

# SAFETY DATA SHEET

## 1. Chemical Product and Company Identification

Description: Differential Reference Solution  
Product Code: 3864-0002  
Product Type: Aqueous buffered salt solution  
Application: 2764, 2766, 2765 and 2767 Differential Sensors

### Manufacturer/Supplier Information

Manufactured for and SDS prepared by:  
Georg Fischer Signet LLC  
3401 Aero Jet Ave.  
El Monte, California 91731

Date Prepared: 11/28/2018

For additional health, safety or regulatory information, call (626) 571-2770

**For Chemical Emergency  
Spill Leak Fire Exposure or Accident  
Call CHEMTREC Day or Night**

**DOMESTIC NORTH AMERICA 800-424-9300**

**INTERNATIONAL, REFER TO THE INFORMATION CONTAINED HEREIN AND CALL YOUR LOCAL GF OFFICE**

## 2. Hazard(s) Identification

GHS Classification:  
GHS Label Elements:  
Pictogram: GHS03



**Hazard Statements:** H272: May intensify fire; oxidizer.

**Pictogram: GHS07**



**Hazard Statements:** H315: Causes skin irritation. H319: Causes serious eye irritation.



**Hazard Statements:** Xi; Irritant, R36/38: Irritating to eyes and skin.



**Hazard Statements:** O; Oxidizing, R8: Contact with combustible material may cause fire.

### Information Concerning Particular Hazards for Human and Environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

**Classification System:** The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

**Label Elements:  
Labelling According to  
EU Guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

**Code Letter and Hazard  
Designation of Product:**

Xi; Irritant, O; Oxidizing

**Risk Phrases:**

8 Contact with combustible material may cause fire.  
36/38 Irritating to eyes and skin.

**Safety Phrases:**

17 Keep away from combustible material.  
23 Do not breathe gas/fumes/vapor/spray.  
24/25 Avoid contact with skin and eyes.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
60 This material and its container must be disposed of as hazardous waste.



**NFPA Ratings (Scale 0 - 4)**

Health = 1  
Fire = 3  
Reactivity = 0  
The substance possesses oxidizing properties.



**HMIS Ratings (Scale 0 - 4)**

Health = 1  
Fire = 3  
Reactivity = 0

**Other Hazards:**

**Results of PBT and vPvB Assessment:**

**PBT:** Not applicable  
**vPvB:** Not applicable

**3. Composition/Information on Ingredients**

**Chemical Characterization:**

Mixture

**Description:**

Mixture of the substances listed below with non-hazardous additions.

**Dangerous:**

**Sodium Hydroxide**

**CAS Number:** 1310-73-2  
**% w/v:** <1

**Non-Dangerous:**

**Water**

**CAS Number:** 7732-18-5  
**% w/v:** >82

**Potassium Nitrate**

**CAS Number:** 7757-79-1  
**% w/v:** <14

## Sodium Chloride

CAS Number: 7647-14-5  
% w/v: <2

## Potassium Phosphate

CAS Number: 7778-77-0  
% w/v: <1

### 4. First Aid Measures

**Inhalation:** In case of unconsciousness place patient stably in side position for transportation.  
**Skin Contact:** Immediately wash with water and soap and rinse thoroughly.  
**Eye Contact:** Rinse opened eye for several minutes under running water.  
If symptoms persist, consult a doctor.  
**Ingestion:** If symptoms persist consult doctor.  
**Most Important Symptoms and Effects,  
(both acute and delayed):** No further relevant information available.

**Indication of Any Immediate Medical  
Attention and Special Treatment Needed:** No further relevant information available.

### 5. Fire Fighting Measures

**Suitable Extinguishing Media:** CO<sub>2</sub>, extinguishing powder or water spray.  
Fight larger fires with water spray or alcohol resistant foam.

**Unsuitable Extinguishing Media:** No information available

**Special Hazards Arising from the Substance or Mixture:** During heating or in case of fire poisonous gases are produced.

**Protective Equipment and Precautions for Firefighters:** Mount respiratory protective device.

### 6. Accidental Release Measures

**Environmental Precautions:** Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.

**Methods and Material for  
Containment and Clean Up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.

**Reference to Other Sections:** See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

### 7. Handling and Storage

**Handling:** Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.

**Information about Protection  
against Explosions and Fires:** Keep respiratory protective device available.

**Requirements to be met by Storerooms and Receptacles:** No special requirements.

**Information about Storage in One Common Storage Facility:** Not required

**Further Information about Storage Conditions:** Keep receptacle tightly sealed.

**Specific End Use(s):** No further relevant information available

## 8. Exposure Controls / Personal Protection

**Additional Information about Design of Technical Systems:** No further data; see item 7.

### Control Parameters:

**Components with limit values that require monitoring at the workplace:** 1310-73-2 sodium hydroxide

PEL Long-term value: 2 mg/m<sup>3</sup>

REL Short-term value: C 2 mg/m<sup>3</sup>

TLV Short-term value: C 2 mg/m<sup>3</sup>

**Additional Information:** The lists that were valid during the creation were used as basis.

### Personal Protective Equipment

**Hygiene Measures:** Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

**Respiratory Protection:** In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

**Eye/Face Protection:** Tightly sealed goggles

**Skin and Body Protection:** Protective gloves. To avoid skin problems reduce the wearing of gloves to the required minimum. Only use chemical-protective gloves with CE-labeling of category III. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

