Section I - Chemical Product and Company Identification

Material Name: HALT 2901  
Chemical Family: None  
CAS Reg. No.: None  
Function: Scale Inhibitor  
Distributor: Danlin Industries Corporation  
Physical Address: 23737 Hwy 47, Thomas, OK 73669  
Mailing Address: P. O. Box 307, Thomas, OK 73669  
Phone Number: (580) 661-3248  
Prepared By: Danlin Industries Corporation  

Section II - Hazards Identification

Emergency Overview: DANGER
FLAMMABLE LIQUID AND VAPOR
MAY BE HARMFUL IF SWALLOWED AND ENTERS AIRWAYS
CAUSES SKIN IRRITATION
CAUSES SERIOUS EYE IRRITATION
MAY CAUSE GENETIC DEFECTS
MAY DAMAGE FERTILITY OR THE UNBORN CHILD

Primary Routes of Exposure: EYE CONTACT, SKIN ABSORPTION AND CONTACT, INGESTION, INHALATION

Precautionary Overview:
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces - No Smoking.
Ground/bond container and receiving equipment.
Use explosion-proof equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Use personal protective equipment as required.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF exposed or concerned: Get medical advice/attention.
If skin irritation occurs: Get medical advice/attention.
In case of fire: Use agents approved for Class B hazards (i.e. water fog, foam, dry chemical, carbon dioxide) for extinction.
Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional regulation.

Eye Contact: May cause eye irritation, burns.
Skin Contact: May cause skin irritation, sensitization.
Inhalation: May cause irritation of respiratory tract, decreased breathing capacity.
Ingestion: May be poisonous or fatal if swallowed.

Target(Organs): CNS, Liver, Kidneys
Systems(Affected): CNS, Liver, Kidneys, Skin, Respiratory

Carcinogenicity: NTP: No  IARC Monographs: No  OSHA Regulated: No
### Section III - Hazardous Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>Wt. %</th>
<th>CAS #</th>
<th>OSHA</th>
<th>ACGIH</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>&lt;15</td>
<td>67-56-1</td>
<td>200ppm</td>
<td>NA</td>
<td>200ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>250ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>RQ 5000</td>
</tr>
<tr>
<td>Ethylene Glycol</td>
<td>&lt;10</td>
<td>107-21-1</td>
<td>NA</td>
<td>NA</td>
<td>100mg/m3 C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>RQ 5000</td>
</tr>
</tbody>
</table>

### Section IV - First Aid Measures

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart to ensure flushing of entire surface. Get immediate medical attention.

**Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing, including shoes. Thoroughly clean clothing and shoes before reuse. Get medical attention.

**Inhalation:** Remove to fresh air. Give artificial respiration if not breathing. Give oxygen if breathing is difficult. Keep victim warm and get immediate medical attention.

**Ingestion:** If swallowed, do not induce vomiting. Keep victims head below knee level to prevent vomit from aspiration into lungs. Get immediate medical attention. **NOTE:** Never give anything by mouth to an unconscious person.

**NOTES TO PHYSICIAN:**

For Methanol: Western Journal of Medicine, March 1985, page 337 reports that when plasma methanol concentrations are higher than 20 mg/deciliter, when ingested doses are greater than 30 milliliters, and when there is evidence of acidosis or visual abnormalities, a 10% solution of ethanol in 5% aqueous dextrose, administered intravenously, is a safe and effective antidote.

### Section V - Fire Fighting Measures

**Extinguishing Media.** Agents approved for Class B hazards, (i.e., water fog, foam, dry chemical, carbon dioxide).

**Special Fire Fighting Procedures.** Do not enter confined space without full bunker gear and self contained breathing apparatus. Treat as Class B oil fire. Keep sealed containers cool with water spray.

**Unusual Fire and Explosion Hazards.** Flammable liquid. Vapor may explode if ignited in enclosed area. Containers may explode from internal pressure if confined to fire. Cool with water.

### Section VI - Accidental Release Measures

**Steps To Be Taken In Case Material is Released or Spilled:** Responders should wear PPE. Evacuate all unnecessary personnel from area. Remove or shut off all sources of ignition. Increase ventilation if possible. Stop leak if possible. Spilled material should be contained and removed by mechanical means, such as, absorbing with inert material and placing it in a properly labeled waste receptacle. Do not let run off water go to lakes, streams, etc.

### Section VII - Handling and Storage

**Precautions To Be Taken In Handling and Storing:** Use appropriate PPE as outlined in Section VIII. Keep away from ignition sources (e.g., heat, sparks, flames, etc.). Keep container closed. Ground and bond containers when transferring liquids. Use with adequate ventilation. Do not breathe vapors. Do not cut, puncture, or weld on or near this container.

