



# Safety Data Sheet (SDS) 4045

SDS Revision Date: 04/07/2015

## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Product Identity** 4045  
**Alternate Names** 4045

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Intended use** Contact ChemStation representative.  
**Application Method** Contact ChemStation representative.

### 1.3. Details of the supplier of the safety data sheet

**Company Name** ChemStation MnDak  
3001 South 17th Street  
Moorhead MN 56560

### Emergency

**CHEMTREC (USA)** (800) 424-9300  
**Customer Service: ChemStation MnDak** (218) 233-2727

## 2. Hazard identification of the product

### 2.1. Classification of the substance or mixture

Skin Corr. 1B;H314 Causes severe skin burns and eye damage.  
Eye Irrit. 2;H319 Causes serious eye irritation.

### 2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



**Danger**

H314 Causes severe skin burns and eye damage.

H319 Causes serious eye irritation.

**[Prevention]:**

P260 Do not breathe mist / vapors / spray.

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

**[Response]:**

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P310 Immediately call a POISON CENTER or doctor / physician.

P337+313 If eye irritation persists: Get medical advice / attention.

P363 Wash contaminated clothing before reuse.

**[Storage]:**

P405 Store locked up.

**[Disposal]:**

P501 Dispose of contents / container in accordance with local / national regulations.

### 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Sodium hydroxide CAS Number: 0001310-73-2	1.0 - 10	Skin Corr. 1A;H314 Acute Tox. 4;H312	[1][2]
Ethylene glycol monobutyl ether CAS Number: 0000111-76-2	1.0 - 10	Acute Tox. 4;H332 Acute Tox. 4;H312 Acute Tox. 4;H302 Eye Irrit. 2;H319 Skin Irrit. 2;H315	[1][2]

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

\*The full texts of the phrases are shown in Section 16.

### 4. First aid measures

#### 4.1. Description of first aid measures

**General**

Move victim to fresh air.  
Call 911 or emergency medical service if deemed necessary.  
Give artificial respiration if victim is not breathing.  
Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.  
Administer oxygen if breathing is difficult.  
Remove and isolate contaminated clothing and shoes.  
In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.  
For minor skin contact, avoid spreading material on unaffected skin.  
Keep victim warm and quiet.  
Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.  
Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

**Inhalation**

Move victim to fresh air. Call emergency medical care. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.

**Eyes**

Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

**Skin**

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

**Ingestion**

If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

**4.2. Most important symptoms and effects, both acute and delayed****Overview**

Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. See section 2 for further details.

**Eyes**

Causes serious eye irritation.

**Skin**

Causes severe skin burns and eye damage.

## 5. Fire-fighting measures

**5.1. Extinguishing media**

Recommended extinguishing media; alcohol resistant foam, CO<sub>2</sub>, powder, water spray.  
Do not use; water jet.

**5.2. Special hazards arising from the substance or mixture**

Hazardous decomposition: Hydrogen chloride and chlorine. Chlorine gas rate of decomposition increases with the concentration with temperatures above 85 degrees F (30C).

Do not breathe mist / vapors / spray.

**5.3. Advice for fire-fighters**

Wear positive pressure self-contained breathing apparatus (SCBA).

Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

Some are oxidizers and may ignite combustibles (wood, paper, oil, clothing, etc.).

Contact with metals may evolve flammable hydrogen gas.

Containers may explode when heated.

**TOXIC**; inhalation, ingestion or skin contact with material may cause severe injury or death.

Contact with molten substance may cause severe burns to skin and eyes.

Avoid any skin contact.

Effects of contact or inhalation may be delayed.

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

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## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Stop leak if you can do it without risk.

Prevent entry into waterways, sewers, basements or confined areas.

Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

DO NOT GET WATER INSIDE CONTAINERS.

### 6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

### 6.3. Methods and material for containment and cleaning up

Keep unauthorized personnel away.

Stay upwind.

Keep out of low areas.

Ventilate enclosed areas.

## 7. Handling and storage

### 7.1. Precautions for safe handling

See section 2 for further details. - [Prevention]:

### 7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Incompatible materials: Any acidic material, ammonia, urea, oxidizable materials and metals such as nickel, copper, tin, aluminum and iron.

See section 2 for further details. - [Storage]:

### 7.3. Specific end use(s)

No data available.

## 8. Exposure controls and personal protection

## 8.1. Control parameters

### Exposure

CAS No.	Ingredient	Source	Value
0000111-76-2	Ethylene glycol monobutyl ether	OSHA	TWA 50 ppm (240 mg/m <sup>3</sup> ) [skin]
		ACGIH	TWA: 20 ppm Revised 2003,
		NIOSH	TWA 5 ppm (24 mg/m <sup>3</sup> ) [skin]
		Supplier	No Established Limit
0001310-73-2	Sodium hydroxide	OSHA	TWA 2 mg/m <sup>3</sup>
		ACGIH	Ceiling: 2 mg/m <sup>3</sup>
		NIOSH	C 2 mg/m <sup>3</sup>
		Supplier	No Established Limit

### Carcinogen Data

CAS No.	Ingredient	Source	Value
0000111-76-2	Ethylene glycol monobutyl ether	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;
0001310-73-2	Sodium hydroxide	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

## 8.2. Exposure controls

### Respiratory

Use NIOSH/MSHA approved respirator, following manufacturer's recommendations when concentrations exceed permissible exposure limits.