**Material of Gloves:** Nitrile rubber, NBR  
Natural rubber, NR  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

**Penetration Time of Glove Material:** The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

## 9. Physical and Chemical Properties

**Appearance:** Clear, colorless liquid

**Odor:** No odor

**Odor Threshold:** Data not available

**pH:** 7 @ 20 °C

**Melting Point/Melting Range:** Undetermined  
**Boiling Point/Boiling Range:** 100 °C (212 °F)  
**Flash Point:** Not applicable  
**Flammability (solid, gaseous):** Not applicable  
**Decomposition Temperature:** Not determined  
**Auto Igniting:** Product is not self-igniting  
**Danger of Explosion:** Product does not present an explosion hazard.  
**Explosion Limits:**  
    **Lower:** Not determined  
    **Upper:** Not determined  
**Vapor Pressure at 20 °C (68 °F):** 23 hPa (17 mm Hg)  
**Density:** Not determined  
    **Relative Density:** Not determined  
    **Vapor Density:** Not determined  
    **Evaporation Rate:** Not determined  
**Solubility in / Miscibility With Water:** Miscible  
**Partition coefficient (n-octanol/water):** Not determined  
**Viscosity:**  
    **Dynamic:** Not determined  
    **Kinematic:** Not determined  
**Solvent content:**  
    **Organic solvents:** 0.0 %  
    **Water:** 82.0 %  
**Other information:** No further relevant information available

## 10. Stability and Reactivity

**Chemical Stability:** Stable  
**Hazardous Polymerization:** Will not occur  
**Conditions to Avoid:** Excessive temperatures which cause evaporation.  
**Incompatible Materials:** Heavy metals, phosphites, organic compounds, carbonaceous materials, strong acids.

### Hazardous Decomposition

**Products:** Nitrogen oxides and toxic metal fumes.

## 11. Toxicological Information

**Acute toxicity:**  
**LD/LC50 values that are relevant for classification:**

### 7757-79-1 Potassium Nitrate

Oral LD50 3750 mg/kg (rat)

### 7647-14-5 Sodium Chloride

Oral LD50 3000 mg/kg (rat)

### 1310-73-2 Sodium Hydroxide

Oral LD50 2000 mg/kg (rat)

### Primary Irritant Effect:

**On Skin:** Irritant to skin and mucous membranes.  
**On Eyes:** Irritating effect.  
**Sensitization:** No sensitizing effects known.

**Additional Toxicological Information:** The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

**Carcinogenic Categories:**  
**IARC (International Agency for Research on Cancer):** None of the ingredients is listed.  
**NTP (National Toxicology Program):** None of the ingredients is listed.

## 12. Ecological Information

**Aquatic Toxicity:** No information available  
**Persistence and Degradability:** No information available  
**Bioaccumulation Potential:** No information available  
**Mobility in Soil:** No information available  
**General Notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water.  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## Results of PBT and vPvB Assessment:

**PBT:** Not applicable  
**vPvB:** Not applicable  
**Other adverse effects:** No further relevant information available.

## 13. Disposal Considerations

**Waste Treatment Methods:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
**Uncleaned Packaging:** Disposal must be made according to official regulations.

## 14. Transport Information (US DOT / CANADA TDG)

### UN-Number:

**DOT, ADR, IMDG, IATA:** UN3093

### UN Proper Shipping Name:

**DOT:** Void  
Corrosive liquids, oxidizing, N.O.S. (Sodium Hydroxide)  
**ADR:** UN 3093 Corrosive liquids, oxidizing, N.O.S. (Sodium Hydroxide)  
**IMDG, IATA:** CORROSIVE LIQUID, OXIDIZING, N.O.S. (Sodium Hydroxide)

### Transport Hazard Classes:

#### DOT



**Class 8 Corrosive substances.**  
**Label 8+5.1**

#### ADR



**Class 8 (CO1) Corrosive substances**  
**Label 8+5.1**

#### IMDG, IATA



**Class 8 Corrosive substances.**  
**Label 8+5.1**

**Packing group:**  
DOT, ADR, IMDG, IATA II

**Environmental Hazards:** Not applicable

**Special Precautions for User:** Warning: Corrosive substances  
**Danger Code (Kemler):** 85  
**EMS Number:** F-A, S-Q  
**Segregation Groups:** Alkalis

**Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code:** Not applicable

**UN "Model Regulation":** UN3093, Corrosive liquids, oxidizing, N.O.S. (Sodium Hydroxide), 8 (5.1), II

### 15. Regulatory Information

**S.A.R.A. Section 355 (extremely hazardous substances):** Not applicable  
**S.A.R.A. Section 313 (Specific toxic chemical listings):** Not applicable

**TSCA (Toxic Substances Control Act):** All ingredients are listed.  
**California Proposition 65:** No Prop.65 listed chemicals are present in this product.

#### Carcinogenicity Categories:

**EPA (Environmental Protection Agency):** Not applicable  
**TLV (Threshold Limit Value established by ACGIH):** Not applicable  
**MAK (German Maximum Workplace Concentration):** Not applicable  
**NIOSH-Ca (National Institute for Occupational Safety and Health):** Not applicable  
**OSHA-Ca (Occupational Safety & Health Administration):** Not applicable

#### Product Related Hazard Information:

The product has been classified and marked in accordance with directives on hazardous materials.

##### Hazard Symbols:

Xi Irritant  
O Oxidizing

##### Risk Phrases:

8 Contact with combustible material may cause fire.  
36/38 Irritating to eyes and skin.

##### Safety Phrases:

17 Keep away from combustible material.  
23 Do not breathe gas/fumes/vapor/spray.  
24/25 Avoid contact with skin and eyes.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
60 This material and its container must be disposed of as hazardous waste.

#### National Regulations:

**Water Hazard Class:** Water Hazard Class 1 (Self-assessment): Slightly hazardous for water.  
**Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

## 16. Disclaimer

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### Revision

Date of latest revision:	11/28/2018
Responsibility for SDS:	S.K. Wells

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