

Zerex™ SUPER CLEANER  
ZXC020

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Ashland	Regulatory Information Number	1-800-325-3751
P.O. Box 2219	Telephone	614-790-3333
Columbus, OH 43216	Emergency telephone number	1-800-ASHLAND (1-800-274-5263)
Product name	Zerex™ SUPER CLEANER	
Product code	ZXC020	

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

Appearance: liquid

WARNING! REDUCES BLOOD'S OXYGEN-CARRYING CAPACITY. MAY BE HARMFUL IF SWALLOWED. CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

#### Potential Health Effects

##### **Exposure routes**

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

##### **Eye contact**

Can cause severe eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure eye tissue.

##### **Skin contact**

Can cause severe skin irritation. Symptoms may include redness and burning of skin, and other skin damage. The feeling of irritation or pain may be delayed.

##### **Ingestion**

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

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### Inhalation

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

### Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: lung (for example, asthma-like conditions), Skin, Upper respiratory tract, Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias.

### Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), Cough, central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), Lowered blood pressure, effects on heart rate, Lack of coordination, Difficulty in breathing, lung edema (fluid buildup in the lung tissue), lung damage, damage to the mouth, throat, and/or airways, shock, cyanosis (causes blue coloring of the skin and nails from lack of oxygen), Convulsions, May cause methemoglobinemia, a blood abnormality that may cause headache, difficulty breathing, lightheadedness, weakness, confusion, rapid heart rate and cyanosis (lack of oxygen in the tissues causing blue-colored skin and nails).

### Target Organs

No data

### Carcinogenicity

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

### Reproductive hazard

This material (or a component) has been shown to cause birth defects in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Hazardous Components	CAS-No. / Trade Secret No.	Concentration
SODIUM GLUCONATE	527-07-1	>=15-<20%
SODIUM NITRATE	7631-99-4	>=1.5-<5%
ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT	64-02-8	>=1.5-<5%
SODIUM HYDROXIDE	1310-73-2	>=1.5-<5%

#### 4. FIRST AID MEASURES

##### Eyes

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention. Do not remove the victim from water access for transport to a medical facility unless instructed to do so by qualified medical personnel. If possible, continue flushing the eye gently with water while transporting the victim.

##### Skin

Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

##### Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

##### Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

##### Notes to physician

**Hazards:** Overexposure to this product (or a component) may cause methemoglobinemia, which in sufficient concentration causes cyanosis. Severe cyanosis may require intravenous injection of methylene blue. Methylene blue is contraindicated if the patient has confirmed or suspected glucose-6-phosphate dehydrogenase deficiency.

**Treatment:** No information available.

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### 5. FIREFIGHTING MEASURES

#### Suitable extinguishing media

Water mist, Carbon dioxide (CO<sub>2</sub>), Dry chemical

#### Hazardous combustion products

May form: carbon dioxide and carbon monoxide, Hydrocarbons, nitrogen compounds, nitrogen oxides (NO<sub>x</sub>), toxic fumes, corrosive vapors, Sodium oxides

#### Precautions for fire-fighting

Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

#### NFPA Flammable and Combustible Liquids Classification

not applicable

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

#### Environmental precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

#### Methods for cleaning up

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

#### Other information

Comply with all applicable federal, state, and local regulations.

### 7. HANDLING AND STORAGE

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### Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

### Storage

Store in a cool, dry, ventilated area.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

SODIUM HYDROXIDE		1310-73-2
ACGIH	Ceiling Limit Value:	2 mg/m <sup>3</sup>
NIOSH	Ceiling Limit Value and	2 mg/m <sup>3</sup>
	Time Period (if specified):	
OSHA Z1	Permissible exposure limit	2 mg/m <sup>3</sup>

### General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

### Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

### Eye protection

Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist. Maintain eye wash station near work area.

