



# LDN-225 Detergent (7311)

Safety Data Sheet  
Revision Date: 03/10/2021

Version: 1.0

## SECTION 1: IDENTIFICATION

### Product Identifier

**Product Form:** Mixture  
**Product Name:** LDN-225 Detergent  
**Product Code:** 7311  
**Synonyms:** LDN-225 Detergent

### Intended Use of the Product

**Use of the Substance/Mixture:** Multi-metal safe, free rinsing nitrite liquid detergent used in a spray washer. For professional use only.

### Name, Address, and Telephone of the Responsible Party

#### **Company**

Better Engineering Mfg., Inc.  
1802 Fashion Court  
Joppa, Maryland 21085 USA  
T: 800-229-3380  
[www.betterengineering.com](http://www.betterengineering.com)

### Emergency Telephone Number

**Emergency number** : 1-800-535-5053 (INFOTRAC)

## SECTION 2: HAZARDS IDENTIFICATION

### Classification of the Substance or Mixture

#### **Classification (GHS-US)**

Oral Toxicity 5 H303  
Skin Irritant 3 H316  
Eye Irritant 2A H319  
Inhalation 5 H333

### Label Elements

#### **GHS-US Labeling**

##### **Hazard Pictograms (GHS-US)**



##### **Signal Word (GHS-US)**

: Warning

##### **Hazard Statements (GHS-US)**

: H303 – May be harmful if swallowed  
H316 – Causes mild skin irritation  
H319 – Causes serious eye irritation  
H333 – May be harmful if inhaled

##### **Precautionary Statements (GHS-US)**

: P261 – Avoid breathing dust/fume/gas/mist/vapors/spray  
P264 – Wash thoroughly after handling  
P270 – Do not eat, drink or smoke when using this product  
P271 – Use only outdoors or in a well-ventilated area  
P280 – Wear protective gloves/protective clothing/eye protection/face protection  
P301+P312 – If swallowed, call a Poison Center or doctor/physician  
P304+P340 – If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing  
P304+P312 – If inhaled, call a Poison Center or doctor/physician  
P305+P351+P338 – If in eyes, rinse cautiously with water for several minutes; remove contact lenses if present and easy to do. Continue rinsing.  
P312 – Call a Poison Center for doctor/physician if you feel unwell

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**Precautionary Statements (GHS-US)** : P330 – Rinse mouth  
P332+P313 – If skin irritation occurs, get medical advice/attention  
P337+P313P – If eye irritation persists, get medical advice/attention  
P501 – Dispose of contents/container in accordance with all local, regional, national, provincial, territorial and international regulations by a licensed disposal agent.

## Other Hazards

**Other Hazards Not Contributing to the Classification:** None known

**Other Hazards:** Generally considered a mild irritant, does not have a significant risk, provided, that the proper use, handling and storage precautions are exercised. However, prolonged exposure may cause mild irritation and redness, headache, and/or nasal irritation. May cause eye irritation. Can decompose if mixed with acids or exposed to fire conditions, releasing toxic nitrogen oxides.

**Unknown Acute Toxicity (GHS-US)** Not available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### Substances

Name	Product identifier	% (w/w)
Dipropylene Glycol Monomethyl Ether ACGIH TWA: 100 ppm, STEL: 150 ppm NIOSH REL: 100 ppm, 600 mg/m <sup>3</sup> NIOSH STEL: 150 ppm, 900 mg/m <sup>3</sup> OSHA Z1 PEL: 100 ppm, 600 mg/m <sup>3</sup>	(CAS No) 34590-94-8	Not Regulated
Sodium nitrite	(CAS No) 7632-00-0	Less than 1%
Modified Polyethoxylated Alcohol	Trade Secret	Not Regulated
Nonionic Surfactant Blend	Proprietary	Not Regulated
* Diethylene glycol monobutyl ether	(CAS No) 112-34-5	4

## SECTION 4: FIRST AID MEASURES

### Description of 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).

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**Skin Contact:** Immediately flush skin with water while removing contaminated clothing and shoes. Seek medical attention if irritation persists. Wash clothing before reuse and discard contaminated shoes.

**Eye Contact:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye(s). Call a poison control center or doctor for treatment advice.

**Ingestion:** Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to mouth and throat. If individual is conscious and alert, immediately rinse mouth with water and give milk or water to drink. If possible, do not leave the individual unattended.

**Note To Physicians:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Sodium nitrite forms methemoglobin in the blood stream. Treat accordingly.

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## **Most Important Symptoms and Effects Both Acute and Delayed**

**Inhalation:** Prolonged inhalation may result in respiratory irritation. Harmful if inhaled, dependent on the extent of exposure. Under normal conditions, using adequate ventilation no problems are expected. Inhalation of vapors and mist of the product may be irritating to the respiratory system. Excessive inhalation of this material causes headache, dizziness, nausea and loss of motor skills.

