

Fehling's Solution B, Alkaline No. 2 Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 07/14/2020

SECTION 1: Identification	
1.1. Identification	
Product form	: Mixtures
Product name	: Fehling's Solution B, Alkaline No. 2
Product code	: LC14210
1.2. Recommended use and restrict	ions on use
Use of the substance/mixture	: For laboratory and manufacturing use only.
Recommended use	: Laboratory chemicals
Restrictions on use	: Not for food, drug or household use
	· ····································
1.3.SupplierLabChem, Inc.	
1010 Jackson's Pointe Ct.	
Zelienople, PA 16063 - USA	
T 412-826-5230 - F 724-473-0647	
info@labchem.com - www.labchem.com	
1.4. Emergency telephone number	
Emergency number	: CHEMTREC: 1-800-424-9300 or +1-703-741-5970
SECTION 2: Hazard(s) identificat	ion
2.1. Classification of the substance	
	or mixture
GHS US classification	
Skin corrosion/irritation Category 1	H314 Causes severe skin burns and eye damage
Serious eve damage/eve irritation Category	1 H318 Causes serious eve damage
Serious eye damage/eye irritation Category	1 H318 Causes serious eye damage
Serious eye damage/eye irritation Category Full text of H statements : see section 16	1 H318 Causes serious eye damage
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Full text of H statements : see section 16 2.2. GHS Label elements, including GHS US labeling Hazard pictograms (GHS US) Signal word (GHS US)	precautionary statements : : : Danger
Full text of H statements : see section 16 2.2. GHS Label elements, including GHS US labeling Hazard pictograms (GHS US) Signal word (GHS US) Hazard statements (GHS US)	precautionary statements : : : Danger : H314 - Causes severe skin burns and eye damage
Full text of H statements : see section 16 2.2. GHS Label elements, including GHS US labeling Hazard pictograms (GHS US) Signal word (GHS US)	precautionary statements : : Danger : H314 - Causes severe skin burns and eye damage : P260 - Do not breathe mist, spray, vapors.
Full text of H statements : see section 16 2.2. GHS Label elements, including GHS US labeling Hazard pictograms (GHS US) Signal word (GHS US) Hazard statements (GHS US)	precautionary statements : : : Danger : H314 - Causes severe skin burns and eye damage : P260 - Do not breathe mist, spray, vapors. P264 - Wash exposed skin thoroughly after handling. P280 - Wear eye protection, face protection, protective clothing, protective gloves.
Full text of H statements : see section 16 2.2. GHS Label elements, including GHS US labeling Hazard pictograms (GHS US) Signal word (GHS US) Hazard statements (GHS US)	precautionary statements : : : : Danger : H314 - Causes severe skin burns and eye damage : H314 - Causes severe skin burns and eye damage : P260 - Do not breathe mist, spray, vapors. P264 - Wash exposed skin thoroughly after handling. P280 - Wear eye protection, face protection, protective clothing, protective gloves. P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Full text of H statements : see section 16 2.2. GHS Label elements, including GHS US labeling Hazard pictograms (GHS US) Signal word (GHS US) Hazard statements (GHS US)	 precautionary statements : interpretation of the statement of the stateme
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SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable 3.2. Mixtures

Name	Product identifier	%	GHS US classification
Water	(CAS-No.) 7732-18-5	60.9	Not classified
Sodium Potassium Tartrate, Tetrahydrate	(CAS-No.) 6381-59-5	34.6	Not classified
Sodium Hydroxide	(CAS-No.) 1310-73-2	4.5	Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures	
4.1. Description of first aid measures	
First-aid measures general	 Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.
4.2. Most important symptoms and effects	s (acute and delayed)
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects	: Causes severe skin burns and eye damage.
Symptoms/effects after inhalation	: Corrosion of the upper respiratory tract.
Symptoms/effects after skin contact	: Caustic burns/corrosion of the skin. Blisters. Destruction of tissue.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Bleeding of the gastrointestinal tract. Burns to the gastric/intestinal mucosa. Diarrhoea. Nausea. Vomiting.
Symptoms/effects upon intravenous administration	: Not available.
Chronic symptoms	: No specific information available.
4.3. Immediate medical attention and spec	cial treatment, if necessary
Obtain medical assistance.	
SECTION 5: Fire-fighting measures	
5.1. Suitable (and unsuitable) extinguishing	ng media
Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.
5.2. Specific hazards arising from the che	mical
Fire hazard	: Not flammable.
Explosion hazard	: Not applicable.
Reactivity in case of fire	: Thermal decomposition generates : Corrosive vapors.
Hazardous decomposition products in case of fire	: Carbon dioxide. Carbon monoxide.
5.3. Special protective equipment and pre	cautions for fire-fighters
Firefighting instructions	 Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Complete protective clothing. Self-contained breathing apparatus.

