

Sulfur Dioxide – Alkaline Reagent

Health & Safety data sheet

According to EC Directive 91/155/EC and following amendments

Revision Date: 2016-06-01

Reason for Revision: Reviewed Only

SECTION 1 - IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

Product name:

Application:

- Mi 555-003 Sulphur dioxide, Alkaline Reagent
- Reagent for wine analysis

Manufacturer identification: Milwaukee Instruments.
2950 Business Park Drive
Rocky Mount, NC 27804

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients:

NAME (EC directives)	EC-Index-No.	CAS No.	LABELLING (EC directives)	CONTENT
Sodium Hydroxide	011-002-00-6	1310-73-2	C R 35	≥ 10%

(full text of R phrases in section 16).

SECTION 3 - HAZARD IDENTIFICATION

Causes severe burns.

SECTION 4 - FIRST AID MEASURES

Remove contaminated, soaked clothing immediately and dispose of safely.

- **After inhalation** : remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.
- **After skin contact** : flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician
- **After eye contact** : wash with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.
- **After swallowing** : If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately. Do not induce vomiting. Do not attempt to neutralize.

SECTION 5 – FIRE-FIGHTING MEASURES

- **Suitable extinguishing media**
 - In adaptation to materials stored in the immediate neighborhood.
- **Special risks:**
 - Non-combustible. Ambient fire may liberate hazardous vapors. Hazardous Decomposition Products: sodium/sodium oxides.
- **Special protective equipment for fire fighting:**
 - Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.
- **Additional information:**
 - Contain escaping vapors with water.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

- **Personal precautions:**
 - Do not inhale vapors. Avoid substance contact. Ensure supply of fresh air in enclosed rooms.
- **Environmental precautions:**
 - Do not discharge into the drains/surface waters/groundwaters.
- **Additional notes:**
 - Take up with liquid-absorbent material. Clean up affected area and dispose according to local regulation.
 - Render harmless: neutralize with diluted sulfuric acid.

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SECTION 7 - HANDLING AND STORAGE

- **Handling:**
 - Cannot be stored indefinitely.
 - Accessible only for authorized persons.
- **Storage:**
 - Tightly closed. Store at room temperature (+15 to +25 °C recommended). Protect from light and moisture.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

- **General hygiene measures**
 - Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

- **Ingredients with occupational exposure limits to be monitored:**
SODIUM HYDROXIDE

EXPOSURE LIMITS - DENMARK

Source	Type	Value
OEL	TWA	2 mg/m ³
Remarks: L		

EXPOSURE LIMITS - GERMANY

Source	Type	Value
TGRS900	OEL	2 mg/m ³
Remarks: =1=		

- **Personal protective equipment:**
 - As appropriate to quantity handled.
- **Protective gloves:**
 - Rubber or plastic
- **Respiratory protection:**
 - Required when vapors/aerosols are generated. Work under hood.
- **Eye protection:**
 - Goggles or face mask

SECTION 9 - PHYSICAL/CHEMICAL PROPERTIES

- **Appearance** : colorless liquid,
- **Odor** : odorless
- **Solubility in water** : soluble
- **Melting point** : ND
- **Boiling point** : ND
- **pH value at 20°C** : > 12
- **density at 20°C** : 1.15 g/cm³
- **flash point** : NA
- **explosive properties** : NA
- **explosion limits** : NA
- **ignition temperature** : NA

SECTION 10 - STABILITY AND REACTIVITY

- **Conditions to be avoided:**
 - Strong heating.
- **Hazardous decomposition products:**
 - In the event of fire: see section 5.
- **Substances to be avoided:**
 - Materials to avoid: strong oxidizing agents, strong acids, organic materials.
- **Hazardous polymerization:**
 - Hazardous polymerization: will not occur

SECTION 11 - TOXICOLOGICAL INFORMATION

Quantitative data on the toxicity of this product are not available.

