Material Safety Data Sheet
Scintiverse BD Cocktail

ACC# 60803

Section 1 - Chemical Product and Company Identification

MSDS Name: Scintiverse BD Cocktail
Catalog Numbers: SX18 250, SX18 4, SX18-250, SX18-4, SX18250, SX184
Synonyms: None
Company Identification:
Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410
For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>67774-74-7</td>
<td>Benzene, c10-13-alkyl derivatives</td>
<td>82.8</td>
<td>267-051-0</td>
</tr>
<tr>
<td>577-11-7</td>
<td>Diocyl sodium sulfosuccinate</td>
<td>13.0</td>
<td>209-406-4</td>
</tr>
<tr>
<td>9106-45-9</td>
<td>Ethylene oxide-nonylphenol polymer</td>
<td>3.4</td>
<td>unlisted</td>
</tr>
<tr>
<td>92-71-7</td>
<td>2,5-diphenyl-oxazole</td>
<td>0.37</td>
<td>202-181-3</td>
</tr>
<tr>
<td>13280-61-0</td>
<td>Benzene, 1,4-bis[(2-methylphenyl)ethenyl-</td>
<td>0.08</td>
<td>236-285-5</td>
</tr>
<tr>
<td>3806-34-6</td>
<td>Distearyl pentaerythritol diphosphate</td>
<td>0.03</td>
<td>223-276-6</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: not available liquid.

Warning! May cause severe eye irritation and possible injury. May cause skin irritation. May cause respiratory and digestive tract irritation. May cause central nervous system depression. May cause pulmonary edema.

Target Organs: Central nervous system.

Potential Health Effects

Eye: Contact may cause severe eye irritation and possible eye damage.

Skin: May cause skin irritation. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis.

Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

Inhalation: May cause respiratory tract irritation. May cause effects similar to those described for ingestion.

Chronic: No information found.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: No specific antidote exists. 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. Combustion generates toxic fumes.

Extinguishing Media: For small fires, use water spray, dry chemical, carbon dioxide or chemical foam.

Flash Point: > 280°C deg F (> 137.78 deg C)

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 1; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures
General Information: Use proper personal protective equipment as indicated in Section 8. Spills/Leaks: Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as sawdust.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.
Storage: Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene, c10-13-alkyl derivatives</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Dioctyl sodium sulfosuccinate</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
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<tr>
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<td>2,5-diphenyl-oxazole</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Benzene, 1,4-bis2-(2-methylphenylethenyl)</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Distearyl pentaerythritol diphosphite</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Benzene, c10-13-alkyl derivatives: No OSHA Vacated PELs are listed for this chemical. Dioctyl sodium sulfosuccinate: No OSHA Vacated PELs are listed for this chemical. Ethylene oxide-nonylphenol polymer: No OSHA Vacated PELs are listed for this chemical. 2,5-diphenyl-oxazole: No OSHA Vacated PELs are listed for this chemical. Benzene, 1,4-bis2-(2-methylphenylethenyl)-: No OSHA Vacated PELs are listed for this chemical. Distearyl pentaerythritol diphosphite: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment
Eyes: Wear safety glasses and chemical goggles or face shield if handling liquids.
Skin: Wear appropriate protective gloves 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: Liquid
Appearance: not available
Odor: none reported
pH: Not available.
Vapor Pressure: Not available.
Vapor Density: Not available.
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: Not available.
Freezing/Melting Point: Not available.
Decomposition Temperature: Not available.
Solubility: Not available.
Specific Gravity/Density: 0.897 (water=1)
Molecular Formula: Mixture
Molecular Weight: Not available

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: High temperatures, incompatible materials.
Incompatibilities with Other Materials: Strong oxidizers, acids, stearyl alcohol.
Hazardous Decomposition Products: Phosphine, carbon monoxide, oxides of nitrogen, oxides of sulfur, carbon dioxide.
Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#: 67774-74-7 unlisted.
CAS# 577-11-7: WN0525000
CAS# 9016-45-9: AX0247000; AX0257000; MD0900000; MD0905000; OQ0248333; WZ4200000; WZ4375000; WZ4550000; WZ4725000; WZ4750000
CAS# 92-71-7: RP6825000
CAS# 13280-61-0 unlisted.
CAS# 3806-34-6 unlisted.
LD50/LC50:
Not available.

