Material Safety Data Sheet
Sparkleen 2

Section 1 - Chemical Product and Company Identification

MSDS Name:
Sparkleen 2

Catalog Numbers:
04-320-6

Synonyms:
FisherBrand Sparkleen 2 Detergent.

Company Identification:
Fisher Scientific - Fairlawn
One Reagent Lane
Fairlawn, NJ 07410

Company Phone Number:
(201) 796-7100

Emergency Phone Number:
(201) 796-7100

CHEMTREC Phone Number, US:
(800) 424-9300

CHEMTREC Phone Number, Europe:
(202) 483-7616

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
<th>Hazard Symbols</th>
<th>Risk Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>497-19-8</td>
<td>Sodium carbonate anhydrous</td>
<td>&lt; 40</td>
<td>207-838-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7758-29-4</td>
<td>Sodium tripolyphosphate</td>
<td>36</td>
<td>231-838-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6834-92-0</td>
<td>Sodium metasilicate</td>
<td>&lt; 20</td>
<td>229-912-9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51580-86-0</td>
<td>Sodium dichloroisocyanurate, dihydrate</td>
<td>&lt; 10</td>
<td>Not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7757-82-6</td>
<td>Sodium sulfate anhydrous</td>
<td>10</td>
<td>231-820-9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
EMERGENCY OVERVIEW

Appearance: White granules
Danger! Dried product residue can act as an oxidizer. May cause severe eye and skin irritation with possible burns. May cause severe respiratory and digestive tract irritation with possible burns.
Target Organs: Lungs, Eyes, Skin, Mucous membranes

Potential Health Effects

Eye:
Contact with eyes may cause severe irritation, and possible eye burns.

Skin:
Contact with skin causes irritation and possible burns, especially if the skin is wet or moist.

Ingestion:
May cause severe digestive tract irritation with abdominal pain, nausea, vomiting and diarrhea.

Inhalation:
May cause severe irritation of the upper respiratory tract with pain, burns, and inflammation.

Chronic:
Prolonged or repeated contact with concentrated solutions causes tissue damage.

Section 4 - First Aid Measures

Eyes:
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin:
Get medical aid immediately. In case of contact, immediately wipe away excess material with a dry cloth while removing contaminated clothing and shoes. Under safety shower, wash affected areas thoroughly with large amounts of water, and soap if available, for at least 15 minutes. Discard or decontaminate clothing and shoes.

Ingestion:
If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:
Treat symptomatically and supportively.
Section 5 - Fire Fighting Measures

General Information:
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Oxidizer. Greatly increases the burning rate of combustible materials. Aqueous solutions at 10% or greater of sodium metasilicate are corrosive to skin and to aluminum.

Extinguishing Media:
Water is a suitable extinguishing media. Do not use dry chemical extinguisher containing ammonia compounds.

Autoignition Temperature:
Not applicable.

Explosion Limits:
Lower: Not available  Upper: Not available

Flash Point:
Not applicable.

NFPA Rating:
(estimated) Health: 3; Flammability: 0; Instability: 1; Special Hazard: OX

Section 6 - Accidental Release Measures

General Information:
Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:
Vacuum or sweep up material and place into a suitable disposal container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling:
Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Avoid ingestion and inhalation. Keep from contact with clothing and other combustible materials. Do not use Sparkleen 2 for cleaning of rubber, silverware, aluminum, tinned metal, galvanized metal, brass, or other materials harmed by alkaline chlorine solutions.

Storage:
Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from flammable liquids.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.
Material Safety Data Sheet
Sparkleen 2

Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate anhydrous</td>
<td>None listed</td>
<td>None listed</td>
<td>None listed</td>
</tr>
<tr>
<td>Sodium tripolyphosphate</td>
<td>None listed</td>
<td>None listed</td>
<td>None listed</td>
</tr>
<tr>
<td>Sodium metasilicate</td>
<td>None listed</td>
<td>None listed</td>
<td>None listed</td>
</tr>
<tr>
<td>Sodium dichloroisocyanurate, dihydrate</td>
<td>None listed</td>
<td>None listed</td>
<td>None listed</td>
</tr>
<tr>
<td>Sodium sulfate anhydrous</td>
<td>None listed</td>
<td>None listed</td>
<td>None listed</td>
</tr>
<tr>
<td>Dichloroisocyanuric acid, sodium salt, anhydrous</td>
<td>None listed</td>
<td>None listed</td>
<td>None listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs

Personal Protective Equipment

Eyes:
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:
Wear appropriate gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to prevent skin exposure.