### Skin and body protection

Wear resistant gloves such as:

Neoprene

Wear appropriate chemical impervious clothing and boots whenever there is potential for skin contact with product. Launder clothing before reuse. Maintain safety shower at all locations where skin contact could occur. Contact your local safety equipment supplier to assist the facility in determining proper selection of personal protective equipment for the applications/operations present at your facility.

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### Respiratory protection

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state</b>	liquid
<b>Boiling point/boiling range</b>	212 °F / 100 °C @ 1,013.33 hPa Calculated Phase Transition Liquid/Gas
<b>pH</b>	11.2see user defined free text
<b>Flash point</b>	not applicable
<b>Vapour pressure</b>	23.333 hPa @ 68 °F / 20 °C Calculated Vapor Pressure

## 10. STABILITY AND REACTIVITY

### Stability

Stable.

### Conditions to avoid

None known.

### Incompatible products

Avoid contact with:, Strong oxidizing agents, Combustible material, Organic materials, Powdered metals, Reducing agents, Strong acids, steel, strong mineral acids, strong organic acids, Copper alloys, glycols, halogenated hydrocarbons, organic nitro compounds

### Hazardous decomposition products

carbon dioxide and carbon monoxide, Hydrocarbons, nitrogen compounds, nitrogen oxides (NOx), toxic fumes, corrosive vapors, Sodium oxides

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### Hazardous reactions

Product will not undergo hazardous polymerization.

## 11. TOXICOLOGICAL INFORMATION

### Acute oral toxicity

Acute oral toxicity - : no data available  
Product

### Acute oral toxicity - Components

SODIUM NITRATE : LD 50: 1,267 mg/kg Species: Rat

ETHYLENEDIAMINETE : LD 50: 1,780 mg/kg Species: Rat, Female

TRAACETIC ACID,  
TETRASODIUM SALT

SODIUM HYDROXIDE : LD Lo: 500 mg/kg Species: Rabbit

### Acute inhalation toxicity

Acute inhalation toxicity - : no data available  
Product

### Acute inhalation toxicity - Components

ETHYLENEDIAMINETE : LOAEC: 30 mg/m<sup>3</sup> Exposure time: 6 h Species: Rat, male

TRAACETIC ACID, Method: OECD Test Guideline 403Remarks: Information  
TETRASODIUM SALT given is based on data obtained from similar substances.

### Acute dermal toxicity

Acute dermal toxicity - : no data available  
Product

### Acute dermal toxicity - Components

ETHYLENEDIAMINETE : LD 50: > 5,000 mg/kg Species: Rabbit

TRAACETIC ACID,  
TETRASODIUM SALT

SODIUM HYDROXIDE : LD 50: 1,350 mg/kg Species: Rabbit

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### Acute toxicity (other routes of administration)

Acute toxicity (other routes of administration) : no data available

## 12. ECOLOGICAL INFORMATION

### Biodegradability

Biodegradability - Product : no data available

### Biodegradability - Components

SODIUM GLUCONATE : 98 % Remarks: Readily biodegradable

### Bioaccumulation

Bioaccumulation - Product : no data available

### Ecotoxicity effects

#### Toxicity to fish

Toxicity to fish - Product : no data available

#### Toxicity to fish - Components

SODIUM GLUCONATE : LC 50: > 1,000 mg/l  
Species: Fish  
Method: DIN 38412

SODIUM NITRATE : LC 50: 1,355 - 2,063 mg/l  
Exposure time: 96 h  
Species: Rainbow trout,donaldson trout (Oncorhynchus mykiss)  
Method: Static  
Remarks: Mortality

ETHYLENEDIAMINETE : LC 50: 792 mg/l  
TRAACETIC ACID, Exposure time: 96 h  
TETRASODIUM SALT Species: Bluegill (Lepomis macrochirus)

SODIUM HYDROXIDE : LC 50: 125 mg/l  
Exposure time: 96 h

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Species: Western mosquitofish (*Gambusia affinis*)  
Method: Static  
Remarks: Mortality

