



MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards

PART I *What is the material and what do I need to know in an emergency?*

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED): **High Temperature bath fluid Catalog #7012603**

CHEMICAL NAME/CLASS: Heat Transfer Fluid
SYNONYMS: Mixture; None applicable.

DISTRIBUTOR'S NAME: **Techne Inc.**
ADDRESS: 743 Alexander Road
Princeton, N.J. 08540

EMERGENCY PHONE: 800/424-9300 (CHEMTREC)
BUSINESS PHONE: (609)452-9275

DATE OF PREPARATION: February 24, 1998

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	% v/v	EXPOSURE LIMITS IN AIR					
		ACGIH		OSHA		IDLH mg/m ³	OTHER mg/m ³
		TLV mg/m ³	STEL mg/m ³	PEL mg/m ³	STEL mg/m ³		
Hydrocarbon Mixture	> 95%	NE	NE	NE	NE	NE	NE
Other components present in less than 1% concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).	Balance	None of the other ingredients has established exposure limits or contributes any significant, additional hazard to this product. All pertinent hazard information has been provided in this Material Safety Data Sheet, per the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200), U.S. State equivalent standards, and the requirements of the Canadian Workplace Hazardous Materials Information System.					

NE = Not Established

C = Ceiling Level

See Section 16 for Definitions of Terms Used

NOTE (1): ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-1993 format.

NOTE (2): Information on this product is being claimed as proprietary. All pertinent hazard information has been provided, per the Trade Secret requirements of U.S. Federal Occupational Safety and Health Administration Standards (29 CFR 1910.1200) and Canadian WHMIS (CPR 12 and 19). Information on this mixture will be released when the conditions specified in these Standards are met.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This product is a clear, yellow liquid, with a slight, hydrocarbon odor. Mists from this product may be slightly irritating if inhaled. The product may also be slightly irritating to contaminated eyes. The product must be substantially preheated before ignition can occur. If involved in a fire, this liquid will release toxic gases (e.g., carbon monoxide and carbon dioxide). This product is not reactive under typical emergency response conditions. Emergency responders must wear proper personal protective equipment for the situation to which they are responding.

SYMPTOMS OF OVER-EXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of exposure to this product are by inhalation of mists from the product and contact with skin and eyes. The symptoms of overexposure are as follows.

INHALATION: This product has negligible vapor pressure and does not present a significant inhalation hazard under normal circumstances of use. Inhalation of the mists from this product may be slightly irritating to the nose, throat, mucous membranes, and other tissues of the respiratory system. Symptoms of such exposure may include coughing, sneezing, and nasal congestion. Symptoms are alleviated when overexposure ends.

CONTACT WITH SKIN or EYES: This liquid is not reported to cause irritation of the skin. Contact with the eyes may cause slight irritation, redness, and watering. Symptoms are generally alleviated when overexposure ends.

SKIN ABSORPTION: Skin absorption is not known to be a potential route of overexposure for the components of this product.

INGESTION: Ingestion of this product, while not likely to occur in an industrial setting, may cause irritation of the mouth and throat, gastric upset, nausea and vomiting. Additionally, aspiration of this product can result in severe, life-threatening lung damage.

INJECTION: Though not an expected route of occupational exposure for this product, injection (via punctures or lacerations in the skin) may cause local reddening, tissue swelling and discomfort.

SEE SECTION 16 FOR DEFINITION OF RATINGS

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in

Lay Terms. Symptoms associated with overexposure to this product are as follows:

ACUTE: The chief health hazards associated with this product would be the potential for slight irritation of contaminated eyes. Ingestion may cause gastric distress and lung damage as a result of aspiration.

CHRONIC: No health effects are currently reported for chronic exposure to the components of this product. Refer to Section 11 (Toxicological Information) for additional information.

TARGET ORGANS: Eyes.

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

SKIN EXPOSURE: If the product contaminates the skin, begin decontamination with running water. Contaminated individual must seek medical attention if irritation or redness develops.

EYE EXPOSURE: If the product enters the eyes, open victim's eyes while under gentle running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Contaminated individual must seek immediate medical attention, especially if symptoms persist.

4. FIRST-AID MEASURES (Continued)

INHALATION: If mists of the product are inhaled, remove victim to fresh air.

INGESTION: If the product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Victim should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow.

