SAFETY DATA SHEET

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

IDENTIFICATION OF THE MIXTURE
TRADE/MATERIAL NAME:
SpecSeal® Cable Spray

RELEVANT USE of the SUBSTANCE:
Cable Protection

USES ADVISED AGAINST:
None

SUPPLIER/MANUFACTURER’S NAME:
Specified Technologies, Inc.

Address: 210 Evans Way,
Somerville, New Jersey 08876

Business Phone: (908) 526-8000 (8:00am to 5:00pm Eastern Standard Time)

Emergency Phone:
U.S., Canada: 1-800-255-3924 (24 hrs)
International: +1-813-248-0585 (collect-24 hrs)

EMAIL of Competent Person for Information on SDS:
techserv@stifirestop.com

NOTE: ALL United States Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards, Canadian WHMIS [Controlled Products Regulations], Mexican NOM018-STPS 2000, SPRING Singapore, and Japanese JIS Z7250 required information is included in appropriate sections based on the U.S. ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the countries listed above.

2. HAZARD IDENTIFICATION

GLOBAL HARMONIZATION AND JAPANESE JIS Z7253 LABELING AND CLASSIFICATION: This product has been classified per UN GHS Standards under U.S., Japanese and other applicable regulations that require Global Harmonization compliance.

Classification: Carcinogenic Category 2, Acute Oral Toxicity Category 5, Eye Irritation Category 2A, Skin Sensitization Category 1B, Specific Target Organ Toxicity (Inhalation-Respiratory Irritation) Single Exposure Category 3, Specific Target Organ Toxicity (Neurological/Endocrine System) Repeated Exposure Category 3, Aquatic Acute Toxicity Category 2, Aquatic Chronic Toxicity Category 2

Signal Word: Warning

Hazard Statements:

Precautionary Statements:
Response: P308 + P313: IF exposed or concerned: Get medical advice/attention. P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. P337 + P313: If eye irritation persists: Get medical advice/attention. P302 + P352: IF ON SKIN: Wash with plenty of soap and water. P333 + P313: If skin irritation or rash occurs: Get medical advice/attention. P304 + P340: If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. P362 + P364: Take off contaminated clothing and wash it before reuse. P312: Call a POISON CENTER or doctor if you feel unwell. P391: Collect spillage.
Disposal: P501: Dispose of contents/containers in accordance with all local, regional, national and international regulations.

Hazard Symbols: GHS07, GHS08

KOREAN ISHA (Notice 2009-68) LABELING AND CLASSIFICATION: Classified in accordance with ISHA Notice 2009-68. Under ISHA, no differences in classification are applicable.
3. COMPOSITION and INFORMATION ON INGREDIENTS

Hazardous Components:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>Chinese IECSC Inventory</th>
<th>Japanese ENCS #</th>
<th>Korean ECL #</th>
<th>Taiwan NESCI ECS WT%</th>
<th>LABEL ELEMENTS</th>
</tr>
</thead>
</table>
| Aluminum Trihydrate    | 21645-51-2| Listed                  | 1-17           | KE-00980     | Listed               | **SELF CLASSIFICATION**  
GHS & Japanese JIS Z7253 Classification: Eye Irritation Cat. 2A  
KOREAN ISHA: Eye Irritation Cat. 2A  
20-30%                                                                                                                                                                                                   |
| tert-Butyl Diphenyl Phosphate | 56803-37-3| Listed                  | Not Listed     | KE-28568     | Listed               | **SELF CLASSIFICATION**  
GHS & JAPANESE JIS Z7253, KOREAN ISHA:  
Classification: (Neurological/Endocrine Systems) RE Cat. 3, Aquatic Chronic Toxicity Cat. 1  
Hazard Statement Codes: H373, H400  
1-3%                                                                                                                                                                                                   |
| Triphenyl Phosphate    | 115-86-6  | Listed                  | 3-2522, 3-3363 | KE-28568     | Listed               | **SELF CLASSIFICATION**  
GHS & JAPANESE JIS Z7253, KOREAN ISHA:  
Classification: Acute Oral Toxicity Cat. 4, Skin Sensitization Cat. 1B, STOT (Neurological/Endocrine Systems) RE Cat. 3, Aquatic Acute Toxicity Cat. 2, Aquatic Chronic Toxicity Cat. 2  
Hazard Statement Codes: H302, H317, H373, H401, H410  
1-3%                                                                                                                                                                                                   |
| Titanium Dioxide       | 13463-67-7| Listed                  | 1-558          | KE-33390     | Listed               | **SELF CLASSIFICATION**  
GHS & JAPANESE JIS Z7253, KOREAN ISHA:  
Classification: Carcinogenic Cat. 2  
Hazard Statement Codes: H351i  
0.7-0.9%                                                                                                                                                                                                   |
| Crystalline Silica     | 14806-60-7| Listed                  | 1-548          | KE-29983     | Listed               | **SELF CLASSIFICATION**  
GHS & JAPANESE JIS Z7253, KOREAN ISHA:  
Classification: Carcinogenic Cat. 1, STOT (Inhalation-Lungs) RE Cat. 2  
Hazard Statement Codes: H350, H373  
0.02-0.3%                                                                                                                                                                                                   |

4. FIRST-AID MEASURES

**Skin Exposure:** If adverse skin effects occur, discontinue use and flush contaminated area. Seek medical attention if adverse effect occurs after flushing.

