

ETHYLPHENYLDICHLOROSILANE

EPS

CAUTIONARY RESPONSE INFORMATION

| | | | |
|---|--|-----------|-----------------------|
| Common Synonyms | Liquid | Colorless | Sharp irritating odor |
| | Reacts with water. Poisonous gas is produced on contact with water. | | |
| <p>KEEP PEOPLE AWAY. AVOID CONTACT WITH LIQUID AND VAPOR. Avoid inhalation. Wear rubber overclothing (including gloves). Call fire department. Notify local health and pollution control agencies. Protect water intakes.</p> | | | |
| Fire | Combustible. POISONOUS GASES MAY BE PRODUCED IN FIRE. Extinguish with dry chemicals or carbon dioxide. DO NOT USE WATER OR FOAM ON FIRE. | | |
| Exposure | CALL FOR MEDICAL AID. GAS PRODUCED IN REACTION WITH WATER. POISONOUS IF INHALED. Irritating to eyes, nose and throat. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. LIQUID Will burn skin and eyes. Harmful if swallowed. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk. | | |
| Water Pollution | Effect of low concentration on aquatic life is unknown. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes. | | |

1. CORRECTIVE RESPONSE ACTIONS

- Dilute and disperse
- Stop discharge
- Chemical and Physical Treatment:
- Neutralize
- Do not burn
- Do not add water to undissolved material

2. CHEMICAL DESIGNATIONS

- 2.1 CG Compatibility Group: Not listed.
- 2.2 Formula: (C₆H₅)(C₆H₅)SiCl₂
- 2.3 IMO/UN Designation: 8/1760
- 2.4 DOT ID No.: 2435
- 2.5 CAS Registry No.: 1125-27-5
- 2.6 NAERG Guide No.: 156
- 2.7 Standard Industrial Trade Classification: 51550

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Acid-vapor-type respiratory protection; rubber gloves; chemical worker's goggles; other equipment as necessary to protect skin and eyes.
- 3.2 **Symptoms Following Exposure:** Inhalation irritates nose and throat. Contact with liquid causes severe burns of eyes and skin. Ingestion causes severe burns of mouth and stomach.
- 3.3 **Treatment of Exposure:** INHALATION: remove victim to fresh air; give artificial respiration if needed; call physician. EYES: flush with water for 15 min.; obtain medical attention immediately. SKIN: flush with water; obtain medical attention if burning has occurred. INGESTION: if victim is conscious, give large amounts of water, then induce vomiting; get medical attention.
- 3.4 **TLV-TWA:** Not listed.
- 3.5 **TLV-STEL:** Not listed.
- 3.6 **TLV-Ceiling:** Not listed.
- 3.7 **Toxicity by Ingestion:** Grade 3; LD₅₀ = 50 to 500 mg/kg
- 3.8 **Toxicity by Inhalation:** Currently not available.
- 3.9 **Chronic Toxicity:** Currently not available
- 3.10 **Vapor (Gas) Irritant Characteristics:** Vapors cause moderate irritation such that personnel will find high concentrations unpleasant. The effect is temporary.
- 3.11 **Liquid or Solid Characteristics:** Severe skin irritant. Causes second- and third-degree burns on short contact and is very injurious to the eyes.
- 3.12 **Odor Threshold:** Currently not available
- 3.13 **IDLH Value:** Not listed.
- 3.14 **OSHA PEL-TWA:** Not listed.
- 3.15 **OSHA PEL-STEL:** Not listed.
- 3.16 **OSHA PEL-Ceiling:** Not listed.
- 3.17 **EPA AEGL:** Not listed

4. FIRE HAZARDS

- 4.1 **Flash Point:** >150°F O.C.
- 4.2 **Flammable Limits in Air:** Currently not available
- 4.3 **Fire Extinguishing Agents:** Dry chemical
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Water, foam
- 4.5 **Special Hazards of Combustion Products:** Toxic hydrogen chloride and phosgene fumes may be formed.
- 4.6 **Behavior in Fire:** Difficult to extinguish; re-ignition may occur. Contact with water applied to adjacent fires will generate irritating hydrogen chloride gas.
- 4.7 **Auto Ignition Temperature:** Currently not available
- 4.8 **Electrical Hazards:** Currently not available
- 4.9 **Burning Rate:** 3.7 mm/min.
- 4.10 **Adiabatic Flame Temperature:** Currently not available
- 4.11 **Stoichiometric Air to Fuel Ratio:** 52.4 (calc.)
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** 15.0 (calc.)
- 4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** Reacts with water to generate hydrogen chloride (hydrochloric acid)
- 5.2 **Reactivity with Common Materials:** Will react with surface moisture to evolve hydrogen chloride, which is corrosive to common metals.
- 5.3 **Stability During Transport:** Stable
- 5.4 **Neutralizing Agents for Acids and Caustics:** Flush with water, rinse with sodium bicarbonate or lime solution.
- 5.5 **Polymerization:** Not pertinent
- 5.6 **Inhibitor of Polymerization:** Not pertinent