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SECTION 6: Acci	dental release measu	res
6.1. Personal pr	ecautions, protective equip	oment and emergency procedures
General measures	:	Dike and contain spill.
6.1.1. For non-em	ergency personnel	
Protective equipment	:	Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.
Emergency procedures	:	Evacuate unnecessary personnel.
6.1.2. For emerge	ncy responders	
Protective equipment	:	Equip cleanup crew with proper protection.
Emergency procedures	:	Ventilate area.
6.2. Environmer	tal precautions	
Prevent entry to sewer	s and public waters. Notify at	uthorities if liquid enters sewers or public waters.
6.3. Methods an	d material for containment	and cleaning up
For containment	:	Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning u	p :	Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
6.4. Reference t	o other sections	
See Heading 8. Expos	ure controls and personal pro	otection.
SECTION 7: Hand	lling and storage	
7.1. Precautions	for safe handling	

Precautions for safe handling	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe mist, spray, vapors. Avoid contact during pregnancy/while nursing.
Hygiene measures	: Wash exposed skin thoroughly after handling.
7.2. Conditions for safe storage, includin	ig any incompatibilities
Technical measures	: Comply with applicable regulations.
Storage conditions	: Keep only in the original container in a cool, well ventilated place away from : incompatible materials. Keep container closed when not in use.
Incompatible products	: metals. Strong acids.
Incompatible materials	: Direct sunlight.
Prohibitions on mixed storage	: KEEP SUBSTANCE AWAY FROM: strong acids. metal powders. metals.
Packaging materials	: MATERIAL TO AVOID: aluminium, tin, zinc.

SECTION 8: Exposure controls/personal protection

8.1. **Control parameters**

Fehling's Solution B, Alkaline No. 2	
No additional information available	
Sodium Hydroxide (1310-73-2)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH Ceiling (mg/m³)	2 mg/m ³
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (TWA) (mg/m³)	2 mg/m ³
USA - IDLH - Occupational Exposure Limits	
US IDLH (mg/m ³)	10 mg/m³
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (ceiling) (mg/m ³)	2 mg/m ³
Water (7732-18-5)	
No additional information available	
Sodium Potassium Tartrate, Tetrahydrate (6381-59	-5)
No additional information available	
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8.2. Appropriate engineering controls	
Appropriate engineering controls	: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.
8.3. Individual protection measures/Perso	onal protective equipment
Personal protective equipment:	
Gloves. Safety glasses. Chemical resistant apron.	
Materials for protective clothing:	
GIVE GOOD RESISTANCE: natural rubber. Late	ex gloves
Hand protection:	
Wear protective gloves.	
Eye protection:	
Chemical goggles or face shield	
Skin and body protection:	
Wear suitable protective clothing	
Respiratory protection:	
Respiratory protection not required in normal con	nditions
Personal protective equipment symbol(s):	
Other information:	
Do not eat, drink or smoke during use.	
SECTION 9: Physical and chemical p	roperties

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9.1. Information on basic physical and	I chemical properties
Physical state	: Liquid
Color	: Colorless
Odor	: Odorless
Odor threshold	: No data available
рН	: ≥14
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 1.08 g/ml
Solubility	: Soluble in water.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available

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Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: Not applicable.
Oxidizing properties	: No data available.
9.2. Other information	
No additional information available	

 SECTION 10: Stability and reactivity

 10.1.
 Reactivity

 Thermal decomposition generates : Corrosive vapors.

 10.2.
 Chemical stability

 Stable under normal conditions.

 10.3.
 Possibility of hazardous reactions

Reacts exothermically with (some) acids: release of (carbon dioxide).

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong oxidizers.

10.6. Hazardous decomposition products

Sodium oxide. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapors.

Sodium oxide. Carbon monoxide. Carbon dioxi	ide. Thermal decomposition generates : Corrosive vapors.	
SECTION 11: Toxicological information	ation	
11.1. Information on toxicological effect	ts	
Acute toxicity (oral)	: Not classified	
Acute toxicity (dermal)	: Not classified	
Acute toxicity (inhalation)	: Not classified	
Water (7732-18-5)		
LD50 oral rat	≥ 90000 mg/kg	
ATE US (oral)	90000 mg/kg body weight	
Skin corrosion/irritation	: Causes severe skin burns.	
	pH: ≥ 14	
Serious eye damage/irritation	: Causes serious eye damage.	
	pH: ≥ 14	
Respiratory or skin sensitization	: Not classified	
Germ cell mutagenicity	: Not classified	
Carcinogenicity	: Not classified	
Reproductive toxicity	: Not classified	
STOT-single exposure	: Not classified	
STOT-repeated exposure	: Not classified	
Aspiration hazard	: Not classified	
/iscosity, kinematic	: No data available	
ikely routes of exposure	: Skin and eye contact.	
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.	
Symptoms/effects	: Causes severe skin burns and eye damage.	
Symptoms/effects after inhalation	: Corrosion of the upper respiratory tract.	
Symptoms/effects after skin contact	: Caustic burns/corrosion of the skin. Blisters. Destruction of tissue.	
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Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Bleeding of the gastrointestinal tract. Burns to the gastric/intestinal mucosa. Diarrhoea. Nausea. Vomiting.
Symptoms/effects upon intravenous administration	: Not available.
Chronic symptoms	: No specific information available.

