



## Safety Data Sheet

### Section 1: Identification

#### Product identifier

**Product Name**

- **Sustain® Shield**

**Synonyms**

- DMO (Bulk Shield), Sustain® Summer Shield, Sustain® Winter Shield

**Relevant identified uses of the substance or mixture and uses advised against****Recommended use**

- Water treatment

**Details of the supplier of the safety data sheet****Manufacturer**

- Axiall, LLC  
1000 Abernathy Rd. NE, Suite 1200  
Atlanta, GA 30328  
United States  
www.axiall.com  
msdsinfo@axiall.com

**Telephone (General)** ● +1 225-685-1240

**Emergency telephone number****Manufacturer**

- +1 304-455-6882

### Section 2: Hazard Identification

**United States (US)**

According to: OSHA 29 CFR 1910.1200 HCS

**Classification of the substance or mixture****OSHA HCS 2012**

- Not classified

**Label elements****OSHA HCS 2012**

**Hazard statements** ● No label element(s) required

**Other hazards****OSHA HCS 2012**

- This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.

**Canada**

According to: WHMIS

**Classification of the substance or mixture****WHMIS**

- Not classified

**Label elements****WHMIS**

- No label element(s) required

**Other hazards****WHMIS**

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

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

- Material does not meet the criteria of a substance.

**Mixtures**

Composition				
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive
Sodium chloride	CAS:7647-14-5	10% TO 30%	Ingestion/Oral-Rat LD50 • 3000 mg/kg	OSHA HCS 2012: Eye Irrit. 2
Sodium carbonate (2:1)	CAS:497-19-8	0.2%	Ingestion/Oral-Rat LD50 • 4090 mg/kg Inhalation-Rat LC50 • 2300 mg/m <sup>3</sup> 2 Hour(s)	OSHA HCS 2012: Eye Irrit. 2

**Section 4: First-Aid Measures****Description of first aid measures****Inhalation**

- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim 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. If signs/symptoms continue, get medical attention.

**Skin**

- For minor skin contact, avoid spreading material on unaffected skin. In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Remove and isolate contaminated clothing. If irritation develops and persists, get medical attention.

**Eye**

- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

**Ingestion**

- Do not use mouth-to-mouth method if victim ingested the substance. Rinse mouth. Do not give anything by mouth to an unconscious person. Obtain medical attention immediately if ingested.

**Most important symptoms and effects, both acute and delayed**

- Refer to Section 11 - Toxicological Information.

**Indication of any immediate medical attention and special treatment needed****Notes to Physician**

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

## Section 5: Fire-Fighting Measures

### Extinguishing media

**Suitable Extinguishing Media** ● In case of fire use media as appropriate for surrounding fire.

**Unsuitable Extinguishing Media** ● No data available.

### Special hazards arising from the substance or mixture

**Unusual Fire and Explosion Hazards** ● Emits toxic fumes under fire conditions. Containers may explode when heated.

**Hazardous Combustion Products** ● When this product is involved in fires, it can decompose to toxic, corrosive hydrogen chloride gas. Decomposition products may include the following materials: carbon oxides, nitrogen oxides, halogenated compounds, metal oxide/oxides.

### Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Wear positive pressure self-contained breathing apparatus (SCBA). LARGE FIRES: Cool containers with flooding quantities of water until well after fire is out.

## Section 6 - Accidental Release Measures

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions** ● Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing mist, vapors, spray. Avoid contact with skin, eyes, and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Emergency Procedures** ● Stay upwind. Keep out of low areas. Keep unauthorized personnel away.

### Environmental precautions

- Avoid release to the environment.

### Methods and material for containment and cleaning up

**Containment/Clean-up Measures** ● Stop leak if you can do it without risk.  
SMALL SPILLS: Take up with sand or other non-combustible absorbent material and place into containers for later disposal.  
LARGE SPILLS: Dike far ahead of spill for later disposal.

## Section 7 - Handling and Storage

### Precautions for safe handling

**Handling** ● Use only with adequate ventilation. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing mist, vapors, spray. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

### Conditions for safe storage, including any incompatibilities

**Storage** ● Keep only in the original container. Keep container tightly closed. Store in a cool, dry, well-ventilated place. Do not store below the following temperature: 5°C (41°F). Do not expose to temperatures above 37°C. Keep from direct sunlight.

## Section 8 - Exposure Controls/Personal Protection

### Control parameters

- Exposure Limits/Guidelines** • No applicable exposure limits available for product or components.