CAS# 577-11-7:
Draize test, rabbit, eye: 250 ug Mild;
Draize test, rabbit, eye: 1% Severe;
Draize test, rabbit, skin: 10 mg/24H Moderate;
Oral, mouse: LD50 = 2643 mg/kg;
Oral, rat: LD50 = 1900 mg/kg;

CAS# 9016-45-9:
Draize test, rabbit, eye: 5 mg Severe;
Draize test, rabbit, eye: 5 mg Severe;
Draize test, rabbit, eye: 20 mg Severe;
Draize test, rabbit, eye: 100 mg Severe;
Draize test, rabbit, eye: 15 mg Severe;
Draize test, rabbit, eye: 200 mg Severe;
Oral, mouse: LD50 = >50 gm/kg;
Oral, rat: LD50 = 4 gm/kg;
Oral, rat: LD50 = 1310 mg/kg;
Oral, rat: LD50 = 2590 uL/kg;
Oral, rat: LD50 = >3 gm/kg;
Oral, rat: LD50 = 4290 uL/kg;
Oral, rat: LD50 = 3670 uL/kg;

CAS# 92-71-7:

CAS# 13280-61-0:

CAS# 3806-34-6:

Carcinogenicity:
CAS# 67774-74-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 577-11-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 9016-45-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 92-71-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 13280-61-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 3806-34-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.
Teratogenicity: No information available.
Mutagenicity: Please refer to RTECS for specific information.
Neurotoxicity: No information available.
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.
Environmental: No information reported.
Physical: No information available.
Other: No information available.

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 Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>US DOT</th>
<th>Canada TDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Name:</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>Hazard Class:</td>
<td></td>
</tr>
<tr>
<td>UN Number:</td>
<td></td>
</tr>
<tr>
<td>Packing Group:</td>
<td></td>
</tr>
</tbody>
</table>

Section 15 - Regulatory Information
US FEDERAL

TSCA
CAS # 67774-74-7 is listed on the TSCA inventory.
CAS # 577-11-7 is listed on the TSCA inventory.
CAS # 9016-45-9 is listed on the TSCA inventory.
CAS # 92-71-7 is listed on the TSCA inventory.
CAS # 13280-61-0 is listed on the TSCA inventory.
CAS # 3806-34-6 is listed on the TSCA inventory.

Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.

Section 12b
None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.

SARA Codes
CAS # 67774-74-7: immediate, delayed.
CAS # 577-11-7: immediate.
CAS # 9016-45-9: immediate, delayed, fire.

Section 313
No chemicals are reportable under Section 313.

Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.

Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.

STATE
CAS # 67774-74-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
CAS # 577-11-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
CAS # 9016-45-9 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
CAS # 92-71-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
CAS # 13280-61-0 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
CAS # 3806-34-6 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65
California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:
Not available.

Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)
CAS # 67774-74-7: 1
CAS # 577-11-7: 2
CAS # 9016-45-9: 2
CAS # 92-71-7: No information available.
CAS # 13280-61-0: No information available.
CAS # 3806-34-6: No information available.

Canada - DSL/NDSL
CAS # 67774-74-7 is listed on Canada's DSL List.
CAS # 577-11-7 is listed on Canada's DSL List.
CAS # 9016-45-9 is listed on Canada's DSL List.
CAS # 92-71-7 is listed on Canada's DSL List.
CAS # 13280-61-0 is listed on Canada's DSL List.
CAS # 3806-34-6 is listed on Canada's DSL List.

Canada - WHMIS
This product has a WHMIS classification of D2B.
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 # 577-11-7 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997
Revision #4 Date: 10/03/2005
The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.