

MATERIAL SAFETY DATA SHEET

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SECTION 1 -- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

| | | | |
|------------------|---|----------|----|
| PRODUCT NAME | Extreme Cool™, Ultra Cool™, Extra Cool™ | | |
| DOCUMENT NO. | MSDS-0001 | REVISION | AB |
| ISSUE DATE | December 6, 2004 | | |
| LAST REVIEW DATE | | | |

SUPPLIER: Thermal Dynamics Corp.
STREET ADDRESS: 82 Benning St.
CITY, STATE, ZIP: West Lebanon, NH 03784

MANUFACTURER: See Supplier

EMERGENCY TELEPHONE NUMBERS
***CHEMTREC (800) 424-9300 USA / CANADA**
703 527 3887 INTERNATIONAL

* For spill, leak, fire or transport accident emergencies.

Product Information: (603) 298-2200

Thermal Dynamics Torch Coolant is sold in three (3) forms and all are covered by this MSDS.

Product Identifier: Extreme Cool™, Ultra Cool™, Extra Cool™

Product Use: Cutting and Welding Torch and System Coolant.

SECTION 2 -- COMPOSITION / INFORMATION ON INGREDIENTS

| COMPONENT | CAS No. | % by wt. | OSHA ACGIH | | R PHRASES | EXPOSURE LIMITS | |
|------------------|---------|----------|------------|------|--------------|--------------------------------|----------------------------|
| | | | PEL | TLV | | LC50, ppm (inhalation, rat) | LD50, mg/kg (oral, rat) |
| Benzotriazole | 95-14-7 | <1.0 | N.E. | N.E. | R22,36/37/38 | 1910 mg/m3/3h | 560 mg/kg ⁻¹ |
| Propylene Glycol | 57-55-6 | * | N.E. | N.E. | R36/37/38 | Not available | 22,000 mg/kg |

* Extreme Cool™ - > 99%, Ultra Cool™ - < 51%, Extra Cool™ - < 31%

SECTION 3 -- HAZARDS IDENTIFICATION

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| EMERGENCY OVERVIEW | Causes eye irritation. May be harmful if swallowed. May cause skin irritation. |
| POTENTIAL HEALTH EFFECTS | |
| INGESTION | May cause nausea or diarrhea. |
| INHALATION | Mists are harmful. |
| EYE CONTACT | Causes eye irritation. |
| SKIN CONTACT | Can cause skin irritation. |

SECTION 4 -- FIRST AID MEASURES

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| INGESTION | Never give anything by mouth to an unconscious person. Give several glasses of water. If vomiting is spontaneous, keep head below hips to prevent breathing vomit into lungs. Do not induce vomiting. Keep airway clear. Get medical attention. |
| INHALATION | If affected, remove from exposure. Restore breathing. Keep warm and quiet. Get medical attention. |
| EYE CONTACT | Immediately flush eyes with cool running water. Remove contact lenses if applicable. Continue flushing with water for at least 15 minutes. Get immediate medical attention. |
| SKIN CONTACT | Wash with soap and water. If irritation develops or persists, get medical attention. |
| NOTE TO PHYSICIAN | Treat based on judgment of physician in response to reactions of the patient. |

SECTION 5 -- FIRE FIGHTING MEASURES

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| CONDITIONS OF FLAMMABILITY | Product can burn, but is not a combustible material at normal temperatures. Addition of water to the mixture lowers flammability. |
| MEANS OF EXTINCTION | Product is an aqueous solution. Use carbon dioxide, dry chemical or alcohol resistant foam. Wear positive pressure self-contained breathing apparatus. |
| SENSITIVITY TO MECHANICAL IMPACT / STATIC DISCHARGE | Not susceptible to mechanical impact or static discharge. |
| FLASH POINT | Extreme Cool™ - 109°C (228°F) (PMCC) (Aqueous solution) |
| UPPER FLAMMABLE LIMIT | Extreme Cool™ - 17.4% by volume |
| LOWER FLAMMABLE LIMIT | Extreme Cool™ - 2.4% by volume |
| AUTO IGNITION TEMPERATURE | 371°C (700°F) |
| HAZARDOUS COMBUSTION PRODUCTS | Burning produces normal products of combustion such as carbon monoxide and other toxic gasses. |