### Exposure controls

#### Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

#### Personal Protective Equipment

##### Respiratory

- If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

##### Eye/Face

- Wear chemical splash goggles and face shield.

##### Skin/Body

- Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. HANDS: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

#### Environmental Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

## Section 9 - Physical and Chemical Properties

### Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Blue liquid with a slight odor.
Color	Blue	Odor	Slight odor.
Odor Threshold	No data available		
General Properties			
Boiling Point	> 100 C(> 212 F)	Melting Point	< 0 C(< 32 F)
Decomposition Temperature	No data available	pH	7 to 9
Specific Gravity/Relative Density	= 1.14 @ 23 C(73.4 F) Water=1 (15% solution)	Density	9.51 lbs/gal
Water Solubility	Soluble 100 %	Viscosity	No data available
Volatility			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available	Volatiles (Wt.)	80 to 85 %
Volatiles (Vol.)	80 to 85 %		
Flammability			
Flash Point	Product does not support combustion	UEL	No data available
LEL	No data available	Autoignition	No data available

Flammability (solid, gas)	No data available		
<b>Environmental</b>			
Octanol/Water Partition coefficient	No data available		

## Other Information

- % Solids 15-20% (w/w)

## Section 10: Stability and Reactivity

### Reactivity

- No dangerous reaction known under conditions of normal use.

### Chemical stability

- Stable under recommended storage and handling conditions.

### Possibility of hazardous reactions

- Under normal conditions of storage and use, hazardous polymerization will not occur.

### Conditions to avoid

- When exposed to high temperatures may produce hazardous decomposition products.

### Incompatible materials

- Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.

### Hazardous decomposition products

- Decomposition products may include the following materials: carbon monoxide, carbon dioxide, oxides of nitrogen, metal oxide/oxides, Hydrogen chloride (HCl).

## Section 11 - Toxicological Information

### Information on toxicological effects

Components		
Sodium carbonate (2:1) (0.2%)	497-19-8	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 4090 mg/kg; Inhalation-Rat LC50 • 2300 mg/m <sup>3</sup> 2 Hour(s); <i>Lungs, Thorax, or Respiration:</i> <b>Dyspnea</b> ; <i>Gastrointestinal:</i> <b>Other changes</b> ; <b>Irritation:</b> Eye-Rabbit • 50 mg • Severe irritation; Skin-Rabbit • 500 mg 24 Hour(s) • Mild irritation; <b>Multi-dose Toxicity:</b> Inhalation-Rat TCLo • 16.2 mg/m <sup>3</sup> 16 Week(s)-Intermittent; <i>Sense Organs and Special Senses:</i> <b>Olfaction:Change in sensation of smell</b> ; <i>Lungs, Thorax, or Respiration:</i> <b>Emphysema</b> ; <i>Immunological Including Allergic:</i> <b>Decrease in cellular immune response</b>
Sodium chloride (10% TO 30%)	7647-14-5	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 3000 mg/kg; <b>Irritation:</b> Eye-Rabbit • 100 mg 24 Hour(s) • Moderate irritation; Skin-Rabbit • 500 mg 24 Hour(s) • Mild irritation; <b>Multi-dose Toxicity:</b> Ingestion/Oral-Rat TDLo • 201.6 g/kg 6 Week(s)-Intermittent; <i>Vascular:</i> <b>BP elevation not characterized in autonomic section</b> ; <b>Mutagen:</b> Unscheduled DNA synthesis • Ingestion/Oral-Rat • 16800 mg/kg 4 Week(s)-Continuous; <b>Reproductive:</b> Ingestion/Oral-Rat TDLo • 56400 mg/kg (5D pre-21D post); <i>Reproductive Effects:Maternal Effects:Postpartum</i> ; <i>Reproductive Effects:Effects on Newborn:</i> <b>Biochemical and metabolic</b>

GHS Properties	Classification
Acute toxicity	OSHA HCS 2012 • No data available
Aspiration Hazard	OSHA HCS 2012 • No data available
Carcinogenicity	OSHA HCS 2012 • No data available

<b>Germ Cell Mutagenicity</b>	OSHA HCS 2012 • No data available
<b>Skin corrosion/Irritation</b>	OSHA HCS 2012 • No data available
<b>Skin sensitization</b>	OSHA HCS 2012 • No data available
<b>STOT-RE</b>	OSHA HCS 2012 • No data available
<b>STOT-SE</b>	OSHA HCS 2012 • No data available
<b>Toxicity for Reproduction</b>	OSHA HCS 2012 • No data available
<b>Respiratory sensitization</b>	OSHA HCS 2012 • No data available
<b>Serious eye damage/Irritation</b>	OSHA HCS 2012 • No data available

## Potential Health Effects

### Inhalation

**Acute (Immediate)** • No data available

**Chronic (Delayed)** • No data available.

### Skin

**Acute (Immediate)** • The acute studies conducted in rabbits with an 18% solution of this product indicates that the material causes no significant skin irritation.