Store away from oxidizer or other materials bearing a yellow "D.O.T." label.

### Section VIII - Exposure Controls/Personal Protective Measures

<table>
<thead>
<tr>
<th>Components</th>
<th>List</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>ACGIH</td>
<td>TWA</td>
<td>200ppm</td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>STEL</td>
<td>250ppm</td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>Notation:</td>
<td>End of shift, Methanol in urine 15 mg/L; SKIN</td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>TWA</td>
<td>200ppm</td>
</tr>
<tr>
<td>Ethylene Glycol</td>
<td>ACGIH</td>
<td>STEL</td>
<td>100mg/m3 C</td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>Notation:</td>
<td>Not Classifiable as a Human Carcinogen</td>
</tr>
</tbody>
</table>
Respiratory Protection: Use OSHA/NIOSH/MSHA approved air supplied respirator for organic vapors. Entry into confined space requires self contained positive breathing apparatus.

**Ventilation:**
- Local Exhaust: Yes, equal to fresh air
- Mechanical Exhaust: Exhaust fan recommended to control exposure levels.
- Special: Control airborne concentrations below exposure guidelines.

**Personal Protective Equipment:** Chemical resistant gloves (polyvinyl alcohol or Buna-N), chemical splash goggles, chemical resistant footware, and chemical resistant aprons are recommended when handling the product.

**Other Protective Equipment:** Eye wash and safety showers should be readily available

**Work and Hygienic Practices:** Avoid breathing chemicals, wash hands before eating, drinking or smoking

### Section IX - Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance/Odor</td>
<td>Clear Pale Yellow/Alcoholic</td>
</tr>
<tr>
<td>State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Specific Gravity (g/ml)</td>
<td>0.959 to 1.039</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>172°F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>110°F</td>
</tr>
<tr>
<td>UEL (Calculated)</td>
<td>100%</td>
</tr>
<tr>
<td>LEL (Calculated)</td>
<td>22.8%</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>N/D</td>
</tr>
<tr>
<td>Chemical Stability</td>
<td>Stable</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Ignition sources, eg., sparks and flame</td>
</tr>
<tr>
<td>Incompatible Materials</td>
<td>Strong oxidizing agents (bromine, chlorine, hydrogen peroxide, etc.) and strong bases</td>
</tr>
<tr>
<td>Decomposition Products</td>
<td>Thermal Decomposition: Carbon dioxide, carbon monoxide, smoke and oxides of nitrogen</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Will not occur</td>
</tr>
</tbody>
</table>

### Section X - Stability and Reactivity

**Chemical Stability**
- Stable

**Conditions to Avoid**
- Ignition sources, eg., sparks and flame

**Incompatible Materials**
- Strong oxidizing agents (bromine, chlorine, hydrogen peroxide, etc.) and strong bases

**Decomposition Products**
- Thermal Decomposition: Carbon dioxide, carbon monoxide, smoke and oxides of nitrogen

**Hazardous Polymerization**
- Will not occur

### Section XI - Toxicological Information

No specific toxicity tests have been conducted on this product. Components have shown to be toxic.

**ETHYLENE GLYCOL** - Human poison by ingestion. (Lethal dose for humans reported to be 100 mL.) Moderately toxic to humans by an unspecified route. Moderately toxic experimentally by ingestion, subcutaneous, intravenous, and intramuscular routes. Human systemic effects by ingestion and inhalation: eye lachrymation, general anesthesia, headache, cough, respiratory stimulation, nausea or vomiting, pulmonary, kidney, and liver changes. If ingested it causes initial central nervous system stimulation followed by depression. Later, it causes potentially lethal kidney damage. Very toxic in particulate form upon inhalation. An experimental teratogen. Other experimental reproductive effects. Human mutation data reported. A skin, eye, and mucous membrane irritant.

