/m³ Effects: Systemic **DNEL - General population - Short term - Inhalation** 300 mg/m³ Effects: Systemic **DNEL - Workers - Short term - Inhalation** 500 mg/m³ Effects: Systemic
zinc nitrate	**DNEL - General population - Long term - Oral** 0.83 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Inhalation** 1 mg/m³ Effects: Systemic **DNEL - General population - Long term - Inhalation** 1.25 mg/m³ Effects: Systemic **DNEL - General population - Long term - Dermal** 8.3 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Dermal** 8.3 mg/kg bw/day Effects: Systemic
Phosphoric acid	**DNEL - General population - Long term - Oral** 0.1 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 0.36 mg/m³ Effects: Local **DNEL - Workers - Long term - Inhalation** 1 mg/m³ Effects: Local **DNEL - Workers - Short term - Inhalation** 2 mg/m³ Effects: Local **DNEL - General population - Long term - Inhalation** 4.57 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Inhalation** 10.7 mg/m³ Effects: Systemic

PNECs

Not available.

8.2 Exposure controls

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. Recommended : 1 - 4 hours (breakthrough time): Protective gloves made of nitrile rubber (material thickness of 0,4 mm); EN 374-5 Cat. III ; 4 - 8 hours (breakthrough time): Protective gloves made of Viton®/ butyl rubber (material thickness of 0,7 mm); EN388 Cat.II / EN374 Cat.III / EN374-2

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended : organic vapor (Type AX) and particulate filter

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Color : Dark-Brown. Black.

Odor : Characteristic.

Odor threshold : Not available.

Melting point/freezing point : Not available.

Boiling point or initial boiling point and boiling range : 100°C (212°F)

Flammability : Highly flammable in the presence of the following materials or conditions: heat.

Lower and upper explosion limit : Not available.

SECTION 9: Physical and chemical properties

Flash point :

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
Isopropyl alcohol	11.7	53.1				
1-ethoxypropan-2-ol	40	104	IP 34/88			

Auto-ignition temperature : Not applicable.

Decomposition temperature : Not available.

pH : 1.4 to 2 [Conc. (% w/w): 100%]

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): 1 mm^2/s
Kinematic (40°C): Not available.

Solubility :

Media	Result
cold water	Soluble

Solubility in water : Not available.

Partition coefficient n-octanol/ water (log Pow) : Not applicable.

Vapor pressure :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Isopropyl alcohol	33.00268	4.4				
1-ethoxypropan-2-ol	7.50061	1				
Phosphoric acid	0.03	0.004				

Relative density : Not available.

Relative vapor density : Not available.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties : Not available.

Oxidizing properties : Not available.

9.2.2 Other safety characteristics

Miscible with water : Yes.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

SECTION 10: Stability and reactivity

10.5 Incompatible materials : Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.
Reactive or incompatible with the following materials:
alkalis
metals

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Extremely reactive or incompatible with the following materials: oxidizing materials and reducing materials.

SECTION 11: Toxicological information

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

Acute toxicity

Product/ingredient name	Result
Isopropyl alcohol	**Rabbit - Dermal - LD50** 12800 mg/kg **Rat - Oral - LD50** 5000 mg/kg Toxic effects: Behavioral - General anesthetic
1-ethoxypropan-2-ol	**Rat - Oral - LD50** 4400 mg/kg **Rabbit - Dermal - LD50** 8100 mg/kg
Phosphoric acid	**Rat - Oral - LD50** 1.25 g/kg Toxic effects: Lung, Thorax, or Respiration - Acute pulmonary edema Liver - Changes in liver weight
nitric acid	**Rat - Inhalation - LC50 Gas.** 2500 ppm [4 hours] **Rat - Inhalation - LC50 Vapor** 130 mg/m³ [4 hours]
zinc bis(dihydrogen phosphate)	**Rat - Oral - LD50** 1990 mg/kg

Conclusion/Summary [Product] : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Rust Converter	7812.5	N/A	N/A	220.8	N/A
Isopropyl alcohol	5000	12800	N/A	N/A	N/A
1-ethoxypropan-2-ol	4400	8100	N/A	N/A	N/A
zinc nitrate	500	N/A	N/A	N/A	N/A
nitric acid	N/A	N/A	N/A	2.65	N/A
zinc bis(dihydrogen phosphate)	500	N/A	N/A	N/A	N/A

