Fomrez* catalyst UL-6
Dibutyltin bis(2-ethylhexyl thioglycolate)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufactured By: Sistersville Plant
3500 South State Route 2
FRIENDLY WV 26146
Revised: 05/21/2010
Preparer: PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS
CHEMTREC 1-800-424-9300
Chemical Family/Use: Dibutyltin bis(2-ethylhexyl thioglycolate)
Formula: Dibutyltin bis(2-ethylhexyl thioglycolate)

HMIS
Flammability: 1 Reactivity: 0 Health: 2

NFPA
Flammability: 1 Reactivity: 0 Health: 2

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
WARNING! Harmful if swallowed. May cause eye and skin irritation. May cause allergic skin reaction. Harmful: danger of serious damage to health by prolonged exposure if swallowed. Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Form: liquid Color: Colorless to straw Odor: Faint

POTENTIAL HEALTH EFFECTS

INGESTION
No information available.

SKIN
No information available.

INHALATION
No information available.

EYES
No information available.

MEDICAL CONDITIONS AGGRAVATED
No information currently available.

SUBCHRONIC (TARGET ORGAN)
None known.
Material Safety Data Sheet

Fomrez* catalyst UL-6
Dibutyltin bis(2-ethylhexyl thioglycolate)

CHRONIC EFFECTS / CARCINOGENICITY
This product or one of its ingredients present at 0.1% or more is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA.

ROUTES OF EXPOSURE
Ingestion; dermal; Eyes

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>PRODUCT COMPOSITION</th>
<th>CAS REG NO.</th>
<th>WGT. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. HAZARDOUS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dibutyltin bis(2-ethylhexyl thioglycolate)</td>
<td>10584-98-2</td>
<td>60 - 100 %</td>
</tr>
<tr>
<td>B. NON-HAZARDOUS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

INGESTION
Call a physician immediately. Drink water in small sips. (Diluting effect) Do not give milk, oily products, fat or alcohol. Give medicinal activated charcoal 10 g in 100 ml water at 20 minute intervals (5 x).

SKIN
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention if symptoms persist.

INHALATION
Remove to fresh air.

EYES
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

NOTE TO PHYSICIAN
There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.
5. FIRE-FIGHTING MEASURES

FLASH POINT: 145 °C; 293 °F
METHOD: ASTM D 93
FLAMMABLE LIMITS IN AIR - LOWER (%): Not available
FLAMMABLE LIMITS IN AIR - UPPER (%): Not available

SENSITIVITY TO MECHANICAL IMPACT: No

SENSITIVITY TO STATIC DISCHARGE
Sensitivity to static discharge is not expected.

EXTINGUISHING MEDIA
All standard extinguishing agents are suitable.

SPECIAL FIRE FIGHTING PROCEDURES
Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED
Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section.

ENVIRONMENTAL PRECAUTIONS
Do not flush into surface water or sanitary sewer system.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Avoid contact with skin and eyes. Keep away from children. Attention: Not for injection into humans.

STORAGE
Keep container closed. Store in original container.

FURTHER INFORMATION ON STORAGE CONDITIONS
Store above 4 °C (40 °F).
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS
Use only in an area equipped with a safety shower.; Eye wash bottle with pure water; General (mechanical) room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment.; Special, local ventilation is needed at points where vapors can be expected to escape to the workplace air.

RESPIRATORY PROTECTION
If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).

PROTECTIVE GLOVES
Impermeable or chemical resistant gloves.

EYE AND FACE PROTECTION
Safety glasses with side-shields

OTHER PROTECTIVE EQUIPMENT
Wear suitable protective clothing and eye/face protection.

Exposure Guidelines

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS RN</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dibutyltin bis(2-ethylhexyl thioglycolate)</td>
<td>10584-98-2</td>
<td>ACGIH, TWA</td>
<td>0.1 mg/m3</td>
</tr>
<tr>
<td>Dibutyltin bis(2-ethylhexyl thioglycolate)</td>
<td>10584-98-2</td>
<td>ACGIH, STEL</td>
<td>0.2 mg/m3</td>
</tr>
<tr>
<td>Dibutyltin bis(2-ethylhexyl thioglycolate)</td>
<td>10584-98-2</td>
<td>ACGIH, SKINDES</td>
<td>Can be absorbed through the skin.</td>
</tr>
<tr>
<td>Dibutyltin bis(2-ethylhexyl thioglycolate)</td>
<td>10584-98-2</td>
<td>OSHA Z1, PEL</td>
<td>0.1 mg/m3</td>
</tr>
</tbody>
</table>