**TOXICITY DATA:**

- **Eye effects-Rat** 12 mg/m3/3D; **Skin-Rabbit**, adult 555 mg open Mild irritation effects; **Eye effects-Rabbit**, adult 500 mg/24H Mild irritation effects; **Eye effects-Rabbit**, adult 100 mg/1H Mild irritation effects; **Eye effects-Rabbit**, adult 12 mg/m3/3D; **Eye effects-Rabbit**, adult 1440 mg/6H Moderate irritation effects; DNA Inhibition-Human: lymphocyte 320 mmol/L; **Mutation in Mammalian Somatic Cells-Mouse**: lymphocyte 100 mmol/L; Oral-Mouse TDLo: 84 g/kg (female 1-21D post): Reproductive effects; Oral-Rat TDLo: 8580 mg/kg (female 6-15D post): Teratogenic effects; Oral-Child TDLo: 5500 mg/kg: Central nervous system effects, Pulmonary system effects, KID; Oral-Human LDLo: 786 mg/kg; Oral-Human LDLo: 398 mg/kg: Central nervous system effects, Gastrointestinal tract effects, LIV; Inhalation-Human TCLI: 10,000 mg/m3: Eye effects, Pulmonary system effects; Unreported-Man LDLo: 1637 mg/kg; Oral-Rat LD50: 4700 mg/kg; Intrapерitoneal-Rat LD50: 5010 mg/kg; Subcutaneous-Rat LD50: 2800 mg/kg; Intravenous-Rat LD50: 3260 mg/kg; Intramuscular-Rat LDLo: 3300 mg/kg; Oral-Mouse LD50: 7500 mg/kg; Intrapерitoneal-Mouse LD50: 5614 mg/kg; Subcutaneous-Mouse LD50: 2700 mg/kg

**METHYL ALCOHOL (METHANOL)** - A human poison by ingestion. Poison experimentally by skin contact. Moderately toxic experimentally by intravenous and intraperitoneal routes. Mildly toxic by inhalation. Human systemic effects: changes in circulation, cough, dyspnea, headache, lachrymation, nausea or vomiting, optic nerve neuropathy, respiratory effects, visual field changes. An experimental teratogen. Experimental reproductive effects. An eye and skin irritant. Human mutation data reported. A narcotic. Its main toxic effect is exerted upon the nervous system, particularly the optic nerves and possibly the retinae. The condition can progress to permanent blindness. Once absorbed, methanol is only very slowly eliminated. Corne resulting from massive exposures may last as long as 2-4 days. In the body, the products formed by its oxidation are formaldehyde and formic acid, both of which are toxic. Because of the slow elimination, methanol should be regarded as a cumulative poison. Though single exposures to fumes may cause no harmful effect, daily exposure may result in the accumulation of sufficient methanol in the body to cause illness. Death from ingestion of less than 30 mL has been reported. A common air contaminant.
TOXICITY DATA:

Skin-Rabbit, adult 20 mg/24H Moderate irritation effects; Eye effects-Rabbit, adult 100 mg/24H Moderate irritation effects; DNA Inhibition-Human: lymphocyte 300 mmol/L; Microsomal Mutagenicity Assay-Mouse: lymphocyte 7900 mg/L; Oral-Rat TDL0: 7500 mg/kg (17-19D preg): Reproductive effects; Inhalation-Rat TCL0: 10,000 ppm/7H (7-15D preg): Teratogenic effects; Oral-Man LDL0: 6422 mg/kg; Central nervous system effects, Pulmonary system effects, Gastrointestinal tract effects; Oral-Man TDL0: 3429 mg/kg; Eye effects; Oral-Human LDL0: 428 mg/kg; Central nervous system effects, Pulmonary system effects; Oral-Human LDL0: 143 mg/kg; Eye effects, Pulmonary system effects, Gastrointestinal tract effects; Oral-Woman TDL0: 4 g/kg; Eye effects, Pulmonary system effects, Gastrointestinal tract effects; Inhalation-Human TCL0: 86,000 mg/m³; Eye effects, Pulmonary system effects; Inhalation-Human TCL0: 300 ppm; Eye effects, Central nervous system effects, Pulmonary system effects; Oral-Woman TDL0: 4 g/kg; Oral-Rat LD50: 5628 mg/kg; Inhalation-Rat LC50: 64,000 ppm/4H; Intraperitoneal-Rat LD50: 7529 mg/kg; Intravenous-Rat LD50: 2131 mg/kg; Oral-Mouse LD50: 7300 mg/kg; Intraperitoneal-Mouse LD50: 10,765 mg/kg; Subcutaneous-Mouse LD50: 9800 mg/kg; Intravenous-Mouse LD50: 4710 mg/kg; Oral-Monkey LDL0: 7000 mg/kg; Inhalation-Monkey LCL0: 1000 ppm; Skin-Monkey LDL0: 393 mg/kg

Section XII - Ecological Considerations

Ecological testing has not been conducted on this product. Material should be considered hazardous to aquatic life.

Section XIII - Disposal Considerations

Waste Classification: Material should be disposed of by incineration or in an approved landfill in accordance with all federal, state, and local regulations. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the products meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixtures, processes, etc. may render the resulting material hazardous.