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:** Currently not available
- 6.2 **Waterfowl Toxicity:** Currently not available
- 6.3 **Biological Oxygen Demand (BOD):** Currently not available
- 6.4 **Food Chain Concentration Potential:** None
- 6.5 **GESAMP Hazard Profile:**
 Bioaccumulation: -
 Damage to living resources: 1
 Human Oral hazard: 1
 Human Contact hazard: II
 Reduction of amenities: XX

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Commercial
- 7.2 **Storage Temperature:** Ambient
- 7.3 **Inert Atmosphere:** No requirement
- 7.4 **Venting:** Pressure-vacuum
- 7.5 **IMO Pollution Category:** Currently not available
- 7.6 **Ship Type:** Currently not available
- 7.7 **Barge Hull Type:** Currently not available

8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Corrosive material
- 8.2 **49 CFR Class:** 8
- 8.3 **49 CFR Package Group:** II
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:** Not listed
- 8.6 **EPA Reportable Quantity:** Not listed.
- 8.7 **EPA Pollution Category:** Not listed.
- 8.8 **RCRA Waste Number:** Not listed
- 8.9 **EPA FWPCA List:** Not listed

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Liquid
- 9.2 **Molecular Weight:** 205.1
- 9.3 **Boiling Point at 1 atm:** >300°F = >149°C = >422°K
- 9.4 **Freezing Point:** Not pertinent
- 9.5 **Critical Temperature:** Not pertinent
- 9.6 **Critical Pressure:** Not pertinent
- 9.7 **Specific Gravity:** 1.159 at 15°C (liquid)
- 9.8 **Liquid Surface Tension:** (est.) 25 dynes/cm = 0.025 N/m at 20°C
- 9.9 **Liquid Water Interfacial Tension:** Not pertinent
- 9.10 **Vapor (Gas) Specific Gravity:** Not pertinent
- 9.11 **Ratio of Specific Heats of Vapor (Gas):** Not pertinent
- 9.12 **Latent Heat of Vaporization:** 103 Btu/lb = 57 cal/g = 2.4 X 10⁵ J/kg
- 9.13 **Heat of Combustion:** (est.) -9,900 Btu/lb = -5,500 cal/g = -230 X 10⁶ J/kg
- 9.14 **Heat of Decomposition:** Not pertinent
- 9.15 **Heat of Solution:** Currently not available
- 9.16 **Heat of Polymerization:** Not pertinent
- 9.17 **Heat of Fusion:** Currently not available
- 9.18 **Limiting Value:** Currently not available
- 9.19 **Reid Vapor Pressure:** Currently not available