SECTION 12: Ecological information	
12.1. Toxicity	
Sodium Hydroxide (1310-73-2)	
LC50 fish 1	45.4 mg/l (96 h, Salmo gairdneri, Static system, Fresh water, Experimental value, Solution >=50%)
EC50 Daphnia 1	40.4 mg/l (48 h, Ceriodaphnia sp., Experimental value, Nominal concentration)

Fehling's Solution B, Alkaline No. 2		
Not established.		
Biodegradability: not applicable.		
Not applicable (inorganic)		
Not applicable (inorganic)		
Not established.		
Sodium Potassium Tartrate, Tetrahydrate (6381-59-5)		
Not established.		
Not established.		
Sodium Hydroxide (1310-73-2)		
Not bioaccumulative.		
Water (7732-18-5)		
Not established.		
Sodium Potassium Tartrate, Tetrahydrate (6381-59-5)		
Not established.		

12.4. Mobility in soil

Sodium Hydroxide (1310-73-2)	
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Other adverse effects

Other information

: Avoid release to the environment.

SECTION 13: Disposal considerations			
13.1. Disposal methods			
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.		
Ecology - waste materials	: Avoid release to the environment.		

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SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

- Transport document description UN-No.(DOT) Proper Shipping Name (DOT) Transport hazard class(es) (DOT) Packing group (DOT) Hazard labels (DOT)
- : UN1824 Sodium hydroxide solution, 8, II
- : UN1824
- : Sodium hydroxide solution
- : 8 Class 8 Corrosive material 49 CFR 173.136
- : II Medium Danger
- : 8 Corrosive



: 202

DOT Packaging Non Bulk (49 CFR 173.xxx) DOT Packaging Bulk (49 CFR 173.xxx)

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DOT Packaging Bulk (49 CFR 173.xxx)	:	242
DOT Special Provisions (49 CFR 172.102)		 B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material. T7 - 4 178.274(d)(2) Normal
DOT Packaging Exceptions (49 CFR 173.xxx)	:	154
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	30 L
DOT Vessel Stowage Location	:	A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	:	52 - Stow "separated from" acids
Other information	:	No supplementary information available.
Transportation of Dangerous Goods		
Transport document description	:	UN1824 SODIUM HYDROXIDE SOLUTION, 8, II
UN-No. (TDG)	:	UN1824
Proper Shipping Name (Transportation of Dangerous Goods)	:	SODIUM HYDROXIDE SOLUTION
TDG Primary Hazard Classes	:	8 - Class 8 - Corrosives
Packing group	:	II - Medium Danger
Explosive Limit and Limited Quantity Index	:	1 L

Transport by sea

Carrying Railway Vehicle Index

Passenger Carrying Road Vehicle or Passenger : 1 L

Class (IMDG) 07/14/2020	: 8 - Corrosive substances EN (English US)	7/
Proper Shipping Name (IMDG)	: SODIUM HYDROXIDE SOLUTION	
UN-No. (IMDG)	: 1824	
Transport document description (IMDG)	: UN 1824 SODIUM HYDROXIDE SOLUTION, 8, II	

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Packing group (IMDG)	: II - substances presenting medium danger
Air transport	
Transport document description (IATA)	: UN 1824 Sodium hydroxide solution, 8, II
UN-No. (IATA)	: 1824
Proper Shipping Name (IATA)	: Sodium hydroxide solution
Class (IATA)	: 8 - Corrosives
Packing group (IATA)	: II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations	
Fehling's Solution B, Alkaline No. 2	
SARA Section 311/312 Hazard Classes	Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Sodium Hydroxide (1310-73-2)		
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard	
15.2. International regulations		
CANADA		
Sodium Hydroxide (1310-73-2)		
Listed on the Canadian DSL (Domestic Substances List)		
Water (7732-18-5)		
Listed on the Canadian DSL (Domestic Substances List)		
Sodium Potassium Tartrate, Tetrahydrate (6381-59-5)		
Listed on the Canadian DSL (Domestic Substances List)		
EU-Regulations No additional information available		
National regulations		
No additional information available		
15.3. US State regulations		

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

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Revision date	:	07/14/2020
Other information	:	None.

Full text of H-phrases: see section 16:

	•	
	H314	Causes severe skin burns and eye damage
	H318	Causes serious eye damage
	H402	Harmful to aquatic life
NFF	PA health hazard	: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.
NFF	PA fire hazard	 O - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFF	PA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.

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Hazard Rating	
Health	: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability	: 0 Minimal Hazard - Materials that will not burn
Physical	: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
Personal protection	: C C - Safety glasses, Gloves, Synthetic apron

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