Skin corrosion/irritation

Product/ingredient name	Result

SECTION 11: Toxicological information

Isopropyl alcohol	**Rabbit - Skin - Mild irritant** Amount/concentration applied: 500 mg

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name	Result
Isopropyl alcohol	**Rabbit - Eyes - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 100 mg **Rabbit - Eyes - Moderate irritant** Amount/concentration applied: 10 mg **Rabbit - Eyes - Severe irritant** Amount/concentration applied: 100 mg
1-ethoxypropan-2-ol	**Rabbit - Eyes - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 100 mg

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

SECTION 11: Toxicological information

Product/ingredient name	Result
Isopropyl alcohol	STOT SE 3, H336 (Narcotic effects)
1-ethoxypropan-2-ol	STOT SE 3, H336 (Narcotic effects)
zinc nitrate	STOT SE 3, H336 (Narcotic effects)

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

SECTION 11: Toxicological information

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result
Isopropyl alcohol	**Acute - LC50 - Marine water** Crustaceans - Common shrimp, sand shrimp - *Crangon crangon* 1400 mg/l [48 hours] Effect: Mortality **Acute - LC50 - Fresh water** Fish - Harlequinfish, red rasbora - *Rasbora heteromorpha* Size: 1 to 3 cm 4200 mg/l [96 hours] Effect: Mortality
zinc nitrate	**Acute - LC50 - Fresh water** Fish - Minnow - *Phoxinus phoxinus* - Adult Size: 56 to 86 mm 3200 µg/l [96 hours] Effect: Mortality **Acute - LC50 - Fresh water** US EPA, OECD Daphnia - Water flea - *Daphnia magna* - Neonate Age: 20 to 24 hours 0.553 mg/l [48 hours] Effect: Mortality
Phosphoric acid	**Acute - LC50 - Fresh water** US EPA Fish - Bluegill - *Lepomis macrochirus* Weight: 0.39 g 60 ppm [96 hours] Effect: Mortality **Acute - LC50 - Fresh water** US EPA Daphnia - Water flea - *Daphnia magna* Age: <48 hours 89 mg/l [48 hours] Effect: Mortality
nitric acid	**Acute - LC50 - Marine water** Crustaceans - Green crab - *Carcinus maenas* - Adult 180 mg/l [48 hours] Effect: Mortality **Acute - LC50 - Fresh water** Fish - Western mosquitofish - *Gambusia affinis* - Adult 72 ppm [96 hours] Effect: Mortality

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Not available.

SECTION 12: Ecological information

Conclusion/Summary [Product] : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Isopropyl alcohol	0.05	-	Low
1-ethoxypropan-2-ol	<1	-	Low
zinc nitrate	-	60960	High
nitric acid	-0.21	-	Low
zinc bis(dihydrogen phosphate)	-	60960	High

12.4 Mobility in soil

Soil/Water partition coefficient

Product/ingredient name	logKoc	Koc
Isopropyl alcohol	0.54	3.4364
1-ethoxypropan-2-ol	1.2	14.7877

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
Isopropyl alcohol	No	No	No	No	No	No	No
1-ethoxypropan-2-ol	No	No	No	No	No	No	No
zinc nitrate	No	No	No	No	No	No	No
Phosphoric acid	No	No	No	No	No	No	No
nitric acid	No	No	No	No	No	No	No
zinc bis(dihydrogen phosphate)	No	No	No	No	No	No	No

Mobility : Not available.

Conclusion/Summary : The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Isopropyl alcohol	No	N/A	N/A	No	N/A	N/A	N/A
1-ethoxypropan-2-ol	No	N/A	N/A	No	N/A	N/A	N/A
zinc nitrate	No	No	No	No	No	No	No
Phosphoric acid	No	No	No	No	No	No	No
nitric acid	No	No	No	No	No	No	No
zinc bis(dihydrogen phosphate)	No	No	No	No	No	No	No

Regulation (EC) No. 1272/2008 [CLP]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Isopropyl alcohol	No	No	No	No	No	No	No
1-ethoxypropan-2-ol	No	No	No	No	No	No	No
zinc nitrate	No	No	No	No	No	No	No
Phosphoric acid	No	No	No	No	No	No	No
nitric acid	No	No	No	No	No	No	No
zinc bis(dihydrogen phosphate)	No	No	No	No	No	No	No

Conclusion/Summary Regulation (EC) No. 1272/2008 [CLP] : The product does not meet the criteria to be considered as a PBT or vPvB.

