

# MATERIAL SAFETY DATA SHEET



MSDS



KREOLA CHEMICALS WDC

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## 1. Product



**Trade Name:** CALUANIE MUELEAR OXIDIZE

Other Names	CAS#	Molecular Formula	Application
Heavy Water	75-13-8	HNCO or CHNO	It is used for the refinement of <b>precious metals and semi-precious stones</b>

## 2. HAZARDS IDENTIFICATION

Clear, colorless solution with caustic odor.

R35 - causes severe burns.

R26 - very toxic for inhalation

S1/2, S9, S16, S30, S28, S36/37, S45

Routes of Entry: Skin, eyes, inhalation and ingestion

## 3. FIRST AID INFORMATION

**Inhalation:** Inhalation of mists can cause corrosive action on mucous membranes, symptoms include burning, choking, coughing, wheezing, laryngitis, shortness of breath, headache or nausea. Move casualty to fresh air and keep at rest. Get medical attention if symptoms persist.

**Eyes:** Contact rapidly causes server damage, symptoms include eye burns, watering eyes,

Permanent damage to cornea may result. In case of eye contact, rinse with plenty of Water and seek medical attention immediately.

**Skin:** Severe and rapid corrosion from contact. Extent of damage depends on duration of contact. Symptoms include burning, itching, redness, inflammation and/or swelling of exposed tissues. Harmful if absorbed through skin. Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.

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#### 4. FIRE-FIGHTING MEASURES

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**FLAMMABLE PROPERTIES:**

**Flash Point:** Not Flammable

**Autoignition Temperature:** Not Applicable

**Upper Flame Limit (volume % in air):** Not Applicable

**Lower Flame Limit (volume % in air):** Not Applicable

**Extinguish Media:** Product is not flammable. Use appropriate media for adjacent fire.

**Special fire and explosion hazard:** Wear self-contained, approved breathing apparatus and full Protective clothing, including eye protection and boots.

**Hazardous combustion products:** Emits toxic fumes under fire conditions.

**Unusual fire and explosion hazards:** Material can react with metals to produce flammable hydrogen gas.

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#### 5. ACCIDENTAL RELEASE MEASURES

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**Personal precautions:** See section 8 for recommendations on the use of personal protective equipment.

**Environmental precautions:** Cleanup personal need personal protection from inhalation and skin/eye contact. Evacuate and ventilate the area. Prevent spillage from entering drains. Cautiously add water to spill, taking care to avoid splashing and spattering. Neutralize diluted spill with soda ash or lime. Absorb neutralized spill with inert absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Any release to the environment may be subjected to federal/national or local reporting requirements. Dispose of all waste or cleanup material in accordance with local regulations. Containers, even when empty, will retain residue and vapors.

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#### 6. HANDLINE AND STORAGE

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**Normal handling:** See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep

container closed when not in use.

**Storage:** store in cool, dry well-ventilated area. Keep away from incompatible materials (use section 10 for incompatibilities) Drains for storage or use areas for this material should have retention basins for pH adjustment and dilution of pills.

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## 7. EXPOSURE CONTROLS/PERSONAL PROTECTION

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**Ventilation:** Provide local exhaust, preferably mechanical.

**Respiratory protection:** If necessary use an approved respirator with acid vapor cartridges.

**Eye protection:** Wear chemical safety glasses with a face shield for splash protection.

**Skin and body protection:** Wear neoprene or rubber gloves, apron and other protective clothing appropriate to the risk of exposure.

**Other Recommendations:** Provide eyewash station, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

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## 8. PHYSICAL AND CHEMICAL PROPERTIES

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**Appearance:** Clear , colorless liquid

**Physical State:** Liquid

**Odor:** Pungent odor, similar to the smell of acetic acid

**Density:** 1.86g /cm<sup>3</sup>

**Boiling point:** 31 - 3F (13 - 25 °C)

**Solubility in Water:** Insoluble

**Vapor Pressure:** ASTM D323

**Coefficient of Water/Oil Distribution:** Not Determined

**Flash Point:** 22 F (28° C) Tag Open Cup: 22 F (28 °C) Tag Open cup

**Pour point:** -63 C ( -81.4 F ) D-97

**Specific Gravity:** 0.8 - 0.32 @ 30 F

**PH:** Not Applicable

**Vapor Density:** Greater than 1

**VOC:** 412 grams/liter (49.5%)

**Flammable Limits (Solvent Portion):** LEL: 0.6% UEL:8.0%

**Kinematic Viscosity:** 2.97-2.96cSt @ 100 F

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## 9. STABILITY AND REACTIVITY

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**Stability:** Stable

**Conditions to avoid:** uncontrolled addition of oxidants.

**Incompatibility:** bases, organic materials, metals, carbides, cyanides, chlorates', nitrates, picrates, permanganate, peroxides, zinc iodide, azides, perchlorates, phosphorus.

