

**Safety Data Sheet  
3-0 SALTS**

**\*\*\* Section 1 - Chemical Product and Company Identification \*\*\***

**Product Trade Name:** 3-0 SALTS

Manufacturer Information  
DULITE CORPORATION  
171 RIVER ROAD  
MIDDLETOWN, CT 06457

Contact Phone 860-347-2505 (8 am to 5 pm)  
CHEMTel Emergency Phone: (800) 255-3924 24 Hours

CHEMTEL International: 01-813-248-0585

**Product Description** Chemical product for producing black oxide coatings on Stainless Steel, Cast and Malleable Iron

**\*\*\* Section 2 - Hazards Identification \*\*\***

**OSHA Hazard Communication Standard**

This product is considered hazardous as defined by 29 CFR 1910.1200 (Hazard Communication).

**Classification:** Skin Corrosion, Category

**Labeling:**

**Symbol:** Corrosion Skull and Crossbones Exclamation Point  
**Signal Word:** WARNING!  
**Hazard Statements:** Causes severe skin burns and eye damage. May be harmful if swallowed. May cause respiratory irritation.  
**Precautionary Statements:** Wear protective gloves and eye/face protection. Store in cool/well-ventilated place. Do not breathe mist/vapors.

**\*\*\* Section 3 - Composition / Information on Ingredients \*\*\***

HAZARDOUS INGREDIENT	CAS #	OSHA PEL(mg/m3)	ACGIH TLV(mg/m3)
SODIUM HYDROXIDE	1310-73-2	2.0	2.0
SODIUM NITRITE	7632-00-0	N.E.	N.E.
SODIUM NITRATE	7631-99-4	N.E.	N.E.

\*OSHA-PEL and ACGIH-TLV are 8-Hour TWA unless otherwise noted.

\*per CFR 29, Part 1910.1200; ingredients listed only if deemed hazardous and comprise 1% or greater of the composition (0.1% or greater for carcinogens).

**Component Related Regulatory Information:**

This product may be regulated, have exposure limits or other information identified.

**\*\*\* Section 4 - First Aid Measures \*\*\***

**FIRST AID:** INHALATION: Move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. EYES: Hold eyelids apart and flush with running water for at least 15 minutes. Get medical attention. SKIN: Wash affected area with plenty of water. Remove contaminated clothing. If irritation or burns are present, get medical attention. INGESTION: If conscious, give plenty of water. Do not induce vomiting. Get medical attention.

**Special Treatment/Notes to Physician:** None

GHS Label Elements  
Hazard Pictograms



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## \*\*\* Section 5 - Fire Fighting Measures \*\*\*

Flash Point:	None.	Upper Flammable Limit (UFL):	N.A.
Flammable Limits:	None.	Lower Flammable Limit (LFL):	N.A.

### Fire & Explosion Hazards:

Prolonged contact with some metals (i.e. aluminum, tin, zinc etc.) may release flammable hydrogen gas. Contains oxidizer-increases the flammability of organics, combustibles and easily oxidizable materials.

### Decomposition Products:

steam, hydrogen, oxides of nitrogen.

### Extinguishing Media, PPE and Guidance for Firefighter:

**IN CASE OF FIRE:** Material is nonflammable. Use extinguishing media appropriate to surrounding conditions. Wear protective clothing with self-contained breathing apparatus.

## \*\*\* Section 6 - Accidental Release Measures \*\*\*

Containment and Clean up procedures must be conducted in accordance with all local, state, and federal regulations.

### Containment and Clean-Up Procedures:

**IN CASE OF SPILL:** Contain spills with inert absorbant. Scoop up into a chemical waste container. Neutralize spill area with dilute acid.

## \*\*\* Section 7 - Handling and Storage \*\*\*

### Handling and Storage Procedures:

**PRECAUTIONS:** Wear proper protective clothing when using this product. Use with adequate ventilation. Wash thoroughly after handling. Store away from strong acids. When making a solution, add slowly to water with constant stirring. Emptied containers of this product may contain hazardous vapors and residue. Clean thoroughly before reusing or discarding. Do not use a welding torch to cut container. Do not use for water or food storage. This product will generate heat when mixed with water.