12.6 Endocrine disrupting properties

SECTION 12: Ecological information

Not available.

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
13 02 06*	synthetic engine, gear and lubricating oils

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Type of packaging	European waste catalogue (EWC)	
Can	15 01 10*	packaging containing residues of or contaminated by hazardous substances

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN3264	UN3264	UN3264	UN3264
14.2 UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphoric acid)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphoric acid)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphoric acid)	Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid)
14.3 Transport hazard class(es)	8 	8 	8 	8 
14.4 Packing group	III	III	III	III

SECTION 14: Transport information

14.5 Environmental hazards	No.	No.	No.	No.

Additional information

ADR/RID : **Hazard identification number** 80
Limited quantity 5 L
Special provisions 274
Tunnel code (E)
ADR Classification Code: C1

ADN : **Special provisions** 274

IMDG : **Emergency schedules** F-A, S-B
Special provisions 223, 274

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 5 L. Packaging instructions: 852. Cargo Aircraft Only: 60 L. Packaging instructions: 856. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y841.
Special provisions A3, A803

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed above the relevant limit.

Substances of very high concern

None of the components are listed above the relevant limit.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
Rust Converter	≥90	3

Labeling : Not applicable.

Synthetic polymer microparticles - Designation 78

Generic identity of polymer(s) : Not applicable.

Total percentage of synthetic polymer microparticles : Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

SECTION 15: Regulatory information

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Explosive precursors : Not applicable.

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

Product/ingredient name	List name	Name on list	Classification	Notes
propan-2-ol	DFG MAC-values list	-	Develop C	-
1-ethoxypropan-2-ol	DFG MAC-values list	-	Develop C	-
zinc nitrate	DFG MAC-values list	Zinc and its inorganic compounds	Develop C	-
orthophosphoric acid	DFG MAC-values list	-	Develop C	-
zinc bis(dihydrogen phosphate)	DFG MAC-values list	Zinc and its inorganic compounds	Develop C	-

Storage class (TRGS 510) : 8B

Hazardous incident ordinance

This product is not controlled under the Germany Hazardous Incident Ordinance.

Hazard class for water : 3

Technical instruction on air quality control (TA Luft)

Number [Class]	Description	%
5.2.5	Organic substances	52.5
5.2.5 [I]	Organic substances	15
5.2.10	Soil polluting substances	4.8

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Eurasian Economic Union : **Russian Federation inventory**: Not determined.

SECTION 15: Regulatory information

Japan : **Japan inventory (CSCL)**: All components are listed or exempted.
Japan inventory (ISHL): Not determined.

New Zealand : All components are listed or exempted.

Philippines : Not determined.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : Not determined.

United States : Not determined.

Viet Nam : Not determined.

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms :
ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
B = Bioaccumulative
BCF = Bioconcentration Factor
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
M = Mobile
N/A = Not available
P = Persistent
PBT = Persistent, Bioaccumulative and Toxic
PMT = Persistent, Mobile and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SGG = Segregation Group
T = Toxic
vB = Very Bioaccumulative
vM = Very Mobile
vP = Very Persistent
vPvB = Very Persistent and Very Bioaccumulative
vPvM = Very Persistent and Very Mobile

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Met. Corr. 1, H290	Expert judgment
Skin Irrit. 2, H315	Expert judgment
Eye Dam. 1, H318	On basis of test data
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

SECTION 16: Other information

H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H272	May intensify fire; oxidizer.
H290	May be corrosive to metals.
H302	Harmful 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.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

Full text of classifications [CLP/GHS]

Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 2	AQUATIC HAZARD (LONG-TERM) - Category 2
Aquatic Chronic 3	AQUATIC HAZARD (LONG-TERM) - Category 3
Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Met. Corr. 1	CORROSIVE TO METALS - Category 1
Ox. Liq. 3	OXIDIZING LIQUIDS - Category 3
Ox. Sol. 2	OXIDIZING SOLIDS - Category 2
Skin Corr. 1A	SKIN CORROSION/IRRITATION - Category 1A
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

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