**Inhalation:** If fumes or vapors are inhaled, remove victim to fresh air. Seek medical attention if adverse effect continues after removal to fresh air.

**Eye Exposure:** If this product contaminates the eyes, rinse eyes under gently running water. Use sufficient force to open eyelids and then “roll” eyes while flushing. Minimum flushing is for 20 minutes. The contaminated individual must seek medical attention if any adverse effect continues after rinsing.

**Ingestion:** If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, DO NOT INDUCE VOMITING. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Pre-existing respiratory, skin or neuromuscular disorders may be aggravated by overexposures to this product.

5. FIRE-FIGHTING MEASURES

**FLASH POINT:** 260°C (500°F)  
**AUTOIGNITON TEMPERATURE:** Not available.  
**FLAMMABLE LIMITS (in air by volume, %):** Not applicable.  
**FIRE EXTINGUISHING MEDIA:** Use extinguishing materials suitable for the surrounding area.  
**UNSUITABLE FIRE EXTINGUISHING MEDIA:** None known.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** This product is formulated to be non-flammable and non-combustible. When involved in a fire, this material may decompose and produce irritating vapors and toxic gases.

**Explosion Sensitivity to Mechanical Impact:** Not sensitive.  
**Explosion Sensitivity to Static Discharge:** Not sensitive.

**SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS:** No Special protective actions for fire-fighters are anticipated.
6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS AND EMERGENCY PROCEDURES: Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. Call CHEMTREC (1-800-424-9300) for emergency assistance. Or if in Canada, call CANUTEC (613-996-6666)

PERSONAL PROTECTIVE EQUIPMENT: Proper protective equipment should be used.

Methods for Clean-up and Containment: Spills of this product present minimal hazard.

Small Spills: Small releases can be carefully swept up or cleaned up using a damp sponge or poly pads.

Large Spills: Access to the spill area should be restricted. For large spills, dike or otherwise contain spill and sweep-up or vacuum with non-sparking vacuum.

All Spills: Place all spill residue in a double plastic bag or other containment and seal. Close off sewers and take other measures to protect human health and the environment as necessary. Rinse area with soap and water solution and follow with a water rinse. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations). For spills on water, contain, minimize dispersion and collect. Dispose of recovered material and report spill per regulatory requirements.

ENVIRONMENTAL PRECAUTIONS: Avoid release to the environment.

7. HANDLING and USE

PRECAUTIONS FOR SAFE HANDLING: As with all chemicals, avoid getting this material ON YOU or IN YOU. Do not eat, drink, smoke, or apply cosmetics while handling this product. Wash hands thoroughly after handling this product or containers of this product. Avoid breathing fumes or vapors generated by this product. Use in a well-ventilated location.

CONDITIONS FOR SAFE STORAGE: Store containers in a cool, dry location, away from direct sunlight, sources of intense heat. Do not store above 55°C (131°F)

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/CONTROL PARAMETERS:

Ventilation and Engineering Controls: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below (if applicable). Exhaust directly to the outside, taking necessary precautions for environmental protection.

**Workplace Exposure Limits/Control Parameters:**

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS #</th>
<th>ACGIH-TLVs</th>
<th>OSHA-PELs</th>
<th>NIOSH-RELs</th>
<th>NIOSH</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TWA mg/m³</td>
<td>STEL mg/m³</td>
<td>TWA mg/m³</td>
<td>STEL mg/m³</td>
<td>IDLH mg/m³</td>
</tr>
<tr>
<td>Aluminum Trihydrate</td>
<td>21645-51-2</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>tert-Butyl Diphenyl Phosphate</td>
<td>56803-37-3</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Crystalline Silica (Quartz)</td>
<td>14808-60-7</td>
<td>0.025 (resp. fract.)</td>
<td>NE</td>
<td>30 mg/m³ (total dust)</td>
<td>NE</td>
<td>0.05 (resp. dust)</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>10</td>
<td>NE</td>
<td>15 (total dust); 10 (vacated 1989 PEL)</td>
<td>NE</td>
<td>See Pocket Guide App. A</td>
</tr>
<tr>
<td>Triphenyl Phosphate</td>
<td>115-86-6</td>
<td>3</td>
<td>NE</td>
<td>3</td>
<td>NE</td>
<td>1000</td>
</tr>
</tbody>
</table>

NE = Not Established.  mppcf: Millions of Particles per Cubic Foot  See Section 16 for Definitions of Other Terms Used
8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

International Occupational Exposure Limits: Currently, the following additional exposure limit values have been established by various countries for the components of this mixture. More current limits may be available; individual countries should be consulted to determine if newer limits are available.