## \*\*\* Section 8 - Exposure Controls / Personal Protection \*\*\*

### Exposure Guidelines:

#### A: General Product Information

Follow all applicable exposure limits. Keep formation of airborne mists to a minimum.

#### B: Component Exposure Limits

HAZARDOUS INGREDIENT	CAS #	OSHA PEL(mg/m3)	ACGIH TLV(mg/m3)
SODIUM HYDROXIDE	1310-73-2	2.0	2.0
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\*OSHA-PEL and ACGIH-TLV are 8-Hour TWA unless otherwise noted.

\*per CFR 29, Part 1910.1200; ingredients listed only if deemed hazardous and comprise 1% or greater of the composition (0.1% or greater for carcinogens).

### Engineering Controls:

Set up ventilation to effectively remove and prevent buildup of any dust, vapor or mist generated from the handling of this product.

### PERSONAL PROTECTIVE EQUIPMENT

#### Eyes/Face Protective Equipment:

Wear appropriate eye protection to prevent eye contact.

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**Skin Protection:**

Wear appropriate personal protective clothing to prevent skin contact. The worker should immediately wash the skin when it becomes contaminated. Remove wet or significantly contaminated work clothing and replace.

**Respiratory Protection:**

If ventilation is not sufficient to effectively prevent buildup of dust, mists or vapors, provide appropriate NIOSH/MSHA respiratory protection.

**Personal Protective Equipment:**

Provide eyewash fountains in areas where there is any possibility that workers could be exposed to the substance; this is irrespective of the recommendation involving the wearing of eye protection. Provide facilities for quickly drenching the body within the immediate work area for emergency use where there is a possibility of exposure. Depending on the specific circumstances, a deluge shower, a sink or hose could be considered adequate.

**\*\*\* Section 9 - Physical & Chemical Properties \*\*\***

<b>Physical State:</b>	Solid	<b>Appearance/Odor:</b>	off white powder, no odor.
<b>pH:</b>	N.A.	<b>Boiling Point:</b>	N.E.
<b>Specific Gravity:</b>	2.14	<b>Melting Point:</b>	N.E.
<b>Evaporation Rate:</b>	N.E.	<b>Flash Point:</b>	None.
<b>Solubility Water:</b>	completely miscible.	<b>Auto-ignition Temperature</b>	N.E.
<b>Vapor Density:</b>	N.E.	<b>Decomposition Point:</b>	N.E.
<b>Vapor Pressure:</b>	Nil.	<b>Flammability Limits - Low:</b>	N.A.
<b>Octanol-Water Coefficient:</b>	N.E.	<b>Hi:</b>	N.A.

**\*\*\* Section 10 - Chemical Stability & Reactivity Information \*\*\***

**Chemical Stability:**

STABLE

**Conditions to Avoid:**

None.

**Incompatibility:**

strong acids, chlorinated hydrocarbons, leather, wool, metals such as aluminum, zinc, tin, brass etc. May generate heat when mixed with water.

**Decomposition Products:**

steam, hydrogen, oxides of nitrogen.

**Hazardous Polymerization:**

Will not occur.

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## \*\*\* Section 11 - Toxicological Information \*\*\*

### Emergency Overview:

Contains STRONG ALKALI. Causes severe eye, skin and tissue burns. May be harmful or fatal if swallowed. May cause respiratory tract irritation. Avoid contact with eyes, skin or clothing.

### Routes of Exposure:

eye/skin contact, inhalation, ingestion.

### Acute Toxicity:

#### A: General Product Information

##### Eye Contact:

Corrosive to the eyes and causes severe eye tissue damage, including blindness.

##### Skin Contact:

Corrosive. May cause skin burns and tissue damage.

##### Skin Absorption

This product is not expected to be absorbed through the skin.

##### Ingestion:

Harmful if ingested. Corrosive to tissue. May be fatal.

##### Inhalation:

Harmful if inhaled. May damage mucous membranes and cause difficulty in breathing.

##### Chronic Hazards:

No known chronic effects.

##### Medical Conditions Aggravated by Exposure:

None known.

##### B: Component Analysis - LD50/LC50

Sodium Nitrite: LD50 (oral, rat) 132 mg/kg

LC50 (inhalation, rat) 5.5 mg/m<sup>3</sup>/4 hrs

### Carcinogenicity:

#### A: General Product Information

Sodium nitrite may react with certain amines to form carcinogenic nitrosamine compounds.