**Skin Contact:** Causes mild skin irritation.

**Eye Contact:** Moderate to severe eye irritant.

**Ingestion:** Very low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. May irritate mouth, esophagus and stomach. Although small quantities are used in food preparation, swallowing moderate amounts of sodium nitrite can result in serious toxic effects including death. Effects include nausea, weakness, cyanosis (blue skin), collapse and coma, possibly leading to death. Sodium nitrite interferes with the blood's ability to transport oxygen.

**Chronic (Cancer) Information:** Not listed by IARC or NTP as a carcinogen.

**Teratology (Birth Defect) Information:** Not classified as a teratogen.

**Reproduction Information:** Does not harm reproductive cells.

## **Indication of Any Immediate Medical Attention and Special Treatment Needed**

If exposed or concerned, get medical advice and attention.

## **SECTION 5: FIRE-FIGHTING MEASURES**

### **Extinguishing Media**

**Suitable Extinguishing Media:** Dry chemical, foam, carbon dioxide, water fog. Use water to cool fire-exposed containers and to protect personnel. Use flooding amounts of water.

**Unsuitable Extinguishing Media:** Do not use dry chemicals containing ammonium phosphates.

### **Special Hazards Arising From the Substance or Mixture**

**Fire Hazard:** Not flammable.

**Explosion Hazard:** None known

**Reactivity:** Can decompose if mixed with acids or exposed to fire conditions, releasing toxic nitrogen oxides.

### **Advice for Firefighters**

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool containers and fire affected zone until fire is out and danger of re-ignition has passed. Fight fire from protected location or safe distance.

Follow NFPA Fire Protection Guidelines.

**Hazardous Combustion Products:** Oxides of carbon and nitrogen.

### **Reference to Other Sections**

Refer to section 9 for flammability properties.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

**General Measures:** Do not allow product to spread into the environment. Do NOT breathe (dust, fumes). Do not get in eyes, on skin, or on clothing. No smoking. Avoid generating dust.

#### **For Non-Emergency Personnel**

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### **For Emergency Personnel**

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Ventilate area.

### **Environmental Precautions**

Prevent entry to sewers and public waters. Avoid release to the environment.

**Small Spill:** Use appropriate containment to avoid run-off. Keep out of streams, sewers and waterways. Collect free material. Absorb remainder on inert absorbent. Wash area with plenty of water.

**Large Spill:** If possible, clean up spill area on a dry basis and then flush with plenty of water. Absorb liquid with vermiculite, floor absorbent or other absorbent material. Keep out of sewer, streams, ponds, lakes, or other waterways.

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## **Methods and Material for Containment and Cleaning Up**

**For Containment:** Avoid generation of dust during clean-up of spills.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely in accordance with all local, state, regional, national, provincial, territorial and international regulations. Contact competent authorities after a spill. Minimize generation of dust.

## **Reference to Other Sections**

See heading 8, Exposure Controls and Personal Protection.

## **SECTION 7: HANDLING AND STORAGE**

### **Precautions for Safe Handling**

**Additional Hazards When Processed:** Containers, even those that have been emptied, will retain product residue and vapor and should be handled as if they were full.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Avoid contact with eyes, skin or clothing. Wear appropriate personal protective equipment and use only with adequate ventilation. Do not eat, drink or smoke in areas where this material is used. Always wash hands and forearms thoroughly with soap and water after handling.

### **Conditions for Safe Storage, Including Any Incompatibilities**

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from incompatible materials. Do not contaminate food or water by storage or disposal. Store locked up. Keep out of reach of children. Keep containers closed when not in use.

**Incompatible Materials:** Oxidizers, reducers, heat, alkalies, acids, disinfectants, and bleach.

**Special Rules on Packaging:** Keep only in original container.

### **Specific End Use(s)**

Nitrite Liquid Detergent

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Control Parameters**

None known

### **Exposure Controls**

**Appropriate Engineering Controls:** Use local and general exhaust ventilation to effectively remove and prevent buildup of mist/vapors/fumes generated from handling this product.

**Personal Protective Equipment:** Impervious gloves. Protective goggles. Protective clothing.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics.

**Hand Protection:** Wear chemically resistant, impervious, protective gloves.

**Eye Protection:** Chemical splash goggles with side shields recommended.

**Skin and Body Protection:** Wear safety apron if there is a chance of skin contact with product.

**Respiratory Protection:** None normally needed. If irritation is experienced, a NIOSH-approved respirator should be worn.

Ventilation and other forms of engineering controls are often the preferred means for controlling chemical exposure.

Respiratory protection may be needed for non-routine or emergency situations.

**Other Information:** When using, do not eat, drink or smoke.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

### **Information on Basic Physical and Chemical Properties**

<b>Appearance</b>	: Clear, liquid
<b>Odor</b>	: Detergent scent
<b>Odor Threshold</b>	: Not available
<b>pH</b>	: 6.8-8.0
<b>Relative Evaporation Rate (butylacetate=1)</b>	: Not available
<b>Melting Point</b>	: Not applicable
<b>Freezing Point</b>	: Not available

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Boiling Point	: 230°C 446°F
Flash Point (Method: Closed Cup)	: 99°C 210°F
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not flammable
Lower Flammable Limit	: 0.85
Upper Flammable Limit	: 24.6

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Vapor Pressure	: Not available
Relative Vapor Density	: (Air=1): >1
Specific Gravity	: 1.02
Solubility in Water	: Soluble
Partition coefficient: n-octanol/water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not available
Explosion Data – Sensitivity to Static Discharge	: Not available

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** Can decompose if mixed with acids or exposed to fire conditions, releasing toxic nitrogen oxides.