ALUMINUM HYDROXIDE:
- Australia: TWA = 2 mg/(Al/m³), JUL 2008
- Belgium: TWA = 2 mg/(Al/m³), MAR 2002
- Finland: TWA = 2 mg/(Al/m³), NOV 2011
- France: VME = 2 mg/(Al/m³), FEB 2006
- Korea: TWA = 2 mg/(Al/m³), 2006
- New Zealand: TWA = 2 mg/(Al/m³), JAN 2002
- Russia: TWA = 6 mg/m³, JUN 2003
- Sweden: TWA = 1 mg/(Al/m³), JUN 2005

Switzerland: MAK-W = 3 mg/m³, resp, JAN 2011
United Kingdom: TWA = 2 mg/(Al/m³), OCT 2007

In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV

CRYSTALLINE SILICA:
- Australia: TWA = 0.1 mg/m³, JUL 2008
- Belgium: TWA = 0.1 mg/m³ (resp. dust), MAR 2002
- Denmark: TWA = 0.1 mg/m³ (respirable), carc, MAY 2011
- Denmark: TWA = 0.1 mg/m³ (resp.), carc, MAY 2011
- Denmark: TWA = 0.3 mg/m³ (total), MAY 2011
- Finland: TWA = 0.05 mg/m³, resp. dust, SEP 2009
- France: VME = 0.1 mg/m³, resp, FEB 2006
- Iceland: TWA = 0.1 mg/m³ (resp. dust), NOV 2011
- Japan: OEL-C. = 0.03 mg/m³ (respirable), APR 2007
- Korea: TWA = 0.1 mg/m³, 2006
- Mexico: TWA = 0.1 mg/m³ (respirable), 2004
- The Netherlands: MAC-TGG = 0.075 mg/m³, 2003
- New Zealand: TWA = 0.2 mg/m³ (respirable dust), JAN 2002
- Norway: TWA = 0.1 mg/m³ (resp. dust), JAN 1999
- Norway: TWA = 0.3 mg/m³ (total dust), JAN 1999
- Peru: TWA = 0.05 mg/m³, JUL 2005
- Russia: TWA = 1 mg/m³, STEL = 3 mg/m³, JUN 2003
- Sweden: TWA = 0.1 mg/m³ (resp. dust), JUN 2005
- Switzerland: MAK-W = 0.15 mg/m³, DEC 2006
- Thailand: TWA = 10 mg/m³ (resp. dust), JUN 1993
- Thailand: TWA = 30 mg/m³ (total dust), JAN 1993
- United Kingdom: TWA = 0.1 mg/m³ (resp. dust), OCT 2007

In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV

TITANIUM DIOXIDE:
- ARAB Republic of Egypt: TWA = 15 mg/m³, JAN 1993
- Austria: MAK-TMG = 5 mg/m³, KZW = 10 mg/m³, resp, 2007
- Belgium: TWA = 10 mg/m³, MAR 2002
- Denmark: TWA = 6 mg/(Ti/m³), MAY 2011
- France: VME = 10 mg/m³, FEB 2006
- Germany: MAK = 1.5 mg/m³ (respirable), 2005
- Iceland: TWA = 6 mg/(Ti/m³), NOV 2011
- Japan: OEL = 1 mg/m³ (resp. dust), 4 mg/m³ (total dust), MAY 2009
- Korea: TWA = 10 mg/m³, 2006
- Mexico: TWA = 10 mg/(Ti/m³); STEL = 20 mg/(Ti/m³), 2004
- The Netherlands: MAC-TGG = 10 mg/m³, 2003
- New Zealand: TWA = 10 mg/m³ (inspirable dust), JAN 2002
- Norway: TWA = 5 mg/m³, JAN 1999
- Peru: TWA = 10 mg/m³, JUL 2005
- Poland: MAC(TWA) = 10 mg/(Ti/m³); MAC(STEL) = 30 mg/(Ti/m³), JAN 1999
- Russia: TWA = 10 mg/m³, JUN 2003
- Sweden: TWA = 5 mg/m³ (total dust), JUN 2005
- Switzerland: MAK-W = 3 mg/m³, DEC 2006
- Turkey: TWA = 15 mg/m³, JAN 1993
- United Kingdom: TWA = 10 mg/m³ (inhal. dust), OCT 2007
- United Kingdom: TWA = 4 mg/m³ (resp. dust), OCT 2007
- In Argentina, Bulgaria, Columbia, Jordan, Singapore, Vietnam check ACGIH TLV

TRIPHENYL PHOSPHATE:
- Australia: TWA = 3 mg/m³, JUL 2008
- Austria: MAK-TMG = 3 mg/m³, KZW = 6 mg/m³, inh, 2007
- Belgium: TWA = 3 mg/m³, MAR 2002
- Denmark: TWA = 3 mg/m³, MAY 2011
- Finland: TWA = 3 mg/m³, STEL = 6 mg/m³, NOV 2011
- France: VME = 3 mg/m³, FEB 2006
- Iceland: TWA = 3 mg/m³, NOV 2011
- Korea: TWA = 3 mg/m³, 2006
- Mexico: TWA = 3 mg/m³; STEL = 6 mg/m³, 2004
- The Netherlands: MAC-TGG = 3 mg/m³, 2003
- New Zealand: TWA = 3 mg/m³, JAN 2002
- Norway: TWA = 3 mg/m³, JAN 1999
- Peru: TWA = 3 mg/m³, JUL 2005
- Russia: STEL = 1 mg/m³, JUN 2003
- Switzerland: MAK-W = 3 mg/m³, inh, JAN 2011
- United Kingdom: TWA = 3 mg/m³; STEL = 6 mg/m³, OCT 2007
- In Argentina, Bulgaria, Columbia, Jordan, Singapore, Vietnam check ACGIH TLV


Respiratory Protection: Maintain airborne contaminant concentrations below exposure limits listed above. For materials without listed exposure limits, minimize respiratory exposure. If necessary, use only respiratory protection authorized under appropriate regulations.

Eye Protection: Wear splash goggles or safety glasses as appropriate for the task.