Respirators:
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Granules
Color: White
Odor: Chlorine-like
pH: 12.1 (0.5% soln)
Vapor Pressure: No information found
Vapor Density: No information found
Evaporation Rate: No information found
Viscosity: No information found
Boiling Point: No information found
Freezing/Melting Point: No information found
Decomposition Temperature: No information found
Solubility in water: Approx. 10% in water @ 25°C
Specific Gravity/Density: No information found
Molecular Formula: Mixture
Molecular Weight: No information found
Section 10 - Stability and Reactivity

Chemical Stability:
Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid:
Dust generation, excess heat

Incompatibilities with Other Materials
Strong reducing agents, acids, aluminum, organic matter

Hazardous Decomposition Products
Hydrogen chloride, chlorine, nitrogen oxides, carbon monoxide, carbon dioxide, toxic fumes of sodium oxide, nitrogen trichloride

Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

RTECS:
CAS# 497-19-8: VZ4050000
CAS# 7758-29-4: YK4570000
CAS# 6834-92-0: VV9275000
CAS# 51580-86-0: XZ1910000
CAS# 7757-82-6: WE1650000
CAS# 2893-78-9: XZ1900000
LD50/LC50:

CAS# 497-19-8:
- Draize test, rabbit, eye: 100 mg/24H Moderate
- Draize test, rabbit, eye: 50 mg Severe
- Draize test, rabbit, skin: 500 mg/24H Mild
- Inhalation, mouse: LC50 = 1200 mg/m3/2H
- Inhalation, rat: LC50 = 2300 mg/m3/2H
- Oral, mouse: LD50 = 6600 mg/kg
- Oral, mouse: LD50 = 6600 mg/kg
- Oral, rat: LD50 = 4090 mg/kg.

CAS# 7758-29-4:
- Draize test, rabbit, skin: 500 mg/24H Moderate
- Oral, mouse: LD50 = 3100 mg/kg
- Oral, rat: LD50 = 3120 mg/kg
- Skin, rabbit: LD50 = >4640 mg/kg.

CAS# 6834-92-0:
- Draize test, rabbit, skin: 250 mg/24H Severe
- Oral, mouse: LD50 = 770 mg/kg
- Oral, rat: LD50 = 1153 mg/kg.

CAS# 51580-86-0:
- No information found

CAS# 7757-82-6:
- Oral, mouse: LD50 = 5989 mg/kg.

CAS# 2893-78-9:
- Draize test, rabbit, eye: 100 mg/24H Mild
- Draize test, rabbit, skin: 500 mg/24H Mild
- Draize test, rabbit, skin: 500 mg Severe
- Oral, rat: LD50 = 1420 mg/kg.

Carcinogenicity:

CAS# 497-19-8: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 7758-29-4: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 6834-92-0: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 51580-86-0: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 7757-82-6: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 2893-78-9: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

No information available.

Teratogenicity:

No information available.

Reproductive:

No information available.

Mutagenicity:

No information available.

Neurotoxicity:

No information available.

Other:

See actual entry in RTECS for complete information.
Section 12 - Ecological Information

Ecotoxicity:
- Aquatic toxicity data for Sodium dichloroisocyanurate dihydrate:
  96 hr LC50 rainbow trout: 0.22 mg/l
  96 hr LC50 bluegill sunfish: 0.28 mg/l
  48 hr LC50 (Daphnia magna): 0.2 mg/l.

Environmental:
- No information found

Physical:
- No information found

Other:
- When too many nutrients such as phosphorus are in the water, algae grows maniacally. Algae blooms are followed by a die-off, and as material decays, it consumes oxygen like a forest fire. No fish, plants or insects can live in oxygen-free zones.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Part 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P Series Wastes
- None of the components are on this list.

RCRA U Series Wastes
- None of the components are on this list.

Section 14 - Transport Information

US DOT

Proper Shipping Name:
- Please contact Fisher Scientific for shipping information

Hazard Class:

UN Number:

Packing Group:

Canadian TDG

USA RQ: CAS# 7758-29-4: 5000 lb final RQ (listed under Sodium phosphate, tribasic): 2270 kg final RQ (li
Section 15 - Regulatory Information

US Federal

TSCA
- CAS# 497-19-8 is listed on the TSCA Inventory.
- CAS# 7758-29-4 is listed on the TSCA Inventory.
- CAS# 6834-92-0 is listed on the TSCA Inventory.
- CAS# 51580-86-0 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the Inventory. (40CFR720.3(u)(2)).
- CAS# 7757-82-6 is listed on the TSCA Inventory.
- CAS# 2893-78-9 is listed on the TSCA Inventory.