**Hazardous decomposition prod:** Carbon oxides.

**Hazardous polymerization:** Will not occur.

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## 10. TOXICOLOGICAL INFORMATION

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**Acute Effects:** See section 4 for symptoms of exposure and effects. Likely routes of exposure are skin, eyes and inhalation.

**Target organs:** kidney, liver, mucous membranes, respiratory system, skin, eyes and cardiovascular system.

**Acute Toxicity Data:**

Lowest published lethal doses (LD/LCL)  
LDL (Man) Oral: 2857 ug/kg  
LCL (Human) - Route: Inhalation : Dose:1280 ppm/30M  
LCL (Rabbit) - Route: inhalation, Dose 4400  
ppm/30M LD50 (oral,rat) , 600 mg/kg  
LC50 (rat): 3125 (1hour)

**Chronic Effects:** May affect liver, bleeding of nose and gums, nasal and oral mucosal ulceration, conjunctivitis, yellowing of teeth and erosion of tooth enamel, dermatitis.

**Teratogenicity:** Not Available

**Mutagenicity:** Not Available

**Embryotoxicity:** Not Available

**Synergistic Products/Effects:** Not Available

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## 11. ECOLOGICAL INFORMATION

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**Ecotoxicity (aquatic and terrestrial):** LD50 @ pH of e3 - 3.6  
LC80 (72 Hours): 56 mg/L (Daphnia Magna )

**Persistence and Degradability:** Not Available

**Bio accumulative Potential:** Not Available

**Mobility in soil:** Not Available

**Other Adverse effects:** Not Available

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## 12. DISPOSAL CONSIDERATIONS

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**RCRA:** Hazardous waste? Yes

**RCRA ID number:** DOO2

**Waste Residues:** Carefully dilute with water, neutralize per spill procedures in section 6. Neutralized material may be flushed to sewer (REGULATIONS PERMITTING) or disposed of through a licensed contractor. Users should review their operations in terms of the applicable federal /nation or local regulations and consult with appropriate regulatory agencies before discharging or disposing of waste material.

**Product containers:** Containers , if thoroughly cleaned, preferably by rising three times and handling

the rinse water as waste residues, may be disposed of or recycled as non-hazardous waste. Users should review their operations in terms of the applicable federal /nation or local regulations and consult with appropriate regulatory agencies before discharging or disposing of waste material.

The information offered in section 13 is for the product as shipped, Use and/or alterations to the product may significantly change the characteristics of the materials and alter the waste classification and proper disposal methods.

**CALUANIE Muelear oxidize, Material: Isocyanic acid A-B consist of modulators and activators:**

1. HNO<sub>2</sub>: 2 HNO<sub>3</sub>: 3, HBP: 4 H<sub>2</sub>EP<sub>2</sub>OF: 5, H, 6 HMNO<sub>4</sub>: 7. (HPOS) n: 8 (H<sub>2</sub>SiCs) m:

9. H<sub>4</sub>SiO: 10. H<sub>2</sub>SO

**Transportation, storage and precautions:** Store in a cool place in it's original sealed packaging away From fire at temperatures from -5C to +25C

**Shelf life:** No expiration date.

**The material is intended for dissolving and burning out metal oxides. Doesn't burn hands.**

**Note:** This product is intended for civilian use.

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### 13. TRANSPORTATION INFORMATION

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**DOT:** UN1760,7,pg. II

**TDG:** UN1760,7,pg. II

**PIN:** Not Available

**IDMG:** UN1760,7,pg. II

**Marine Pollution:** No

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### 14. REGULATORY INFORMATION

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To avoid to humans and the environment, the operating instructions must observed.

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### 15. REGULATORY INFORMATION

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**Contacts on technical issues of the IMPORTER (Dealer in USA) ensuring the safe handling of the substance (material):**

**KREOLA CHEMICALS PHARMACEUTICAL ENTERPRISE /SHOP**

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