Hand Protection: During manufacture or other similar operations, wear the appropriate hand protection for the process.

Skin Protection: Use appropriate protective clothing. If necessary, refer to the U.S. OSHA Technical Manual (Section VII: Personal Protective Equipment) or other appropriate regulations. Full-body chemical protective clothing is recommended for emergency response procedures.

9. PHYSICAL and CHEMICAL PROPERTIES

FORM: Paste.
COLOR: White.

MOLECULAR FORMULA: Mixture.
MOLECULAR WEIGHT: Mixture.

ODOR: Mild acrylic.
ODOR THRESHOLD: Not available.

FLAMMABLE LIMITS (in air by volume, %): Not applicable.
OXIDIZING PROPERTIES: Not applicable.

DECOMPOSITION TEMPERATURE: Not available.
PERCENT VOLATILE: 22 ± 2

AUTOIGNITION TEMPERATURE: Not available.
FLASH POINT: Not available.

FREEZING/MELTING POINT: Not available.
BOILING POINT: > 100°C (> 212°F)
9. PHYSICAL and CHEMICAL PROPERTIES (Continued)

VAPOR PRESSURE: Not available.
VAPOR DENSITY (air = 1): Not available.
EVAPORATION RATE (n-BuAc = 1): > 1
SOLUBILITY IN WATER: Insoluble.
COEFFICIENT WATER/OIL DISTRIBUTION: Not established.
PERCENT SOLIDS: 74±2
HOW TO DETECT THIS SUBSTANCE (warning properties in event of accidental release): The appearance may be characteristics to distinguish a release of this product.

10. STABILITY and REACTIVITY

CHEMICAL STABILITY: This product is stable when properly stored at normal temperature and pressures (see Section 7, Handling and Storage).
DECOMPOSITION PRODUCTS: Combustion: If exposed to extremely high temperatures, thermal decomposition may generate irritating fumes and toxic gases (e.g., aluminum, calcium, carbon, magnesium, phosphorous and titanium oxides, and acrylic monomers). Hydrolysis: None known.
MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product is incompatible with strong oxidizers.
POSSIBILITY OF HAZARDOUS POLYMERIZATION OR REACTION: Will not occur.
CONDITIONS TO AVOID: Avoid exposure to or contact with extreme temperatures and incompatible chemicals.

11. TOXICOLOGICAL INFORMATION

SYMPTOMS OF EXPOSURE BY ROUTE OF EXPOSURE: The health hazard information provided below is pertinent to employees using this product in an occupational setting. The following paragraphs describe the symptoms of exposure by route of exposure.
Inhalation: Inhalation of fumes or vapors may cause irritation of the nose, throat, and lungs and cause coughing. This product contains trace amounts of a suspected human carcinogen by inhalation; however, this hazard is not expected to be significant due to viscosity and consistency of the mixture.
Contact with Skin or Eyes: Direct eye contact may cause irritation, redness, and tearing from mechanical irritation. Prolonged or repeated skin exposures may cause dermatitis (dry red skin).
Skin Absorption: Components are not known to be absorbed through intact skin.
Ingestion: Ingestion is not a significant route of occupational exposure and is unlikely to occur.
SYMPTOMS OF EXPOSURE BY ROUTE OF EXPOSURE (continued):
Injection: Accidental injection of this product, via laceration or puncture by a contaminated object can cause redness at the site of injection. Animal data for the Crystalline Silica component indicate that it may cause carcinogenic effects by this route of exposure.
Other Health Effects: The Triphenyl Phosphate component is suspected to be an endocrine disruptor. Chronic exposure may cause adverse effects to the neurological system due to the Triphenyl Phosphate component.
HEALTH EFFECTS OR RISKS FROM EXPOSURE: Exposure to this product may cause the following health effects:
Acute: Inhalation of fumes or vapors may cause irritation of respiratory system. Eye contact may cause mechanical irritation.
Chronic: Prolonged or repeated skin exposure may cause dermatitis (dry red skin). This product contains trace amounts of a suspected human carcinogen by inhalation; however, this hazard is not expected to be significant due to viscosity and consistency of the mixture.
TARGET ORGANS: Acute: Skin, eyes, respiratory system. Chronic: Skin, neurological system, endocrine system.

TOXICITY DATA: Currently, the following toxicological data are available for components of 1% or more concentration.

ALUMINUM TRIHYDRATE:
TDLo (Oral-Child) 79 gm/kg/2 years-intermittent: Behavioral: changes in motor activity (specific assay), muscle contraction or spasticity; Musculoskeletal: osteomalacia
TDLo (Oral-Child) 122 gm/kg/4 days: Gastrointestinal: other changes; Nutritional and Gross Metabolic: body temperature increase
TDLo (Oral-Woman) 84 gm/kg: female 1-60 week(s) after conception: Reproductive: Effects on Newborn: physical
TDLo (Oral-Infant) 68040 mg/kg/24 weeks-intermittent: Musculoskeletal: osteoporosis; Nutritional and Gross Metabolic: weight loss or decreased weight gain, changes in phosphorus