NOTES

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| 9.20 SATURATED LIQUID DENSITY | | 9.21 LIQUID HEAT CAPACITY | | 9.22 LIQUID THERMAL CONDUCTIVITY | | 9.23 LIQUID VISCOSITY | |
|----------------------------------|-----------------------|------------------------------|-------------------------------------|-------------------------------------|---|----------------------------|------------|
| Temperature (degrees F) | Pounds per cubic foot | Temperature (degrees F) | British thermal unit per pound-F | Temperature (degrees F) | British thermal unit inch per hour-square foot-F | Temperature (degrees F) | Centipoise |
| 52 | 72.589 | 60 | 0.400 | 51 | 0.967 | 60 | 7.064 |
| 54 | 72.520 | 61 | 0.400 | 52 | 0.967 | 61 | 6.879 |
| 56 | 72.450 | 62 | 0.400 | 53 | 0.967 | 62 | 6.699 |
| 58 | 72.379 | 63 | 0.400 | 54 | 0.967 | 63 | 6.524 |
| 60 | 72.309 | 64 | 0.400 | 55 | 0.967 | 64 | 6.355 |
| 62 | 72.240 | 65 | 0.400 | 56 | 0.967 | 65 | 6.190 |
| 64 | 72.169 | 66 | 0.400 | 57 | 0.967 | 66 | 6.031 |
| 66 | 72.099 | 67 | 0.400 | 58 | 0.967 | 67 | 5.876 |
| 68 | 72.040 | 68 | 0.400 | 59 | 0.967 | 68 | 5.726 |
| 70 | 71.969 | 69 | 0.400 | 60 | 0.967 | 69 | 5.580 |
| 72 | 71.900 | 70 | 0.400 | 61 | 0.967 | 70 | 5.438 |
| 74 | 71.830 | 71 | 0.400 | 62 | 0.967 | 71 | 5.301 |
| 76 | 71.759 | 72 | 0.400 | 63 | 0.967 | 72 | 5.167 |
| 78 | 71.690 | 73 | 0.400 | 64 | 0.967 | 73 | 5.037 |
| 80 | 71.620 | 74 | 0.400 | 65 | 0.967 | 74 | 4.911 |
| 82 | 71.549 | 75 | 0.400 | 66 | 0.967 | 75 | 4.789 |
| 84 | 71.480 | 76 | 0.400 | 67 | 0.967 | 76 | 4.670 |
| 86 | 71.410 | 77 | 0.400 | 68 | 0.967 | 77 | 4.555 |
| | | 78 | 0.400 | 69 | 0.967 | | |
| | | 79 | 0.400 | 70 | 0.967 | | |
| | | 80 | 0.400 | 71 | 0.967 | | |
| | | 81 | 0.400 | 72 | 0.967 | | |
| | | 82 | 0.400 | 73 | 0.967 | | |
| | | 83 | 0.400 | 74 | 0.967 | | |
| | | 84 | 0.400 | 75 | 0.967 | | |
| | | 85 | 0.400 | 76 | 0.967 | | |

| 9.24 SOLUBILITY IN WATER | | 9.25 SATURATED VAPOR PRESSURE | | 9.26 SATURATED VAPOR DENSITY | | 9.27 IDEAL GAS HEAT CAPACITY | |
|-----------------------------|-----------------------------------|----------------------------------|------------------------|---------------------------------|-----------------------|---------------------------------|-------------------------------------|
| Temperature (degrees F) | Pounds per 100 pounds of water | Temperature (degrees F) | Pounds per square inch | Temperature (degrees F) | Pounds per cubic foot | Temperature (degrees F) | British thermal unit per pound-F |
| | R | 130 | 0.029 | 130 | 0.00093 | | N |
| | E | 140 | 0.039 | 140 | 0.00123 | | O |
| | A | 150 | 0.052 | 150 | 0.00162 | | T |
| | C | 160 | 0.068 | 160 | 0.00211 | | P |
| | T | 170 | 0.090 | 170 | 0.00273 | | E |
| | S | 180 | 0.117 | 180 | 0.00349 | | R |
| | | 190 | 0.151 | 190 | 0.00444 | | T |
| | | 200 | 0.193 | 200 | 0.00560 | | I |
| | | 210 | 0.246 | 210 | 0.00702 | | N |
| | | 220 | 0.311 | 220 | 0.00874 | | E |
| | | 230 | 0.390 | 230 | 0.01080 | | N |
| | | 240 | 0.486 | 240 | 0.01327 | | T |
| | | 250 | 0.602 | 250 | 0.01620 | | |
| | | 260 | 0.741 | 260 | 0.01967 | | |
| | | 270 | 0.907 | 270 | 0.02375 | | |
| | | 280 | 1.104 | 280 | 0.02853 | | |
| | | 290 | 1.338 | 290 | 0.03409 | | |
| | | 300 | 1.612 | 300 | 0.04054 | | |
| | | 310 | 1.933 | 310 | 0.04798 | | |
| | | 320 | 2.307 | 320 | 0.05654 | | |
| | | 330 | 2.742 | 330 | 0.06634 | | |
| | | 340 | 3.244 | 340 | 0.07751 | | |
| | | 350 | 3.822 | 350 | 0.09020 | | |
| | | 360 | 4.486 | 360 | 0.10460 | | |
| | | 370 | 5.244 | 370 | 0.12080 | | |
| | | 380 | 6.108 | 380 | 0.13900 | | |