

## MATERIAL SAFETY DATA SHEET

|   |                      |
|---|----------------------|
| PRODUCT NAME Brakleen (bulk) #05090,05091,05093 | # MSDS00 5090        |
| MANUFACTURED BY: CRC CHEMICALS                  | Phone (215) 674-4300 |
| 885 LOUIS DRIVE, WARMINSTER, PA. 18974          |                      |

| 1. INGREDIENTS  | CAS #    | ACGIH TLV | OSHA PEL | Other Limits | %       |
|---|----------|-----------|----------|--------------|---------|
| * 1,1,1 Trichloroethane   | 71-55-6  | 350       | 350      |              | 93.4    |
| * Tert-butyl alcohol  | 75-65-0  | 100       | 100      |              | } < 6.6 |
| 1,2 Butylene oxide  | 106-88-7 | N/A       | N/A      |              |         |
| Dimethoxymethane  | 109-87-5 | 1000      | NA       |              |         |
| * These chemicals on Toxic Chemical List found in section 313 of the Emergency Planning and Community Right-to-Know Act (SARA Title III) and is subject to release inventory reporting under the Act. |          |           |          |              |         |

### 2. PHYSICAL DATA

|                     |   |                  |                 |            |       |
|---------------------|---|------------------|-----------------|------------|-------|
| Specific Gravity    | 1.293 @70°F   | Vapor Pressure   | 100 mm Hg @20°C | % Volatile | 100 % |
| Boiling Point       | 164 °F  | Evaporation Rate | Rapid           |            |       |
| Freezing Point      | N/A   | Vapor Density    | 4.55 (air = 1)  |            |       |
| Appearance and Odor | Colorless liquid, irritating odor at high concentrations.             |                  |                 |            |       |
| Solubility          | Slight solubility in water - good solvent for many organic materials. |                  |                 |            |       |

### 3. FIRE AND EXPLOSION DATA

|                     |            |        |               |                  |            |
|---------------------|------------|--------|---------------|------------------|------------|
| Flashpoint          | None       | Method | TCC, COC, TOC | Flammable Limits |            |
| Extinguishing Media | Water, fog |        |               | LEL              | 6 UEL 16.7 |
| Unusual Hazards     | N/A        |        |               |                  |            |

### 4. REACTIVITY AND STABILITY

|                                  |  |  |  |  |  |
|----------------------------------|--|--|--|--|--|
| Stability                        | Good - Avoid exposures to high temperatures (open flames, arcs, etc.)              |  |  |  |  |
| Hazardous decomposition products | Thermal - Hydrogen chloride, chlorine and some phosgene.                           |  |  |  |  |
| Materials to avoid               | Avoid storage in aluminum containers or contact with aluminum and/or zinc powders. |  |  |  |  |

### 5. PROTECTION INFORMATION

|                            |   |            |                |  |  |
|----------------------------|---|------------|----------------|--|--|
| Ventilation                | Maintain vapor concentrations below TLV - use mechanical ventilation if neces |            |                |  |  |
| Respiratory                | Above TLV use self contained breathing apparatus (air mask or vapor mask)     |            |                |  |  |
| Gloves                     | Solvent resistant   | Eye & Face | Safety glasses |  |  |
| Other Protective Equipment | Aprons and boots may be used if exposure is severe.                           |            |                |  |  |

**6. HEALTH HAZARD DATA**

Primary Routes of Entry      Inhalation and skin contact

**Signs and Symptoms of Exposure**

1 Acute Overexposure      Inhalation - headaches, dizziness, anesthetic effects, unconsciousness  
 Eyes - causes pain and some irritation. Skin - causes irritation on repeated exposures.

2 Chronic Overexposure      Repeated overexposures may cause liver and kidney effects.

Medical Conditions Generally Aggravated by Exposure      High levels may cause cardiac arrhythmias (over 8000 ppm).

| Chemical listed as Carcinogen or Potential Carcinogen | National Toxicology Program | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | IARC Monographs | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | OSHA | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
|---|-----------------------------|------------------------------|--|-----------------|------------------------------|--|------|------------------------------|--|
|   |                             |                              |  |                 |                              |  |      |                              |  |

**Emergency and First Aid Procedures ( if symptoms persist, call a physician )**

- 1 Inhalation      Remove to fresh air - apply artificial respiration if needed.
- 2 Eyes      Flush with large amounts of water for 15 minutes.
- 3 Skin      Remove contaminated clothing. Wash exposed skin with soap and water.
- 4 Ingestion      Do not induce vomiting - call a physician.

**7. SPILL OR LEAK PROCEDURES**

Precautions to be taken in Handling and Storage      Store in a cool, dry area. Do not store in aluminum containers.

Steps to be taken in case Materials is released or spilled      Keep out of water supply. Ventilate area. Do not enter spill area without a mask. Dike area and pump into containers or use absorbent to pick up.

Waste Disposal      Treat as Hazardous Waste. Dispose of in conformance with Local, State and Federal regulations.

**8. SPECIAL PRECAUTIONS AND USE DIRECTIONS**

Avoid contact with skin. Avoid breathing of vapors. Vapors are heavier than air and will collect in low areas such as pits, storage tanks, the hold of a ship, etc. If vapors are suspected in low areas, do not enter unless special breathing apparatus is used and an observer is present for assistance.

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ORIGINAL DATE OR DATE OF REVISION      9-89