

MATERIAL SAFETY DATA SHEET

Chemical Product

Product Name: FEHLING SOLUTION 'B'

CAS#: Not Available.

Synonym: Fehling's Solution No.2

Chemical Name: Fehling Solution 'B'

Chemical Formula: Not Available.

Composition and Information on Ingredients

Name	S.K.U	% by Weight
FEHLING SOLUTION 'B'	GCS-9832	100
Potassium sodium tartrate		35.2
Sodium hydroxide		15.4
Water		49.4

Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion. Hazardous in case of inhalation. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

Non-corrosive for skin. Non-irritant for skin. Non-sensitizer for skin. Non-permeator by skin. Non-irritating to the eyes. Non-hazardous in case of ingestion. Non-hazardous in case of inhalation. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:

Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation: Not available.

Ingestion:

Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not available.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in

presence of static discharge: Not available.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Not applicable.

Special Remarks on Explosion Hazards: Not applicable.

Accidental Release Measures

Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of acetic acid.

Large Spill:

Corrosive liquid. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

Neutralize the residue with a dilute solution of acetic acid. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Handling and Storage

Precautions:

Keep container dry. Do not breathe gas/fumes/ vapour/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment if you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as moisture.

Storage:

Corrosive materials should be stored in a separate safety storage cabinet or room.

Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective

clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

Sodium hydroxide CEIL: 2 (mg/m³) from ACGIH [1995] Consult local authorities for acceptable exposure limits.

Physical and Chemical Properties

Physical state and appearance

: **Liquid.**

Odor	: Not available.
Taste	: Not available.
Molecular Weight	: Not applicable.
Color	: Not available.
pH (1% soln/water)	: Basic.
Boiling Point (Water).	: The lowest known value is 100°C (212°F)
Melting Point	: Not available.
Critical Temperature	: Not available.
Specific Gravity	: Weighted average: 1.31 (Water = 1)
Vapor Pressure (@ 20°C) (Water).	: The highest known value is 17.535 mm of Hg
Vapor Density (Water).	: The highest known value is 0.62 (Air = 1)
Volatility	: Not available.
Odor Threshold	: Not available.
Water/Oil Dist. Coeff.	: Not available.
Ionicity (in Water)	: Not available.
Dispersion Properties	: See solubility in water.
Solubility	: Easily soluble in cold water.

Stability and Reactivity Data

Stability: The product is stable.

Instability

Temperature:

Not available.

Conditions of

Instability:

Not available.

Incompatibility with various substances: Not available.

Corrosivity: Slightly corrosive to corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Toxicological Information

Routes of Entry: Eye contact. Inhalation. Ingestion.

Toxicity to Animals: LD50: Not available. LC50: Not available.

Chronic Effects on Humans: The substance is toxic to lungs, mucous membranes.

Other Toxic Effects on Humans:

Very hazardous in case of skin contact (corrosive, irritant), of ingestion. Hazardous in case of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Toxicological Data on Ingredients: Potassium sodium tartrate LD50: Not available. LC50: Not available. Sodium hydroxide LD50: Not available. LC50: Not available.

Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Transformation Information

Land transport (ADR-RID)

Proper shipping name: SODIUM HYDROXIDE SOLUTION

UN N°: 1824

H.I. nr: 80

ADR - Class: 8

Labelling - Transport: 8 : Corrosive substance.

ADR - Group: II

Sea transport (IMDG) [English only]

Proper shipping name: SODIUM HYDROXIDE SOLUTION

UN N°: 1824

IMO-IMDG - Class or division: 8 : Corrosive substance.

IMO-IMDG - Packing group: II

Air transport (ICAO-IATA) [English only]

Proper shipping name: SODIUM HYDROXIDE SOLUTION

UN N°: 1824

IATA - Class or division: 8 : Corrosive substance.

IATA - Packing group: II

Other Regulatory Information

Federal and State Regulations:

Pennsylvania RTK: Copper sulfate pentahydrate Massachusetts RTK: Copper sulfate pentahydrate TSCA 8(b) inventory: Copper sulfate pentahydrate; Sulfuric acid; Water
CERCLA: Hazardous substances: Copper sulfate pentahydrate;

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).



DSCL (EEC): R36- Irritating to eyes.

HMIS (U.S.A.):

<p>Health Hazard: 2</p> <p>Fire Hazard: 0</p> <p>Reactivity: 0</p> <p>Personal Protection: E</p> <p>National Fire Protection Association (U.S.A.):</p> <p>Health: 2</p> <p>Flammability: 0</p> <p>Reactivity: 0</p> <p>Specific hazard:</p> <p>Protective Equipment:</p> <p>Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.</p>
<p>Additional Information</p> <p>References: Not available.</p> <p>Other Special Considerations: Not available.</p>

Disclaimer:

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