The container of this product can present physical or health hazards, even when emptied! To avoid risk of injury, do not cut, puncture, or weld on or near this container. Since emptied containers retain product residue, follow label warnings even after container is emptied.

Section XIV - Transportation Information

DEPARTMENT OF TRANSPORTATION:

DOT Identification Number: UN1993
DOT Proper Shipping Name: UN1993, Flammable liquid, n.o.s., (Contains Methanol), 3, PGIII
DOT Hazard Class: 3
DOT Identification Name: Flammable liquid, n.o.s.
DOT Packaging Group: PGIII
RQ: Methanol (34,427 lbs or 4,136 gallons)
2012 ERG Number: 127

Section XV - Regulatory Information

TSCA: Components of this product are listed on the TSCA Inventory.

CERCLA: If reportable quantity of this product is accidentally spilled the incident is subject to the provisions of the Comprehensive Environmental Response, Compensation, and Liability Act and must be reported to the National Response Center by calling (800) 424-8802.

CERCLA Component | CAS # | Wt. % | RQ, lbs | Product RQ Value |
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>14.5</td>
<td>5000</td>
<td>34,427 lbs (4,136 gallons)</td>
</tr>
<tr>
<td>Ethylene Glycol</td>
<td>107-21-1</td>
<td>6.3</td>
<td>5000</td>
<td>79,667 lbs (9,572 gallons)</td>
</tr>
</tbody>
</table>

SARA TITLE III:

This product contains the following Extremely Hazardous Substance under EPCRA section 302/304 lists.

EHS Component | CAS # | Wt. % | RQ, lbs | TPQ, lbs |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Under the provisions of Title III, Sections 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazard categories:

Immediate (Acute) Health: X  Delayed (Chronic) Health: X  Fire: X  Pressure: ___  Reactive: ___

This product contains the following Section 313 Reportable Ingredients:

<table>
<thead>
<tr>
<th>313 Component</th>
<th>CAS #</th>
<th>Wt. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>14.5</td>
</tr>
<tr>
<td>Ethylene Glycol</td>
<td>107-21-1</td>
<td>6.3</td>
</tr>
</tbody>
</table>

Section XVI - Other Information

Hazardous Material Identification System Category Rating:

Health: 2  Flammability: 2  Reactivity: 0  Personal Protection: C

This rating scheme rates health, fire, and reactivity on a scale of 0 to 4.

0 = No significant hazard 1 = Slight Hazard 2 = Moderate Hazard 3 = High Hazard 4 = Extreme Hazard

Personal Protective Equipment Guide:

A = Safety Glasses  G = Safety Glasses, Gloves, Vapor Respirator
B = Safety Glasses, Gloves  H = Safety Goggles, Gloves, Apron, Vapor Respirator
C = Safety Glasses/Goggles, Gloves, Apron  I = Safety Glasses, Gloves, Apron, Dust & Vapor Respirator
D = Gloves, Apron, Faceshield  J = Splash Goggles, Gloves, Apron, Dust & Vapor Respirator
E = Safety Glasses, Gloves, Dust Respirator  K = Air Line Hood/Mask, Gloves, Full Suit, Boots
F = Safety Glasses, Gloves, Apron, Dust Respirator  X = Ask supervisor for special handling instructions


Definitions

ACGIH: American Conference of Governmental & Industrial Hygienists
ANSI: American National Standard Institute
BEI: Biological Exposure Indices - individual tests via urine or exhaled air
CERCLA: Comprehensive Emergency Response, Compensation, and Liability Act
DOT: U.S. Department of Transportation
EPA: U.S. Environmental Protection Agency
HMIS: Hazardous Materials Identification System
IARC: International Agency For Research On Cancer
LC₅₀: Lethal Concentration 50: A calculated concentration of the substance which is expected to cause death in 50% of an entire defined experimental animal population.
LCLo: Lethal Concentration Low: The lowest concentration of a material in air (other than LC50) that has been reported to have caused death in humans or animals.
LD₅₀: Lethal Dose 50: A calculated concentration of the substance which is expected to cause death in 50% of an entire defined experimental animal population.
LDLo: Lethal Dose Low: the lowest dose (other than LD₅₀) of a material introduced by any route, other than inhalation, over any given period of time in one or more divided portions and reported to have caused death in humans or animals.
MSHA: Mine Safety and Health Administration
N/A: Not Applicable
N/D: Not Determined
NE: Not Established
NFPA: National Fire Protective Association
NIOSH: National Institute for Occupational Safety & Health
NSF: National Sanitation Foundation
NTP: National Toxicology Program
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