### Eyes

Wear safety glasses with side shields to protect the eyes. An eye wash station is suggested as a good workplace practice.

### Skin

Chemical resistant clothing such as coveralls/apron boots should be worn. Chemical Impervious Gloves

### Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

### Other Work Practices

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

## 9. Physical and chemical properties

<b>Appearance</b>	Clear Thin Liquid
<b>Odor</b>	Mild
<b>Odor threshold</b>	Not Measured
<b>pH</b>	12.6 - 14.0
<b>Melting point / freezing point</b>	Not Measured
<b>Initial boiling point and boiling range</b>	>212 deg F
<b>Flash Point</b>	>200 degrees F PMCC (non-flammable)
<b>Evaporation rate (Ether = 1)</b>	0.33
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Upper/lower flammability or explosive limits</b>	<b>Lower Explosive Limit:</b> Not Measured <b>Upper Explosive Limit:</b> Not Measured
<b>Vapor pressure (Pa)</b>	Not Determined
<b>Vapor Density</b>	Not Determined
<b>Specific Gravity</b>	1.024 - 1.044
<b>Solubility in Water</b>	Not Measured
<b>Partition coefficient n-octanol/water (Log Kow)</b>	Not Measured
<b>Auto-ignition temperature</b>	Not Measured
<b>Decomposition temperature</b>	Not Measured
<b>Viscosity (cSt)</b>	Not Measured
<b>Foaming</b>	Moderate

#### 9.2. Other information

No other relevant information.

## 10. Stability and reactivity

### 10.1. Reactivity

Hazardous Polymerization will not occur.

### 10.2. Chemical stability

Stable under normal circumstances.

### 10.3. Possibility of hazardous reactions

No data available.

### 10.4. Conditions to avoid

No data available.

### 10.5. Incompatible materials

Any acidic material, ammonia, urea, oxidizable materials and metals such as nickel, copper, tin, aluminum and iron.

### 10.6. Hazardous decomposition products

Hydrogen chloride and chlorine. Chlorine gas rate of decomposition increases with the concentration with temperatures above 85 degrees F (30C).

## 11. Toxicological information

### Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
Sodium hydroxide - (1310-73-2)	6,600.00, Mouse - Category: NA	1,350.00, Rabbit - Category: 4	600.00, Mouse - Category: NA	No data available	No data available
Ethylene glycol monobutyl ether - (111-76-2)	1,414.00, Guinea Pig - Category: 4	1,200.00, Guinea Pig - Category: 4	173.00, Guinea Pig - Category: NA	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	1B	Causes severe skin burns and eye damage.
Serious eye damage/irritation	2	Causes serious eye irritation.
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

## 12. Ecological information

### 12.1. Toxicity

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and GHS and is not classified as dangerous for the environment, but contains substance(s) dangerous for the environment. See section 3 for details

#### Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Sodium hydroxide - (1310-73-2)	196.00, Poecilia reticulata	40.38, Ceriodaphnia dubia	Not Available
Ethylene glycol monobutyl ether - (111-76-2)	220.00, Fish (Piscis)	1,000.00, Daphnia magna	Not Available

**12.2. Persistence and degradability**

There is no data available on the preparation itself.

**12.3. Bioaccumulative potential**

Not Measured

**12.4. Mobility in soil**

No data available.

**12.5. Results of PBT and vPvB assessment**

This product contains no PBT/vPvB chemicals.

**12.6. Other adverse effects**

No data available.

**13. Disposal considerations**

**13.1. Waste treatment methods**

Observe all federal, state and local regulations when disposing of this substance.

**14. Transport information**

<b>14.1. UN number</b>	NA1760
<b>14.2. UN proper shipping name</b>	Compound, Cleaning, Liquid, (Sodium Hydroxide)
<b>14.3. Transport hazard class(es)</b>	8
<b>14.4. Packing group</b>	III

**15. Regulatory information**

**Regulatory Overview**     The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

**Toxic Substance Control Act ( TSCA)**     All components of this material are either listed or exempt from listing on the TSCA Inventory.

**WHMIS Classification**     D2B E

**US EPA Tier II Hazards**

**Fire:** No

**Sudden Release of Pressure:** No

**Reactive:** No

**Immediate (Acute):** Yes

**Delayed (Chronic):** No

**EPCRA 311/312 Chemicals and RQs (lbs):**

Sodium hydroxide    ( 1,000.00)

**EPCRA 302 Extremely Hazardous :**  
(No Product Ingredients Listed)

**EPCRA 313 Toxic Chemicals:**  
Ethylene glycol monobutyl ether

**Proposition 65 - Carcinogens (>0.0%):**  
(No Product Ingredients Listed)

**Proposition 65 - Developmental Toxins (>0.0%):**  
(No Product Ingredients Listed)



**Proposition 65 - Female Repro Toxins (>0.0%):**

(No Product Ingredients Listed)

**Proposition 65 - Male Repro Toxins (>0.0%):**

(No Product Ingredients Listed)

**N.J. RTK Substances (>1%):**

Ethylene glycol monobutyl ether

Sodium hydroxide

**Penn RTK Substances (>1%):**

Ethylene glycol monobutyl ether

Sodium hydroxide

## 16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

**This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.**

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