#### B: Component Carcinogenicity

None. NTP?: No. IARC?: No.

OSHA?: No. ACGIH?: No.

### Irritation/Corrosivity/Sensitization:

Product is corrosive to tissue. Not known to cause sensitization.

### Reproductive/Genetic/Developmental Effects:

No information available.

### Neurological Effects:

Not known to cause neurological effects.

## \*\*\* Section 12 - Ecological Information \*\*\*

### Ecotoxicity:

#### A: General Product Information

No information available for this product.

#### B: Component Analysis - Ecotoxicity - Aquatic Toxicity

No information available for this product.

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**Persistence and Mobility:**

No information available for this product.

**Bioaccumulation:**

No information available for this product.

**Mobility in Soil:**

No information available.

**\*\*\* Section 13 - Disposal Considerations \*\*\***

Wastes must be tested using methods described in 40 CFR Part 261. It is the generator's responsibly to determine if the waste meets applicable definitions of hazardous wastes. State and local regulations may differ from Federal disposal regulations. Dispose of waste material according to Local, State, Federal and Provincial Environmental Regulations.

**\*\*\* Section 14 - Transportation Information \*\*\***

**US DOT Information**

CORROSIVE SOLIDS, N.O.S., (CONTAINS SODIUM HYDROXIDE, SODIUM NITRITE AND SODIUM NITRATE), 8,(5.1), UN 3084, PG II

**Marine Pollutant:**

No

**IMDG Classification**

Not determined.

**IATA Classification**

Not determined

**\*\*\* Section 15 - Regulatory Information \*\*\***

**US Federal Regulations**

**A: General Product Information**

No additional information available.

**B: Component Analysis**

This material may contain chemicals, requiring identification under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

<b>HAZARDOUS COMPONENT</b>	<b>CERCLA RQ LBS.</b>	<b>SECT 302 TPQ LBS.</b>	<b>SECT 313* TOXIC</b>	<b>% by Wt.</b>
SODIUM HYDROXIDE	1000	N.A.	NO	60-80
SODIUM NITRITE	100	N.A.	YES	1-10
NITRATES, WATER DISSOCIABLE (REPORTED AS NITRATE ION [NO <sub>3</sub> ])	N.A.	N.A	SOLUTION	1-10

**SARA 311/312 HAZARDS:**

**Immediate (Acute)**..... True  
**Chronic\*** ..... True  
**Fire**..... True  
**Sudden Release-of-Pressure**.. False  
**Reactive** ..... False

**State Regulations**

**A: General Product Information**

No information available.

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## Other Regulations

### A: General Product Information

All components are on the U.S. EPA TSCA Inventory List.

### B: Component Analysis - Inventory

CAS #	Component	TSCA	DSL	EINECS
7632-00-0	SODIUM NITRITE	YES	YES	YES
1310-73-2	SODIUM HYDROXIDE	YES	YES	YES
7631-99-4	SODIUM NITRATE	YES	YES	YES

## \*\*\* Section 16 – Other Information \*\*\*

**HMIS Ratings:** Health: 3 Fire: 0 Reactivity: 0 Personal Protection: X

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

### MSDS Change History:

Rev1 Initial issue

2/24/99 Rev2

11/22/18 Rev3: Format update (all sections)  
Information update (all sections)

### Key/Legend:

ACGIH = American Conference of Governmental Industrial Hygienists	NFPA = National Fire Protection Association
CERCLA = Comprehensive Environmental Response, Compensation and Liability Act	NIOSH = National Institute for Occupational Safety and Health
EPA = Environmental Protection Agency	NTP = National Toxicology Program
HMIS = Hazardous Material Identification System	OSHA = Occupational Safety and Health Administration
IARC = International Agency for Research on Cancer	SARA = Superfund Amendments and Reauthorization Act
MSHA = Mine Safety and Health Administration	TSCA = Toxic Substance Control Act

The information presented herein is believed to be factual as it has been derived from the works and opinions of persons believed to be qualified experts; however, nothing contained in this information is to be taken as a warranty or representation for which Du-Lite Corporation bears legal responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate.

This is the end of SDS for 3-0 SALTS.