**Chronic (Delayed)** • No data available.

### Eye

**Acute (Immediate)** • The acute studies conducted in rabbits with an 18% solution of this product indicates that the material causes slight eye irritation. A 14-day repeated installation eye irritation study in rabbits was conducted with aqueous solutions containing Chlorinated Sustain Shield. The results of this study indicated that there was no significant eye irritation from solutions with Chlorinated Sustain Shield concentrations at use levels. When an elevated concentration of Chlorinated Sustain Shield was applied to the eye, results indicate that Sustain Shield did not add significantly to the eye irritation produced by chlorine alone.

**Chronic (Delayed)** • No data available.

### Ingestion

**Acute (Immediate)** • No data available

**Chronic (Delayed)** • No data available.

#### Key to abbreviations

LC = Lethal Concentration

LD = Lethal Dose

TC = Toxic Concentration

TD = Toxic Dose

## Section 12 - Ecological Information

### Toxicity

Sustain® Shield					
Dosage	Species	Duration	Results	Exposure Conditions	Comments
1294600 µg/L	<b>Fish:</b> Bluegill - Lepomis macrochirus	96 Hour(s)	LC50	NDA	Sodium chloride
402600-469200 µg/L	<b>Crustacea:</b> Water flea - Daphnia magna	48 Hour(s)	EC25	NDA	Sodium chloride
0.86 g/L	<b>Fish:</b> Fathead minnow - Pimephales promelas	96 Hour(s)	NOEC	NDA	Sodium chloride

- May be harmful to the environment if released in large quantities.

### Persistence and degradability

- Material data lacking.

### Bioaccumulative potential

- Material data lacking.

### Mobility in Soil

- Material data lacking.

### Other adverse effects

- No studies have been found.

## Section 13 - Disposal Considerations

### Waste treatment methods

#### Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

#### Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

## Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class (es)	Packing group	Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

#### Special precautions for user

- None specified.

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- No data available

## Section 15 - Regulatory Information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### SARA Hazard Classifications

- None

Inventory				
Component	CAS	Canada DSL	Canada NDSL	TSCA
Sodium carbonate (2:1)	497-19-8	Yes	No	Yes
Sodium chloride	7647-14-5	Yes	No	Yes

### Canada

#### Labor

Canada - WHMIS - Classifications of Substances

Uncontrolled product

• Sodium chloride	7647-14-5	according to WHMIS classification criteria
• Sodium carbonate (2:1)	497-19-8	D2B, E
<b>Canada - WHMIS - Ingredient Disclosure List</b>		
• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	1 %

**Environment****Canada - CEPA - Priority Substances List**

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

**United States****Labor****U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

**U.S. - OSHA - Specifically Regulated Chemicals**

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

**Environment****U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

**U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities**

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

**U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities**

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs**

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs**

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

**U.S. - CERCLA/SARA - Section 313 - Emission Reporting**

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

**U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing**

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

**U.S. - TSCA (Toxic Substances Control Act) - Section 12(b) - Export Notification**

• Sodium chloride	7647-14-5	Not Listed
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• Sodium carbonate (2:1)	497-19-8	Not Listed
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## United States - California

### Environment

#### U.S. - California - Proposition 65 - Carcinogens List

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

#### U.S. - California - Proposition 65 - Developmental Toxicity

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

#### U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

#### U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

#### U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

#### U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Sodium chloride	7647-14-5	Not Listed
• Sodium carbonate (2:1)	497-19-8	Not Listed

## Section 16 - Other Information

### Last Revision Date

- 15/May/2015

### Preparation Date

- 15/May/2015

### Disclaimer/Statement of Liability

- The technical data given herein is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release, and is not to be considered a warranty or quality specification. No guarantee is being given as to the end use performance. The product is sold on the basis that buyers test the product for their specific purposes. This information related to the material designated and may not be valid for such material used in combination with any other materials or in any process.

### Key to abbreviations

NDA = No Data Available