APPLICABLE TO MAIN COMPONENT(S):

- The following applies to Sodium Hydroxide, as the pure substance:

Acute toxicity

LD50 Intraperitoneal, mouse: 40 mg/kg

Irritation data

Skin, Rabbit: 500 mg /24 hr

Remarks: Severe irritation effect

Eyes, Rabbit: 0.5 mg / 24 hr

Remarks: Severe irritation effect

Signs and symptoms of exposure

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Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Chronic exposure - mutagen

Cytogenetic analysis

Hamster: 10 mmol/L. Cell type: lung

Hamster: 16 mmol/L. Cell type: ovary

Further toxicological information:

Property of this product must be anticipated on the basis from the components of the preparation:

- **In case of inhalation** : mucosal irritations, coughing, dyspnoea. May be harmful if inhaled.
- **In case of skin contact** : burns, necrosis.
- **In case of skin absorption** : may be harmful.
- **In case of eye contact** : burns, necrosis. Risk of blindness!
- **In case of ingestion** : burns of mouth, mucous membrane, esophagus. Risk of perforation in the esophagus and stomach. May be harmful if swallowed.

SECTION 12 - ECOLOGICAL INFORMATION

• **Ecotoxic effects:**

Quantitative data on the toxicity of this product are not available.

APPLICABLE TO PARTIAL COMPONENT(S):

The following applies to Sodium Hydroxide – as the pure substance:

Biologic degradation:

Methods for the determination of biodegradability are not applicable to inorganic substances.

Behavior in environmental compartments:

Concentration in organisms is not to be expected.

Ecotoxic effects:

Biological effects: Harmful effect on aquatic organisms. Toxic effect on fish and plankton. Harmful effect due to pH shift. Forms corrosive mixtures with water even if diluted. Does not cause biological oxygen deficit. Neutralization possible in waste water treatment plants.

Fish toxicity: Onchorhynchus mykiss LC50: 45.4 mg/l /96 h (in hard water); L. macrochirus LC50: 99 mg/l /48 h;

Fish toxicity: fish LC₅₀: 189 mg/L (1N solution = 40 g/L).

Daphnia toxicity: Daphnia magna EC50: 76 mg/l /24 h.

• **Further ecological data:**

Do not allow to enter waters, waste waters, or soil!

SECTION 13 - DISPOSAL CONSIDERATIONS

• **Waste disposal:**

- Chemical residues are generally classified as special waste and thus covered by local regulations. Contact local authorities or disposal companies for advice.
- Handle contaminated packaging in the same way as the substance itself.

SECTION 14 - TRANSPORT INFORMATION

For Mi 555-003:

- **Land transport**
ADR/RID : 8 PGII
UN-N : 1760
Name : CORROSIVE LIQUID, n.o.s.
- **Sea transport**
IMDG : 8/UN 1760/PGII
Name : CORROSIVE LIQUID, n.o.s.
- **Air transport**
ICAO/IATA : 8/UN 1760/PGII
Name : CORROSIVE LIQUID, n.o.s.

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SECTION 15 - REGULATORY INFORMATION

Labeling according to EC Directives:

Symbol:	C	Corrosive
R-phrases :	35	Causes severe burns.
S-phrases :	26-37/39-45	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

Contains : Sodium Hydroxide

SECTION 16 - OTHER INFORMATION

- **Text of any R phrases referred to under heading 2:**
35 : Causes severe burns.
- **Supersedes edition of** : / (1st edition)
- **Legend** : NA Not applicable
ND Not determined

THE INFORMATION CONTAINED HEREIN IS BASED ON THE PRESENT STATE OF OUR KNOWLEDGE. IT CHARACTERIZES THE PRODUCT WITH REGARD TO THE APPROPRIATE SAFETY PRECAUTIONS. IT DOES NOT REPRESENT A GUARANTEE OF THE PROPERTIES OF THE PRODUCT.