Absence of values indicates none found

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average; INTL REL - Internal Recommended Exposure Limit

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Boiling point - C &amp; F</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapor pressure (20 C) (MM HG)</td>
<td>&lt; 0.75</td>
</tr>
<tr>
<td>Vapor density (Air=1)</td>
<td>no data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>-25 °C; -13 °F</td>
</tr>
<tr>
<td>Physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Faint</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless to straw</td>
</tr>
<tr>
<td>Evaporation rate (Butyl Acetate=1)</td>
<td>no data available</td>
</tr>
<tr>
<td>Density</td>
<td>1.115 - 1.145 g/cm³</td>
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<tr>
<td>Solubility in water (20 C)</td>
<td>insoluble</td>
</tr>
<tr>
<td>Volatile organic content</td>
<td>not determined</td>
</tr>
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</table>

10. STABILITY AND REACTIVITY

Stability
Stable

Hazardous polymerization
Will not occur.

Hazardous thermal decomposition / combustion products
Burning can produce the following combustion products: Carbon oxides; Oxides of tin.; Sulphur oxides; Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant.; Acute overexposure to the products of combustion may result in irritation of the respiratory tract.

Incompatibility (materials to avoid)
Strong acids Strong bases Oxidizing agents

Conditions to avoid
None known.

11. TOXICOLOGICAL INFORMATION

Acute oral
LD50: Species: rat; 1,243 mg/kg; Remarks: slightly toxic

Acute dermal
LD50: Species: rabbit; 7,695 mg/kg; Remarks: Very low order of toxicity

Other
In animal studies with repeated oral application of dibutyl tin compounds toxic effects were observed on the liver, bile duct, brain and immune system., Causes birth defects in laboratory animals.
OTHER EFFECTS OF OVEREXPOSURE
Skin contact may cause: allergic skin reaction

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGY
The following information is based on analogy with a similar material. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Elimination information (persistence and degradability)
Biodegradation
Butyltin compounds proved to be not readily biodegradable in degradation tests.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD
Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>DOT SHIPPING NAME:</th>
<th>Environmentally hazardous substances, liquid, n.o.s. (Dibutyltin bis(2-ethylhexyl thioglycolate))</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT HAZARD CLASS:</td>
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<tr>
<td>DOT LABEL (S):</td>
<td>9</td>
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<tr>
<td>UN/NA NUMBER:</td>
<td>UN3082, NA 3082</td>
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<tr>
<td>PACKING GROUP:</td>
<td>III</td>
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</table>

<table>
<thead>
<tr>
<th>IMDG SHIPPING NAME:</th>
<th>Environmentally hazardous substances, liquid, n.o.s. (Dibutyltin bis(2-ethylhexyl thioglycolate))</th>
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<tbody>
<tr>
<td>CLASS:</td>
<td>9</td>
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<tr>
<td>IMDG-LABELS:</td>
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<tr>
<td>UN NUMBER:</td>
<td>UN3082</td>
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<tr>
<td>PACKING GROUP:</td>
<td>III</td>
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<tr>
<td>EMS No:</td>
<td>F-A; S-F</td>
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<thead>
<tr>
<th>IATA:</th>
<th>Environmentally hazardous substances, liquid, n.o.s. (Dibutyltin bis(2-ethylhexyl thioglycolate))</th>
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<td>CLASS:</td>
<td>9</td>
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<tr>
<td>ICAO-LABELS:</td>
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<tr>
<td>UN NUMBER:</td>
<td>UN3082</td>
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</table>
15. REGULATORY INFORMATION

Inventories

EU list of existing chemical substances  y (positive listing)
Japan Inventory of Existing & New Chemical Substances (ENCS)  y (positive listing)
China Inventory of Existing Chemical Substances  y (positive listing)
Canada DSL Inventory  y (positive listing)
TSCA list  y (positive listing)

For inventories that are marked as quantity restricted or special cases, please contact Momentive.

US Regulatory Information

SARA (311,312) HAZARD CLASS
Acute Health Hazard

SARA (313) CHEMICALS

CALIFORNIA PROPOSITION 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

OTHER
These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

C = ceiling limit  NEGL = negligible  EST = estimated  NF = none found  NA = not applicable
UNKN = unknown  NE = none established  REC = recommended  ND = none determined
V = recommended by vendor  SKN = skin  TS = trade secret
MST = mist  NT = not tested  STEL = short term exposure limit  ppm = parts per million  ppb = parts per billion
By-product = reaction by-product, TSCA inventory status not required under 40 CFR part 720.30(h-2).