SECTION 6 -- ACCIDENTAL RELEASE MEASURES

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| RESPONSE TO SPILLS | Small spills: Mop up residues and place in a covered waste disposal container. Large spills: Dike or dam spill. Pump to containers or soak up with inert absorbent. Place in covered waste disposal container. |
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SECTION 7 -- HANDLING AND STORAGE

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| HANDLING PRECAUTIONS, PROCEDURES AND EQUIPMENT | Keep container in upright position. Avoid creating or breathing airborne vapor or mists. Avoid contact with skin, eyes, and clothing. DO NOT TAKE INTERNALLY. Clean up spills immediately. |
| STORAGE PRECAUTIONS | Store in a cool dry place. Keep from freezing. Keep containers tightly closed when not in use. |

SECTION 8 -- EXPOSURE CONTROLS / PERSONAL PROTECTION

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|----------------------|--|
| HYGIENIC PRACTICES | Normal procedures for good hygiene. |
| ENGINEERING CONTROLS | Good general ventilation. Eye wash station in immediate area of use. M.E.L./O.E.S Nil. U.K HSE EH:40 Not listed |

PERSONAL PROTECTIVE EQUIPMENT

| | | |
|----------|-----------------------|---|
| X | RESPIRATOR | If exposed to mists. |
| X | GOGGLES / FACE SHIELD | Recommended. |
| | APRON | Not required. |
| X | GLOVES | Recommended; PVC, Neoprene or Nitrile acceptable. |
| | BOOTS | Not required. |

SECTION 9 -- PHYSICAL AND CHEMICAL PROPERTIES

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| PHYSICAL STATE | Clear red liquid | ODOR THRESHOLD | Not available |
| BOILING POINT | Extreme Cool™ 188°C Ultra Cool™ 107°C Extra Cool™ 102°C | FREEZING POINT | Extreme Cool™ -60°C Ultra Cool™ -33°C Extra Cool™ -12°C |
| SPECIFIC GRAVITY | Extreme Cool™ 1.037 Ultra Cool™ 1.018 Extra Cool™ 1.000 | COEFFICIENT OF WATER/OIL DISTRIBUTION | Not available |
| VAPOR DENSITY | Extreme Cool™ - 2.5 (Air = 1.0) | VAPOR PRESSURE | Extreme Cool™ - 0.129 mm Hg @ 25°C (77°F) |
| ODOR | None | PH | 5.5 – 7.0 |
| SOLUBILITY IN WATER | Complete | EVAPORATION RATE | Extreme Cool™ - 0.01 (Butyl Acetate = 1.0) |

SECTION 10 -- STABILITY AND REACTIVITY

| | | | | |
|-------------------------------------|---|----------|-----------|--|
| CHEMICAL STABILITY | STABLE | X | UNSTABLE | |
| CONDITIONS TO AVOID | High temperatures, oxidizing conditions. | | | |
| INCOMPATIBILITY | Reacts with strong oxidizing agents, strong acids, isocyanates. | | | |
| HAZARDOUS PRODUCTS OF DECOMPOSITION | See "HAZARDOUS COMBUSTION PRODUCTS" above. | | | |
| POLYMERIZATION | WILL NOT OCCUR | X | MAY OCCUR | |

SECTION 11 -- TOXICOLOGICAL INFORMATION

CARCINOGENICITY

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|----------|---|
| | THIS PRODUCT CONTAINS A KNOWN OR SUSPECTED CARCINOGEN |
| X | THIS PRODUCT DOES NOT CONTAIN ANY KNOWN OR ANTICIPATED CARCINOGENS ACCORDING TO THE CRITERIA OF THE NTP ANNUAL REPORT ON CARCINOGENS AND OSHA 29 CFR 1910, Z . |

