

Total Sulfur Dioxide – Acid 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 555-004 Total Sulphur Dioxide, Acid 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
Sulphuric acid	016-020-00-8	7664-93-9	C R 35	≥ 50%

(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** : fresh air. Summon doctor.
- **After skin contact** : wash off with plenty of water. Immediately remove contaminated clothing.
- **After eye contact** : rinse out with plenty of water for at least 10 minutes. Immediately call in ophthalmologist.
- **After swallowing** : drink plenty of water (if necessary several liters), avoid vomiting (risk of perforation!). Immediately seek medical advice. Do not attempt to neutralize.

SECTION 5 – FIRE-FIGHTING MEASURES

- **Suitable extinguishing media**
 - In adaptation to materials stored in the neighborhood.
- **Special risks:**
 - Non combustible.
 - Hydrogen may form upon contact with metals (danger of explosion!)
 - Development of hazardous combustion gases or vapors possible in the event of fire.
 - The following may develop in event of fire: sulfur 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:**
 - Product itself is non-combustible. Cool container with spray water from a safe distance. Contain escaping vapors with water.
 - Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

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SECTION 6 - ACCIDENTAL RELEASE MEASURES

- **Personal precautions:**
 - Take up with liquid-absorbent material. Clean up affected area and dispose according to local regulation.
- **Environmental precautions:**
 - Do not discharge into the drains/surface waters/groundwaters.
- **Additional notes:**
 - Render harmless: neutralize with diluted sodium hydroxide solution or by throwing on lime, lime sand, or sodium carbonate.

SECTION 7 - HANDLING AND STORAGE

- **Handling:**
 - Avoid generation of vapors/aerosols.
 - Do not inhale substance.
- **Storage:**
 - Tightly closed. In a well-ventilated place at +15 to +25 °C.
 - Keep away from sources of ignition and heat.
 - Accessible only for authorized persons.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

- **Engineering controls**
 - Safety shower and eye bath.
- **Ingredients with occupational exposure limits to be monitored:**
 - SULPHURIC ACID
EXPOSURE LIMITS - GERMANY

Source	Type	Value
TRGS 900	OEL	1 mg/m ³

Remarks: =1=
EXPOSURE LIMITS - DENMARK

Source	Type	Value
OEL	TWA	1 mg/m ³
- **Personal protective equipment:**
 - Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.
- **Respiratory protection:**
 - Required when vapors/aerosols are generated. Work under hood.
- **Protective gloves:**
 - Rubber or plastic
- **Eye protection:**
 - Goggles or face mask
- **Industrial hygiene:**
 - Immediately change contaminated clothing and immerse in water. Apply skin- protective barrier cream.
 - Wash hands and face after working with substance.
 - Work under hood. Do not inhale substance. Avoid generation of vapors/aerosols. Under no circumstances eat or drink at workplace.

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** : < 1
- **density at 20°C** : 1.48 g/cm³
- **flash point** : NA
- **explosive properties** : NA
- **explosion limits** : NA
- **ignition temperature** : NA

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SECTION 10 - STABILITY AND REACTIVITY

- **Conditions to be avoided:**
 - Strong heating.
- **Hazardous decomposition products:**
 - In the event of fire: see section 5.
- **Hazardous polymerization:**
 - Will not occur.
- **Further information:**
 - Hygroscopic
 - Has a corrosive effect
 - Incompatible with metals
- **Substances to be avoided:**
 - Combustible substances, water, metals, metal alloys, alkali metals, alkali compounds, alkali hydroxides, alkali oxides, alkaline earth compounds, alkalis, ammonia, nitrates, sodium carbonate, lithium silicide, halogen-halogen compounds, salts of oxyhalogenic acids, bromates, chromates/perchromates, perchlorates, perchloric acid, permanganates, permanganic acid, organic nitro compounds, nonmetals, nonmetallic oxides, picrates, hydrogen peroxide, nitramide, mercury nitride, ammonium iron (III) sulfate dodecahydrate.

SECTION 11 - TOXICOLOGICAL INFORMATION

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

APPLICABLE TO MAIN COMPONENT(S):

- The following applies to Sulphuric acid, as the pure substance:

Acute toxicity

LC₅₀ Inhalation, Rat: 510 mg/kg/2h.

LD₅₀ Oral, Rat: 2140 mg/kg

Specific symptoms in animal studies:

Eye irritation test (rabbit): burns.

Skin irritation test (rabbit): burns.

Toxicological values are not available due to other dangerous properties of the substance.

Subacute to chronic toxicity

Applicable to partial component(s):

Bacterial mutagenicity: Ames test: negative.

No teratogenic effect in animal experiments.

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

- **In case of inhalation** : After inhalation of aerosols: damage to the affected mucous membranes.
- **In case of skin contact** : Severe burns with formation of scabs.
- **In case of eye contact** : Burns, corneal lesion.
- **In case of ingestion** : Severe pain (risk of perforation!), nausea, vomiting and diarrhea.
- **Further data** : The product should be handled with the care usual when dealing with chemicals.

SECTION 12 - ECOLOGICAL INFORMATION

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

APPLICABLE TO MAIN COMPONENT(S):

- The following applies to Sulphuric acid, 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:

Quantitative data on the ecological effect of this product are not available.

Further ecologic data:

The following applies to sulfuric acid: biological effects: harmful effect on aquatic organisms. Harmful effect due to pH shift. Toxic effect on fish and algae. Caustic even in diluted form. Does not cause biological oxygen deficit. Endangers drinking water supplies if allowed to enter soil and/or waters in large quantities. Neutralization possible in waste water treatment plants.

Daphnia toxicity: Daphnia magna EC 50 : 29 mg/l/24 h (calculated on the pure substance).

DO NOT ALLOW TO ENTER WATERS, WASTE WATERS, OR SOIL!

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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 555-004

- **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.

SECTION 15 - REGULATORY INFORMATION

Labeling according to EC Directives:

Symbol:	C	Corrosive.
R-phrases:	35	Causes severe burns.
S-phrases:	26-30-45	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Never add water to this product. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Contains: Sulphuric acid.

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.