

**Fehling's Solution B****SECTION 1. IDENTIFICATION**

<b>Product Identifier</b>	Fehling's Solution B
<b>Other Means of Identification</b>	None
<b>Product Code(s)</b>	FE1050
<b>Product Family</b>	Inorganic solution
<b>Recommended Use</b>	Laboratory and industrial use.
<b>Restrictions on Use</b>	None known.
<b>Supplier Identifier</b>	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
<b>Emergency Phone No.</b>	CANUTEC CANADA, 613-996-6666, 24 Hours
<b>SDS No.</b>	0499

**SECTION 2. HAZARD IDENTIFICATION**

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

**Classification**

Skin corrosion - Category 1A; Serious eye damage - Category 1

**Label Elements**

Signal Word:  
Danger

Hazard Statement(s):  
Causes severe skin burns and eye damage.

Precautionary Statement(s):  
Do not breathe dusts or mists.  
Wash hands and skin thoroughly after handling.  
Wear protective gloves/protective clothing/eye protection/face protection.

## Response:

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
IF ON SKIN: Wash with plenty of water.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTRE or doctor.

## Storage:

Store in a dry place. Store in a closed container.

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Disposal:  
Dispose of contents and container in accordance with local, regional, national and international regulations.

**Other Hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Water	7732-18-5	52	Dihydrogen Oxide
Butanedioic acid, 2,3-dihydroxy-, (2R,3R)-, monopotassium monosodium salt, tetrahydrate	6381-59-5	35	Potassium sodium tartrate tetrahydrate
Sodium hydroxide	1310-73-2	13	Caustic soda, Sodium hydrate

**SECTION 4. FIRST-AID MEASURES**

**First-aid Measures**

**Inhalation**

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor.

**Skin Contact**

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. Immediately call a Poison Centre or doctor.

**Eye Contact**

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

**Ingestion**

Do not induce vomiting. Rinse mouth with water. Immediately call a Poison Centre or doctor.

**First-aid Comments**

All first aid procedures should be periodically reviewed by a doctor familiar with the material and its condition of use in the workplace. Some of the first-aid procedures recommended here require advanced first-aid training.

**Most Important Symptoms and Effects, Acute and Delayed**

None known.

**Immediate Medical Attention and Special Treatment**

**Special Instructions**

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**SECTION 5. FIRE-FIGHTING MEASURES**

**Extinguishing Media**

**Suitable Extinguishing Media**

Not combustible. Use extinguishing agent suitable for surrounding fire. Use water to keep non-leaking, fire-exposed containers cool.

**Unsuitable Extinguishing Media**

None known.

**Specific Hazards Arising from the Product**

Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: Sodium Oxides. flammable hydrogen.

**Special Protective Equipment and Precautions for Fire-fighters**

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Fight fire from a safe distance or a protected location. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal.

A full-body encapsulating chemical protective suit with positive pressure SCBA may be necessary.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment, and Emergency Procedures

Emergency responders: use the personal protective equipment recommended in Section 8 of this safety data sheet. Remove or isolate incompatible materials as well as other hazardous materials. Increase ventilation to area or move leaking container to a well-ventilated and secure area.

### Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

### Methods and Materials for Containment and Cleaning Up

Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Do not get in eyes, on skin or on clothing. Wear personal protective equipment to avoid direct contact with this chemical. Avoid generating vapours or mists. Prevent accidental contact with incompatible chemicals. Never add water to a corrosive. Always add corrosives slowly to COLD water. Keep containers tightly closed when not in use or empty.

### Conditions for Safe Storage

Store in an area that is: cool, dry, temperature-controlled, separate from incompatible materials (see Section 10: Stability and Reactivity). Store in the original, labelled, shipping container.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Water	Not established		Not established			
Sodium hydroxide		2 mg/m3	2 mg/m3			

Consult local authorities for provincial exposure limits. Consult local authorities for state exposure limits.