Health and Safety Reporting List
None of the components are on this list.

Chemical Test Rules
None of the components are on this list.

TSCA Section 12b
None of the components are on this list.

TSCA Significant New Use Rule (SNUR)
None of the components are on this list.

CERCLA Hazardous Substances and corresponding RQs
- CAS# 7758-29-4: 5000 lb final RQ (listed under Sodium phosphate, tribasic); 2270 kg final RQ (listed under Sodium phosphate tribasic as a material known to be hazardous under the CWA.

SARA Section 302 Extremely Hazardous Substances
None of the components are on this list.

SARA Hazard Categories
- CAS# 497-19-8: immediate.
- CAS# 7758-29-4: immediate.
- CAS# 6834-92-0: immediate.
- CAS# 51580-86-0: immediate, fire, reactive.
- CAS# 2893-78-9: immediate, fire, reactive.

SARA Section 313
None of the components are on this list.

Clean Air Act - Hazardous Air Pollutants (HAPs)
None of the components are on this list.

Clean Air Act - Class 1 Ozone Depletors
None of the components are on this list.

Clean Air Act - Class 2 Ozone Depletors
None of the components are on this list.

Clean Water Act - Hazardous Substances
- CAS# 7758-29-4 is listed as a Hazardous Substance under the CWA.

Clean Water Act - Priority Pollutants
None of the components are on this list.

Clean Water Act - Toxic Pollutants
None of the components are on this list.
OSHA - Highly Hazardous
None of the components are on this list.

OSHA - Specifically Regulated Chemicals
None of the components are on this list.

US State

State Right to Know
Sodium tripolyphosphate can be found on the following state Right-to-Know lists: California, Pennsylvania, Massachusetts.
Sodium dichloroisocyanurate, dihydrate can be found on the following state Right-to-Know lists: Pennsylvania, Massachusetts.
Sodium sulfate anhydrous can be found on the following state Right-to-Know lists: Pennsylvania, Massachusetts.
Dichloroisocyanuric acid, sodium salt, anhydrous can be found on the following state Right-to-Know lists: New Jersey, Pennsylvania, Massachusetts.

California Prop 65
None of the components are on this list.

California No Significant Risk Level
None of the components are on this list.

European/International Regulations

European Labelling in Accordance with EC Directives:
Hazard Symbols: O C N
Risk Phrases: R 31 Contact with acids liberates toxic gas.
R 34 Causes burns.
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 8 Contact with combustible material may cause fire.
Safety Phrases: S 8 Keep container dry.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 41 In case of fire and/or explosion do not breathe fumes.
S 60 This material and its container must be disposed of as hazardous waste.
S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)
No information found

United Kingdom Occupational Exposure Limits
No information found

United Kingdom Maximum Exposure Limits
No information found

Canadian DSL/NDSL
CAS# 497-19-8 is listed on Canada’s DSL List.
CAS# 7755-29-4 is listed on Canada’s DSL List.
CAS# 6834-92-0 is listed on Canada’s DSL List.
CAS# 7757-82-6 is listed on Canada’s DSL List.
CAS# 2893-78-9 is listed on Canada’s DSL List.
Canadian WHMIS Classifications

This product has a WHMIS classification of E, C.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 497-19-8 is listed on the Canadian Ingredient Disclosure List.
CAS# 6834-92-0 is listed on the Canadian Ingredient Disclosure List.
CAS# 2893-78-9 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

Color information has been
MSDS Creation Date: July 12, 1999
Revision Date: March 22, 2006

Revisions were made in Sections:
14

This MSDS is intended for review and guidance in the receipt, storage, handling, use and disposal of product purchased from us, and for no other purpose. Use this product only as directed and in accordance with applicable instructions and warnings provided with the product. Please consult your institution’s policies regarding use of this product. If you have obtained this MSDS other than in connection with the supply of this product from us, this MSDS should be consulted for general information only, and should not be relied upon for any purpose. As with the use of all hazardous materials, you should in all instances follow the guidance of the MSDS provided or available with the specific product purchased.