ALUMINUM TRIHYDRATE (continued):
TDLo (Oral-Woman) 73912.5 mg/kg/28 weeks-intermittent: Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol); Musculoskeletal: osteoporosis; Nutritional and Gross: Metabolic: changes in phosphorus
TDLo (Unreported-Infant) 39 gm/kg/24 days-intermittent: Musculoskeletal: osteomalacia
TDLo (Oral-Rat) 15 mg/kg: Gastrointestinal: other changes
TDLo (Oral-Rat) 8040 mg/kg/67 days-continuous: Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol); Nutritional and Gross Metabolic: changes in phosphorus
11. TOXICOLOGICAL INFORMATION (Continued)

TOXICITY DATA (continued):

ALUMINUM TRHYDRATE (continued):
TDLo (Oral-Mouse) 80,880 mg/kg/23 weeks-continuous: Liver: other changes; Musculoskeletal: other changes; Nutritional and Gross Metabolic: changes in metals, not otherwise specified
TDLo (Intraperitoneal-Rat) 150 mg/kg
TDLo (Intraperitoneal-Rat) 6240 mg/kg/26 weeks-intermittent: Blood: pigmented or nucleated red blood cells; Nutritional and Gross Metabolic: weight loss or decreased weight gain, changes in iron
TDLo (Intraperitoneal-Rat) 1920 mg/kg/8 weeks-intermittent: Blood: microcytosis with or without anemia
TDLo (Intraperitoneal-Rat) 960 mg/kg/4 weeks-intermittent: Blood: changes in erythrocyte (RBC) count
GROUND LIMESTONE:
TDLo (Intravenous-Rat) 30 mg/kg: Vascular: BP lowering not characterized in autonomic section; Lungs, Thorax, or Respiration: changes in lung weight; Blood: other changes
TCLo (Inhalation-Rat) 84 mg/m^3/4 hours/40 weeks-intermittent: Lungs, Thorax, or Respiration: fibrosis (interstitial); LIVER: other changes; Kidney/Ureter/Bladder: other changes
TCLo (Inhalation-Rat) 250 mg/m^3/2 hours/24 weeks-intermittent: Lungs, Thorax, or Respiration: fibrosis, focal (pneumoconiosis)

TRIPHENYL PHOSPHATE:
LDLo (Intraperitoneal-Rat) 3500 mg/kg: Behavioral: tremor, ataxia; Gastrointestinal: hypermotility, diarrhea
LDLo (Oral-Mouse) 1320 mg/kg: Sense Organs and Special Senses (Olfaction): effect, not otherwise specified; Behavioral: somnolence (general depressed activity), changes in motor activity (specific assay)
LDLo (Skin-Rabbit) > 7900 mg/kg
LDLo (Skin-Guinea Pig) > 4 gm/kg
LDLo (Intraperitoneal-Mouse) 1273 mg/kg
LC50 (Inhalation-Mammal-Species Unspecified) 4200 mg/m^3: Sense Organs and Special Senses (Olfaction): effect, not otherwise specified; Behavioral: somnolence (general depressed activity), changes in motor activity (specific assay)
LDLo (Oral-Chicken) > 4 gm/kg
LD Lo (Intraperitoneal-Rat) > 5 gm/kg: Gastrointestinal: other changes; Skin and Appendages: hair

IRRITANCY OF PRODUCT: Inhalation of fumes or vapors may cause respiratory irritation. Eye contact may cause irritation. Prolonged skin contact may cause irritation.

SENSITIZATION OF PRODUCT: Dermal patch tests have shown that allergic contact dermatitis may occur in persons sensitive to Triphenyl Phosphate. Contact with this product may cause allergic skin reactions due to this component.

CARCINOGENIC POTENTIAL OF COMPONENTS: Components of this product are listed by agencies tracking the carcinogenic potential of chemical compounds, as follows:

CRYSTALLINE SILICA: ACGIH-TLV-A2 (Suspected Human Carcinogen); IARC-1 (Carcinogenic to Humans); MAK-1 (Substances that Cause Cancer in Man and Can Be Assumed to Make a Significant Contribution to Cancer Risk); NIOSH-Ca (Potential Occupational Carcinogen with No Further Categorization); NTP-X (Known to Be a Human Carcinogen)

TITANIUM DIOXIDE: ACGIH TLV-A4 (Not Classifiable as a Human Carcinogen); IARC-3 (Unclassifiable as to Carcinogenicity in Humans); NIOSH-Ca (Potential Occupational Carcinogen, with No Further Categorization)

TRIPHENYL PHOSPHATE: ACGIH TLV-A4 (Not Classifiable as a Human Carcinogen)
The remaining components are not found on the following lists: U.S. EPA, U.S. NTP, U.S. OSHA, U.S. NIOSH, GERMAN MAK, IARC, or ACGIH and therefore is neither considered to be nor suspected to be a cancer-causing agent by these agencies.

REPRODUCTIVE TOXICITY INFORMATION: Components of this product have no reported mutagenic, embryotoxic, teratogenic or reproductive toxicity.

ACGIH BIOLOGICAL EXPOSURE INDICES (BEIs): Currently, there are no ACGIH Biological Exposure Indices (BEIs) determined for this material.

DEGREE OF EFFECT TO THE HEALTH OF THE POLLUTING AGENT OF ENVIRONMENT OF WORK (per Mexican NOM-010 STPS-1999): 0

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

MOBILITY: This product has not been tested for mobility in soil.