### Toxicity to daphnia and other aquatic invertebrates

Toxicity to daphnia and other aquatic invertebrates  
- Product : no data available

#### Toxicity to daphnia and other aquatic invertebrates - Components

SODIUM NITRATE : LC 50: 3,581 mg/l  
Exposure time: 48 h  
Species: Water flea (*Daphnia magna*)  
Method: Static  
Remarks: Mortality

ETHYLENEDIAMINETE : EC 50: 140 mg/l  
TRAACETIC ACID, Exposure time: 48 h  
TETRASODIUM SALT Species: Water flea (*Daphnia magna*)

SODIUM HYDROXIDE : EC 50: 34.59 - 47.13 mg/l  
Exposure time: 48 h  
Species: Water flea (*Daphnia magna*)  
Remarks: Intoxication

### Toxicity to algae

Toxicity to algae - Product : no data available

#### Toxicity to algae - Components

ETHYLENEDIAMINETE : ErC50: 2.77 mg/l  
TRAACETIC ACID, Exposure time: 72 h  
TETRASODIUM SALT Species: *Desmodesmus subspicatus* (green algae)

### Toxicity to bacteria

Toxicity to bacteria - Product : no data available

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### Biochemical Oxygen Demand (BOD)

SODIUM GLUCONATE : 507 mg/g

### Chemical Oxygen Demand (COD)

SODIUM GLUCONATE : 807 mg/g

## 13. DISPOSAL CONSIDERATIONS

### Waste disposal methods

Dispose of in accordance with all applicable local, state and federal regulations.

## 14. TRANSPORT INFORMATION

### REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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### U.S. DOT - ROAD

Not dangerous goods

### U.S. DOT - RAIL

Not dangerous goods

### U.S. DOT - INLAND WATERWAYS

Not dangerous goods

### TRANSPORT CANADA - ROAD

Not dangerous goods

### TRANSPORT CANADA - RAIL

Not dangerous goods

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**TRANSPORT CANADA - INLAND WATERWAYS**

Not dangerous goods

**INTERNATIONAL MARITIME DANGEROUS GOODS**

Not dangerous goods

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO**

Not dangerous goods

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER**

Not dangerous goods

**MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES**

Not dangerous goods

\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

**15. REGULATORY INFORMATION****California Prop. 65**

Proposition 65 warnings are not required for this product based on the results of a risk assessment.

**SARA Hazard Classification****SARA 311/312 Classification**

Acute Health Hazard

**SARA 313 Component(s)**

SODIUM NITRATE

2.73 %

**New Jersey RTK Label Information**

WATER

7732-18-5

SODIUM GLUCONATE

527-07-1

SODIUM NITRATE

7631-99-4

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ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT	64-02-8
SODIUM HYDROXIDE	1310-73-2

### Pennsylvania RTK Label Information

WATER	7732-18-5
SODIUM GLUCONATE	527-07-1
SODIUM NITRATE	7631-99-4
SODIUM HYDROXIDE	1310-73-2

### Notification status

US. Toxic Substances Control Act	y (positive listing)
Australia. Industrial Chemical (Notification and Assessment) Act	y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	y (positive listing)
Japan. Kashin-Hou Law List	n (Negative listing)
Korea. Toxic Chemical Control Law (TCCL) List	y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	y (positive listing)
China. Inventory of Existing Chemical Substances	y (positive listing)

### Reportable quantity - Product

US. EPA CERCLA Hazardous Substances (40 CFR 302)	57947 lbs
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### Reportable quantity-Components

SODIUM HYDROXIDE	1310-73-2	1000 lbs
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	HMIS	NFPA
Health	2	2
Flammability	0	0
Physical hazards	0	
Instability		0
Specific Hazard	--	--

### 16. OTHER INFORMATION

# ASHLAND®

## SAFETY DATA SHEET

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Revision Date: 02/13/2013

Print Date: 3/6/2014

MSDS Number: R0296910

Version: 1.8

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The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).