

Fehling Solution B

Health & Safety data sheet

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

Date of issue: 12 September 2007

SECTION 1 - IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

Product name:

- Mi 553B-020 Fehling Solution B

Application:

- For reducing sugars titration.

Manufacturer identification:

Milwaukee s.r.l.
c.so Leonardo da Vinci 48/50
21013 Gallarate (VA), Italy
tel.: +39 0331 268009

Emergency Telephone n. °:

+39-02-66101029
CENTRO ANTIVELENI
OSPEDALE NIGUARDA (MI) – ITALY

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	≥ 5% - < 20%

(full text of R-phrases in section 16).

SECTION 3 - HAZARD IDENTIFICATION

Causes severe burns.

SECTION 4 - FIRST AID MEASURES

- **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 with the eyelid held wide open. 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 immediate neighborhood.
- **Special risks:**
 - Non-combustible. Ambient fire may liberate hazardous vapors.
- **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.

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- **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.

SECTION 7 - HANDLING AND STORAGE

- **Handling:**

- Accessible only for authorized persons.

- **Storage:**

- Tightly closed. Store at room temperature (+15 to +25 °C recommended).

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

- **Industrial hygiene**

- Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

- **Personal protective equipment:**

- Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

- **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 and odor** : colorless, odorless

- **Solubility in water** : soluble

- **Melting point** : ND

- **Boiling point** : ND

- **pH value at 20°C** : > 11

- **Density at 20°C** : 1.25 g/cm³

- **Ignition temperature** : NA

- **Flash point** : NA

SECTION 10 - STABILITY AND REACTIVITY

- **Conditions to be avoided:**

- Heating.

- **Substances to be avoided:**

- Acids; metals; light metals.

- **Hazardous decomposition products:**

- In the event of fire: see section 5.

- **Hazardous polymerization:**

- Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

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

The following applies to Sodium hydroxide – as the pure substance

Acute toxicity

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

Specific symptoms in animal studies:

Eye irritation test (rabbit): burns (RTECS).

Skin irritation test (rabbit): burns (RTECS).

Subacute to chronic toxicity

Mutagenicity (mammal cell test): micronucleus negative (Lit.).

Bacterial mutagenicity: Escherichia coli: negative (Lit.).

Bacterial mutagenicity: Ames test: negative (Lit.).

No teratogenic effect in animal experiments (Lit.).

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

- **In case of inhalation** : burns of mucous membranes.
- **In case of skin contact** : burns, necrosis.
- **In case of eye contact** : burns, necrosis. Risk of blindness!
- **In case of ingestion** : burns of mouth, mucous membrane, esophagus and gastrointestinal tract. Risk of perforation in the esophagus and stomach.
- **Systemic affects** : collapse, death.
- **Further data** : further hazardous properties cannot be excluded. The product should be handled with the care usual when dealing with chemicals.

SECTION 12 - ECOLOGICAL INFORMATION

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

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 /96h (in hard water) (IUCLID).

L.macrochirus LC₅₀ : 99 mg/l /48h (IUCLID).

Daphnia toxicity:

Daphnia magna EC₅₀ : 76 mg/l /24h (External MSDS).

- **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

- **Land transport**

ADR/RID	: 9, PGII
UN-N	: 3316
Name	: CHEMICAL KIT
- **Sea transport**

IMDG	: 9/UN 3316/PGII
Name	: CHEMICAL KIT
- **Air transport**

ICAO/IATA	: 9/UN 3316/PGII
Name	: CHEMICAL KIT

These transport data apply to the COMPLETE KIT!

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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 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** : 07 October 2005.
- **Reasons for revision** : change in SECTION 14 - TRANSPORT INFORMATION.
general update.
- **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.