**Chemical Stability:** Stable

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Incompatible materials.

**Incompatible Materials:** Strong Mineral Acids. Strong oxidizing agents. May react with strong alkalis. Oxidizers, reducers, heat, alkalis, acids, disinfectants, and bleach. Strong oxidizing agents.

**Hazardous Decomposition Products:** Oxides of carbon, and sulfur may be emitted if product burns. Oxides of carbon and nitrogen.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects - Product

**Acute Toxicity:** No information available

**Respiratory or Skin Sensitization:** No information available

**Germ Cell Mutagenicity:** Not mutagenic

**Teratogenicity:** Not a teratogen

**Carcinogenicity:** Not classified as a carcinogen

**Specific Target Organ Toxicity (Repeated Exposure):** No information available

**Reproductive Toxicity:** Not expected to affect human reproduction. Fetal toxicity has been demonstrated in pregnant animals fed toxic doses of sodium nitrite. This is due to the formation of methemoglobin.

**Specific Target Organ Toxicity (Single Exposure):** No information available

**Aspiration Hazard:** No information available

**Symptoms/Injuries After Inhalation:** Low acute inhalation toxicity.

**Symptoms/Injuries After Skin Contact:** Direct contact may cause irritation.

**Symptoms/Injuries After Eye Contact:** Moderately irritating.

**Symptoms/Injuries After Ingestion:** May cause nausea.

**Subchronic:** All components of this product are listed on the U. S. TOXIC SUBSTANCE CONTROL ACT (TSCA) Inventory or exemption has been granted in accordance with 40 CFR 723.50.

## SECTION 12: ECOLOGICAL INFORMATION

**Ecotoxicological Information:** See Mobility in Soil

**Chemical Fate Information:** Readily biodegradable

**Mobility in Soil:** Highly mobile in soil

**Other Adverse Effects:** Avoid release to the environment.

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## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Recommendations:** Dispose of waste material and empty containers in accordance with all local, state, regional, national, provincial, territorial and international regulations by a licensed disposal agent.

## SECTION 14: TRANSPORT INFORMATION

### 14.1 In Accordance with DOT

Not regulated

### 14.2 In Accordance with IMDG

Not regulated

### 14.3 In Accordance with IATA

Not regulated

### 14.4 In Accordance with TDG

Not regulated

## SECTION 15: REGULATORY INFORMATION

### US Federal Regulations

<b>OSHA</b>	Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1200 There is no calculable reportable quantity for this product. Hazcom Standard
<b>CERCLA: SARA HAZARD CATEGORY:</b>	Acute and chronic health hazard Section 313: Contains an ingredient that is reported as "Glycol Ethers." See section 3 (Composition/Information on Ingredients) Yes.

### US State Regulations

No information available.	
<b>Volatile Organic Compounds:</b>	No information available.

### Canadian Regulations

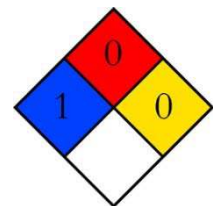
<b>WHMIS Classification</b>	Class C – Oxidizing Material Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
<b>Canadian Environmental Protection Act (CEPA)</b>	No information available
<b>EINECS:</b>	No information available

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Revision date:** 03/10/2021

**Other Information:** Compliant with OSHA's new GHS safety data sheet (SDS). *Information in this Safety Data Sheet (SDS) is based on sources other than direct test data and is given in good faith. No warranty is expressed or implied. We believe that the information is current as of the date of this SDS. The use of this information, the conditions, the methods of handling, storage, use and disposal of the product are not within the control of the manufacturer and distributor, therefore it is the user's responsibility and obligation to determine the conditions of the safe use of this product and to ensure that its activities comply with all laws and regulations.*

<b>NFPA Health Hazard</b>	:	1 – Can cause significant irritation.
<b>NFPA Fire Hazard</b>	:	0 – Will not burn.
<b>NFPA Reactivity</b>	:	0 – Stable.



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## HMIS III Rating

<b>Health</b>	: 1 Slight Hazard: Slightly Toxic – May cause slight irritation
<b>Flammability</b>	: 0 Minimal Hazard: Will not burn under normal conditions
<b>Reactivity</b>	: 0 Minimal Hazard: Normally Stable; does not react with water
<b>Protective Equipment</b>	: B – Wear protective goggles and impervious gloves

## Party Responsible for the Preparation of This Document

Better Engineering Mfg., Inc.  
1802 Fashion Court  
Joppa, Maryland 21085 USA  
T: 800-229-3380

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

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