ROUTES OF EXPOSURE AND ACUTE / CHRONIC EFFECTS

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|-----------------------|---|
| EXPOSURE LIMITS | See section 2. |
| INHALATION | Not expected to present significant inhalation hazard under anticipated conditions of normal use. Inhalation may cause irritation of the nose and throat, headache, nausea and drowsiness. |
| SKIN CONTACT | Not expected to present significant skin hazard under anticipated conditions of normal use. Skin contact may cause irritation. |
| EYE CONTACT | May cause minor eye irritation. |
| INGESTION | May cause nausea, diarrhea. |
| CHRONIC EFFECTS | Lactic acidosis, no adverse systemic changes in animals reported other than cats (species-specific) with hematological changes (Heinz body formation), yet all other tissues unaffected. Overall low inherent toxicity following repeated oral and inhalation exposure. |
| TERATOGENICITY | Studies in pregnant rats, mice, hamsters and rabbits demonstrate no teratogenic or fetotoxic effects. |
| MUTAGENICITY | Negative for genotoxicity both in vitro and in vivo tests. |
| REPRODUCTIVE TOXICITY | No adverse effect on reproductive performance was seen in male and female mice exposed continuously to high doses of propylene glycol in drinking water for up to three months. |
| SENSITIZATION | Not expected to cause sensitization by skin contact, however skin reactions have been described in hypersensitive individuals following topical application. |
| SYNERGISTIC MATERIALS | None known. |

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|-------------|----------------|---|-------------|--|--------------------|
| MSDS | PRODUCT | Extreme Cool™, Ultra Cool™, Extra Cool™ | CODE | | PAGE 4 OF 4 |
|-------------|----------------|---|-------------|--|--------------------|

SECTION 12 -- ECOLOGICAL INFORMATION

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|------------------|----------------|--------------------------|--|-------------------|--|
| BIODEGRADABILITY | Not available. | CONSIDERED BIODEGRADABLE | | NOT BIODEGRADABLE | |
| BOD / COD VALUE | Not available. | | | | |
| ECOTOXICITY | Not available. | | | | |

SECTION 13 -- DISPOSAL CONSIDERATIONS

| | | | | | |
|-----------------------|--|---|------|----------|----|
| WASTE DISPOSAL METHOD | Waste material must be disposed of in accordance with national / local Legislative requirements. | | | | |
| RCRA CLASSIFICATION | Non hazardous. | | | | |
| RECYCLE CONTAINER | YES | X | CODE | 2 - HDPE | NO |

SECTION 14 -- TRANSPORT INFORMATION

| | | | | |
|------------------------------|-----------------------------------|--|---------------|---|
| UN CLASSIFICATION | HAZARDOUS | | NOT HAZARDOUS | X |
| DESCRIPTION | Not applicable. | | | |
| SPECIAL SHIPPING INFORMATION | No special shipping requirements. | | | |

SECTION 15 -- REGULATORY INFORMATION

REGULATORY STATUS: Benzotriazole

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|----|---------------------------|----------------|
| 1. | Labeling Information | Irritant |
| 2. | R Phrases | R 36/37/38, 22 |
| 3. | S Phrases | S 24/25, 26 |
| 4. | EI NECS No. | Not listed |
| 5. | EC annex 1 Classification | Nil. |
| 6. | German WGK | - |

WHMIS Information: Class D2A, Poisonous and Infectious Materials, Other Toxic Effects, Toxic Materials.

TDG Information: Not regulated as dangerous goods.

Department of Transportation (DOT): Not hazardous according to DOT criteria.

SECTION 16 -- OTHER INFORMATION

NFPA CLASSIFICATION

| | | |
|-----|--------|----------------|
| 0 | BLUE | HEALTH HAZARD |
| 1 | RED | FLAMMABILITY |
| 0 | YELLOW | REACTIVITY |
| N/A | WHITE | SPECIAL HAZARD |

Information contained in this MSDS refers only to the specific material designated and does not relate to any process or use involving other materials. This information is based on data believed to be reliable, and the Product is intended to be used in a manner that is customary and reasonably foreseeable. Since actual use and handling are beyond our control, no warranty, express or implied, is made and no liability is assumed by Thermal Dynamics in connection with the use of this information. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that its activities comply with federal, provincial or state, and local laws. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and this MSDS contains all the information required by the Controlled Products Regulations.