PERSISTENCE AND BIODEGRADABILITY: This product has not been tested for persistence or biodegradability. The mineral components are not expected to biodegrade to great extent.
12. ECOLOGICAL INFORMATION (Continued)

BIO-ACCUMULATION POTENTIAL: This product has not been tested for bio-accumulation potential. The tert-Butylphenyl Diphenyl Phosphate component has BCF values 528, 785 and 1096 in fish which suggest bioconcentration in aquatic organisms is high to very high. The Triphenyl Phosphate component has BCF values ranging from 132 to 573 and suggest that bioconcentration in aquatic organisms is high.

ECOTOXICITY: This product has not been tested for aquatic or animal toxicity. All releases to terrestrial, atmospheric and aquatic environments should be avoided. The following aquatic toxicity data are available for the Triphenyl Phosphate component.

TRIOPHENYL PHOSPHATE:

<table>
<thead>
<tr>
<th>Test</th>
<th>Species</th>
<th>Concentration</th>
<th>Exposure Period</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>Pimephales promelas fathead minnow</td>
<td>0.87 mg/L</td>
<td>96 hours</td>
<td>Static bioassay</td>
</tr>
<tr>
<td>LC50</td>
<td>Pimephales promelas fathead minnow</td>
<td>0.51 mg/L</td>
<td>96 hours</td>
<td>Static bioassay</td>
</tr>
<tr>
<td>LC50</td>
<td>Leptomis Macrachirus</td>
<td>290 mg/L</td>
<td>96 hours</td>
<td>Static bioassay</td>
</tr>
<tr>
<td>LC50</td>
<td>Menidia beryllina</td>
<td>95 mg/L</td>
<td>96 hours</td>
<td>Static bioassay</td>
</tr>
<tr>
<td>LC50</td>
<td>Channel catfish</td>
<td>0.42 mg/L</td>
<td>96 hours</td>
<td>Static bioassay</td>
</tr>
<tr>
<td>LC50</td>
<td>Killfish</td>
<td>1.2 mg/L</td>
<td>96 hours</td>
<td>Static bioassay</td>
</tr>
<tr>
<td>LC50</td>
<td>Goldfish</td>
<td>0.70 mg/L</td>
<td>96 hours</td>
<td>Static bioassay</td>
</tr>
<tr>
<td>LC50</td>
<td>Ictalurus punctatus</td>
<td>0.23 g</td>
<td>96 hours</td>
<td>Static bioassay</td>
</tr>
<tr>
<td>LC50</td>
<td>Gammarus pseudolimnaeus</td>
<td>250 µg/L</td>
<td>96 hours</td>
<td>Static bioassay</td>
</tr>
<tr>
<td>LC50</td>
<td>Pomacea canaliculata</td>
<td>38,200 µg/L</td>
<td>72 hours</td>
<td>Static bioassay</td>
</tr>
<tr>
<td>LC50</td>
<td>Chironomus riparius</td>
<td>360 µg/L</td>
<td>48 hours</td>
<td>Static bioassay</td>
</tr>
</tbody>
</table>

OTHER ADVERSE EFFECTS: This material is not listed as having ozone depletion potential.

ENVIRONMENTAL EXPOSURE CONTROLS: Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: It is the responsibility of the generator to determine at the time of disposal whether the product meets the criteria of a hazardous waste per regulations of the area in which the waste is generated and/or disposed of. Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Shipment of wastes must be done with appropriately permitted and registered transporters.

DISPOSAL CONTAINERS: Waste materials must be placed in and shipped in appropriate 5-gallon or 55-gallon poly or metal waste pails or drums. Permeable cardboard containers are not appropriate and should not be used. Ensure that any required marking or labeling of the containers be done to all applicable regulations.

PRECAUTIONS TO BE FOLLOWED DURING WASTE HANDLING: Wear proper protective equipment when handling waste materials.

U.S. EPA WASTE NUMBER: Not applicable.

14. TRANSPORTATION INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS: This product is not classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This product is not classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA): This product is not classified as dangerous goods under rules of IATA.

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION: This product is not classified as Dangerous Goods by the International Maritime Organization.

OFFICIAL MEXICAN STANDARD; REGULATION FOR THE TRANSPORT OF DANGEROUS GOODS AND RESIDUES: This product is not classified as Dangerous Goods, per transport regulations of Mexico.

SINGAPORE STANDARD 286: PART A: This product has no requirements under the Specification for Caution Labeling for Hazardous Substances, Part 4: Marking of Packages, Containers and Vehicles, as it does not meet the criteria for any hazard class under this regulation.

TRANSPORT IN BULK ACCORDING TO THE IBC CODE: See the information under the individual jurisdiction listings for IBC information.