### Appropriate Engineering Controls

General ventilation is usually adequate. Use local exhaust ventilation and enclosure, if necessary, to control amount in the air.

### Individual Protection Measures

#### Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

#### Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

#### Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

**Appearance** Colourless liquid.

**Odour** Odourless

**Odour Threshold** Not available

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<b>pH</b>	12
<b>Melting Point/Freezing Point</b>	Not available (melting); Not available (freezing)
<b>Initial Boiling Point/Range</b>	100 °C (212 °F)
<b>Flash Point</b>	Not available
<b>Evaporation Rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not applicable
<b>Upper/Lower Flammability or Explosive Limit</b>	Not available (upper); Not available (lower)
<b>Vapour Pressure</b>	Not available
<b>Vapour Density (air = 1)</b>	Not available
<b>Relative Density (water = 1)</b>	1.240
<b>Solubility</b>	Not available in water; Not available (in other liquids)
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	Not available
<b>Auto-ignition Temperature</b>	Not available
<b>Decomposition Temperature</b>	Not available
<b>Viscosity</b>	Not available (kinematic); Not available (dynamic)
<b>Other Information</b>	
<b>Physical State</b>	Liquid

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

None known.

### Chemical Stability

Normally stable.

### Possibility of Hazardous Reactions

None known.

### Conditions to Avoid

Heat. Incompatible materials.

### Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid), metals (e.g. aluminum).

### Hazardous Decomposition Products

Sodium Oxides flammable hydrogen gas; very toxic carbon monoxide, carbon dioxide.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

### Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Butanedioic acid, 2, 3-dihydroxy-, (2R,3R)-, monopotassium monosodium salt, tetrahydrate		Not available	Not available
Water	Not available	> 89840 mg/kg (rat)	Not available
Sodium hydroxide	Not available	Not available	1350 mg/kg (rabbit)

### Skin Corrosion/Irritation

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May burn the skin. Permanent scarring may result.

**Serious Eye Damage/Irritation**

Causes serious eye damage based on skin corrosion information.

**STOT (Specific Target Organ Toxicity) - Single Exposure**

**Inhalation**

No information was located.

**Ingestion**

No information was located.

**Aspiration Hazard**

No information was located.

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**

No information was located.

**Respiratory and/or Skin Sensitization**

No information was located.

**Carcinogenicity**

Chemical Name	IARC	ACGIH®	NTP	OSHA
Butanedioic acid, 2, 3-dihydroxy-, (2R,3R)-, monopotassium monosodium salt, tetrahydrate	Not Listed	Not Listed	Not Listed	Not Listed
Water	Not Listed	Not Listed	Not Listed	Not Listed
Sodium hydroxide	Not Listed	Not Listed	Not Listed	Not Listed

**Reproductive Toxicity**

**Development of Offspring**

No information was located.

**Sexual Function and Fertility**

No information was located.

**Effects on or via Lactation**

No information was located.

**Germ Cell Mutagenicity**

No information was located.

**Interactive Effects**

No information was located.

**SECTION 12. ECOLOGICAL INFORMATION**

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal Methods**

Dispose of contents and container in accordance with local, regional, national and international regulations.

**SECTION 14. TRANSPORT INFORMATION**

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	UN1824	Sodium Hydroxide Solution	8	II

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US DOT	UN1824	Sodium Hydroxide, Solution	8	II
IATA (Air)	UN1824	Sodium Hydroxide, Solution	8	II
IMO (Marine)	UN1824	Sodium Hydroxide, Solution	8	II

**Special Precautions** Not applicable

**Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

## SECTION 15. REGULATORY INFORMATION

### Safety, Health and Environmental Regulations

#### Canada

##### Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL or are not required to be listed.

#### USA

##### Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

## SECTION 16. OTHER INFORMATION

**NFPA Rating** Health - 2 Flammability - 0 Instability - 1

**SDS Prepared By** Alphachem Limited

**Phone No.** (905)-821-2995

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**Date of Last Revision** June 21, 2016

**References** CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

**Disclaimer** This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.