ENVIRONMENTAL HAZARDS: This material does not meet the criteria of environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID, and ADN) and is not listed in Annex III under MARPOL 73/78.
UNITED STATES REGULATIONS:
- U.S. SARA Reporting Requirements: This product is not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.
- U.S. SARA Hazard Categories (Section 311/312, 40 CFR 370-21): ACUTE: Yes; CHRONIC: Yes; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No
- U.S. SARA Threshold Planning Quantity (TPQ): There are no specific Threshold Planning Quantities for components. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.
- U.S. CERCLA Reportable Quantity (RQ): Not applicable.
- U.S. TSCA Inventory Status: Components of this product are listed on the TSCA Inventory.
- California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): The Crystalline Silica component is on the California Proposition 65 lists. WARNING! This product contains a compound known to the State of California to cause Cancer.
- CANADIAN REGULATIONS:
  - Canadian DSL/NDSL Inventory Status: Components are on the DSL or NDSL Inventories.
  - Canadian Environmental Protection Act (CEPA) Priorities Substances Lists: Components are not on the CEPA Priorities Substances Lists.
- CANADIAN WHMIS Classification and Symbols: This product would be categorized as a Controlled Product, D2B (Other Toxic Effects-Potential Carcinogenic Effect, Irritation) as per the Controlled Product Regulations.
- CHINESE REGULATIONS:
  - Chinese Inventory of Existing Chemical Substances Status: Components listed by CAS# are listed on the Chinese Inventory of Existing Chemical Substances (IECSC).
- JAPANESE REGULATIONS:
  - Japanese ENCS: Components listed by CAS# are on the ENCS Inventory or are excepted.
  - Japanese Ministry of Economy, Trade, and Industry (METI) Status: Components are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese METI.
- POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW: Components are not listed as a Specified Poisonous Substance under the Poisonous and Deleterious Substances Control Law.
- KOREAN REGULATIONS:
  - Korean Existing Chemicals List (ECL) Status: Components listed by CAS# are listed on the Korean ECL Inventory.
- MEXICAN REGULATIONS:
  - Mexican Workplace Regulations (NOM-018-STPS-2000): This product is classified as hazardous.
- SINGAPORE REGULATIONS:
  - List of Controlled Hazardous Substances: Components listed by CAS# are not listed on the Singapore List of Controlled Substances.
  - Code of Practice on Pollution Control Requirements: The components identified by CAS# in Section 2 (Composition and Information on Ingredients) NOT are subject to the requirements under the Singapore Code of Practice on Pollution Control.
- TAIWANESE REGULATIONS:
  - Taiwan Existing Chemical Substances Inventory Status: Components listed by CAS# are listed on the Taiwan Existing Chemicals List.

REFERENCES AND DATA SOURCES: Contact the supplier for information.

METHODS OF EVALUATING INFORMATION FOR THE PURPOSE OF CLASSIFICATION: Criteria of the GHS were used for classification.

PREPARED BY: CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, HI 96721-1961 • (800) 441-3365

DATE OF PRINTING: January 30, 2017
REVISED: January 3, 2017
REVISION DETAILS: Reviewed January 3, 2017, no changes necessary.

16. OTHER INFORMATION

DEFINITION OF TERMS
A large number of abbreviations and acronyms appear on a SDS. Some of these, which are commonly used, include the following:
- CAS #: This is the Chemical Abstract Service Number that uniquely identifies each constituent.
- EXPOSURE LIMITS IN AIR:
- CEILING: The concentration that shall not be exceeded during any part of the working exposure.
- DFG MAK: Federal Republic of Germany Maximum Concentration Values in the workplace. Exposure limits are given as TWA (Time-Weighted Average) or PEAK (short-term exposure) values.
- DFG MAK Germ Cell Mutagen Categories: 1: Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed humans. 2: Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed mammals. 3A: Substances that have been shown to induce genetic damage in germ cells of human or animals, or which produce mutagenic effects in somatic cells of mammals in vivo and have been shown to reach the germ cells in an active form. 3B: Substances that are suspected of being germ cell mutagens because of their genotoxic effects in mammalian somatic cell in vivo; in exceptional cases, substances for which there are no in vivo data, but that are clearly mutagenic in vitro and structurally related to known in vivo mutagens. 4: Not applicable (Category 4 carcinogenic substances are those with non-genotoxic mechanisms of action. By definition, germ cell mutagens are genotoxic. Therefore, a Category 4 for germ cell mutagens cannot apply. At some time in the future, it is conceivable that a Category 4 could be established for genotoxic substances with primary targets other than DNA [e.g. purely aneugenic substances]; if research results make this seem sensible.) 5: Germ cell mutagens, the potency of which is considered to be so low that, provided the MAK value is observed, their contribution to genotoxic risk for humans is expected not to be significant.
- DFG MAK Pregnancy Risk Group Classification: Group A: A risk of damage to the developing embryo or fetus has been unequivocally demonstrated. Exposure of pregnant women can lead to damage of the developing organism, even when MAK and BAT (Biological Tolerance Value for Working Materials) values are observed. Group B: Currently available information indicates a risk of damage to the developing embryo or fetus must be considered to be probable. Damage to the developing organism cannot be excluded when pregnant women are exposed, even when MAK and BAT values are observed. Group C: There is no reason to fear a risk of damage to the developing embryo or fetus when MAK and BAT values are observed. Group D: Classification in one of the groups A–C is not yet possible because, although the data available may indicate a trend, they are not sufficient for final evaluation.
- IDLH: Immediately Dangerous to Life and Health. This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury.
- LOQ: Limit of Quantitation.
- NE: Not Established. When no exposure guidelines are established, an entry of NE is made for reference.
- NIC: Notice of Intended Change.
- EXPOSURE LIMITS IN AIR (continued):
- NIOSH CEILING: The exposure that shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, the ceiling shall be assumed as a 15-minute TWA exposure (unless otherwise specified) that shall not be exceeded at any time during a workday.
- NIOSH RELs: NIOSH's Recommended Exposure Limits.
- PEL: OSHA's Permissible Exposure Limits. This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the
Hazardous Materials Identification System Hazard Ratings:

- **Toxicity**: Materials whose LD₅₀ for acute oral toxicity is less than or equal to 5 mg/kg.
- **Skin Irritation**: Materials whose LD₅₀ for acute dermal toxicity is less than or equal to 200 mg/kg.
- **Dermal Toxicity**:
  - LD₅₀ for acute dermal toxicity greater than 200 mg/kg.
  - LD₅₀ for acute dermal toxicity less than or equal to 20 mg/kg.
- **Inhalation Toxicity**:
  - LC₅₀ for acute inhalation toxicity greater than 100,000 ppm.
  - LC₅₀ for acute inhalation toxicity less than or equal to 1 ppm.
- **Flammable**: Materials that burn in air when exposed to a temperature of 815.1°C (1500°F) for a period of 5 minutes.
- **Explosives**: Materials that can be ignited under almost all ambient temperature and pressure conditions.
- **Oxidizers**: Materials that initiate combustion.
- **Pyrophorics**: Materials that do not have a mass explosion hazard.
- **Organic Peroxides**: Materials that do not met the criteria for either degree of hazard 3 or 4.
- **Water Reactivity**: Materials that are non-reactive with water.

DEFINITION OF TERMS (Continued):

1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL" is placed next to the PEL that was vacated by Court Order.

**TLV**: Threshold Limit Value. An airborne concentration of a substance that represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour.

**TWA**: Time Weighted Average. The average concentration for a conventional 8-hour (TWA) workday and a 40-hour workweek Without limitation.

**WEEL**: Workplace Environmental Exposure Limit from the AHA.

**Hazardous Materials Identification System Hazard Ratings**:

This rating system was developed by the National Paint and Coating Association and has been adopted by industry to identify the degree of chemical hazards.

**Minimal Hazard**: No significant health risk, irritation of skin or eyes not anticipated. Skin Irritation: Essentially non-irritating. Mechanical irritation may occur. Oily or Draize = 0. Eye Irritation: Essentially non-irritating, minimal effects clearing in < 24 hours. Mechanical irritation may occur. Oily or Draize = 0. Oral Toxicity LD₅₀: > 5000 mg/kg. Dermatotoxic LD₅₀: > 200 mg/kg.

**Moderate Hazard**: Minor reversible irritation may occur; may irritate the stomach if swallowed; may defat the skin and exacerbate existing dermatitis. Skin Irritation: Slightly or mildly irritating. Oily or Draize = 5. Eye Irritation: Slightly to mildly irritating, but reversible within 7 days. Draize = 0 ≤ 25. Oral Toxicity LD₅₀: > 500–5000 mg/kg. Dermatotoxic LD₅₀: > 2–20 mg/L.

**Severe Hazard**: Temporary or transitory irritation may occur; prolonged exposure may affect the CNS. Skin Irritation: Moderately irritating; primary irritant; sensitizer. Oily or Draize ≥ 5, with no destruction of dermal tissue. Eye Irritation: Moderately to severely irritating; reversible corneal opacity; corneal involvement or irritation clearing in 8–21 days. Draize = 4–5. Oral Toxicity LD₅₀: > 50–500 mg/kg. Dermatotoxic LD₅₀: > 20–200 mg/L. Inhalation Toxicity LC₅₀ 4-hrs Rat: > 200 mg/L.

**Extremely Hazardous**: Serious hazard: Liquids and solids that can be ignited under almost all ambient temperature and pressure conditions. Dusts and mists with an LC₅₀ for acute inhalation toxicity greater than 2 mg/L but less than or equal to 10 mg/L. Materials with an LD₅₀ for acute dermal toxicity greater than 20 mg/kg but less than or equal to 200 mg/kg.

**Explosives**: Materials that can be ignited under almost all ambient temperature and pressure conditions. Dusts and mists with an LC₅₀ for acute inhalation toxicity greater than 2 mg/L but less than or equal to 10 mg/L. Materials with an LD₅₀ for acute dermal toxicity greater than 20 mg/kg but less than or equal to 200 mg/kg.

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FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (NFPA). Flash Point: Minimum temperature at which a liquid gives off sufficient vapor to form an ignitable mixture with air near the surface of the liquid or within the test vessel. Autoignition Temperature: Minimum temperature of a solid, liquid, or gas required to initiate or cause self-sustained combustion in air with no other source of ignition. LEL: Lowest concentration of a flammable vapor or gas mixture that will ignite and burn with a flame.

TOXICOLOGICAL INFORMATION:

Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. LD₅₀: Lethal Dose (solids & liquids). LC₅₀: Lethal Concentration (gases) that kills 50% of the exposed animals. mg/m³: Concentration expressed in weight of substance per volume of air. mg/kg: Quantity of material, by weight, administered to a test subject, based on their body weight in kg. TDo, LD₅₀, LDo, LC₅₀, TCo, LCo: Lowest dose (or concentration) to cause lethal or toxic effects. TCLo: Lowest concentration to cause a symptom. TDo: Lowest dose (or concentration) to cause a symptom. TCo: Lowest concentration to cause a symptom. LCo: Lowest concentration to cause a symptom.

EC: Effect concentration in water. BCF: Bioconcentration Factor, which is used to determine if a substance will concentrate in life forms that consume contaminated plant or animal matter. TLm: Median threshold limit. log Kow or log Koc: Coefficient of Oil/Water Distribution is used to assess a substance's behavior in the environment.

SPECSEAL® CABLE SPRAY SDS

EFFECTIVE DATE: JANUARY 3, 2017