Contaminated individual must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to physician or health professional with victim.

5. FIRE-FIGHTING MEASURES

FLASH POINT (Pensky -Martens Closed Cup): 104°C (220°F)

AUTOIGNITION TEMPERATURE: Not available.

FLAMMABLE LIMITS (in air by volume, %): Lower (LEL): Not available.
Upper (UEL): Not available.

FIRE EXTINGUISHING MATERIALS:

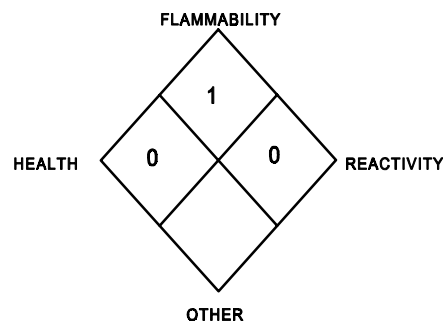
Water Spray: YES Carbon Dioxide: YES Foam: YES
Dry Chemical: YES Halon: YES Other: Any "B" Class

UNUSUAL FIRE AND EXPLOSION HAZARDS: This product must be substantially preheated before ignition can occur. When involved in a fire, this material may decompose and produce irritating vapors, toxic gases (e.g., oxides of carbon), soot, and smoke. This product's vapors can accumulate in confined spaces, resulting in a toxicity and flammability hazard.

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Electricity: Not sensitive.

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural fire fighters must wear Self-Contained Breathing Apparatus and full protective equipment. If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally areas. Decontaminate fire-response equipment with soap and water solution if necessary.



SEE SECTION 16 FOR DEFINITION OF RATINGS

6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: In case of a spill, clear the affected area and protect people. Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used.

For incidental releases, wear neoprene gloves, splash goggles, and appropriate body protection. For large, non-incidental releases in which excessive mists can be generated, the minimum Personal Protective Equipment should be Level C: triple-gloves (rubber gloves and nitrile gloves, over latex gloves), chemically resistant suit and boots, hard-hat, and an air-purifying respirator with dust/mist/fume filter. Level B, which includes Self-Contained Breathing Apparatus, must be worn in situations in which the level of oxygen is less than 19.5% or is unknown.

Absorb spilled liquid with polypads or other suitable absorbent materials. Decontaminate the area thoroughly. If necessary, decontaminate spill response equipment with soap and water solution. Place all spill residue in a suitable container and seal. Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations, or those of Canada and its Provinces (see Section 13, Disposal Considerations).

PART III

How can I prevent hazardous situations from occurring?

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Use in a well-ventilated location. Do not eat or drink while handling this material. Use ventilation and other engineering controls to minimize potential exposure to the aerosols and mists of this product.

7. HANDLING and STORAGE

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Open containers slowly, on a stable surface. Empty containers may contain residual amounts of this product, therefore, empty containers should be handled with care. Store containers in a cool, dry location, away from direct sunlight, or sources of intense heat. Storage areas should be made of fire-resistant materials. Keep containers away from incompatible chemicals (See Section 10, Stability and Reactivity). Keep drums and other containers of this product tightly closed when not in use. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely, if necessary. Decontaminate equipment using soapy water before maintenance begins.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to minimize exposure to mists. Prudent practice is to ensure eyewash stations are available near areas where this product is used.

RESPIRATORY PROTECTION: None needed for normal circumstances of use. Maintain airborne contaminant concentrations below exposure limits listed in Section 2 (Composition and Information on Ingredients). If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134, or applicable U.S. State regulations (or the appropriate regulations of Canada and its Provinces). Use supplied air respiration protection if oxygen levels are below 19.5% or are unknown.

EYE PROTECTION: Splash goggles or safety glasses.

HAND PROTECTION: Wear nitrile, polyvinyl alcohol or Viton™ gloves for routine industrial use. Use triple gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this MSDS.

BODY PROTECTION: Use body protection appropriate for task.

PERSONAL PROTECTIVE EQUIPMENT LEVEL: C

9. PHYSICAL and CHEMICAL PROPERTIES

RELATIVE VAPOR DENSITY (air = 1): > 1.0

EVAPORATION RATE (n-BuAc=1): < 1.0

SPECIFIC GRAVITY (water = 1): 0.856

FREEZING/MELTING POINT or RANGE: < -60°C (<-76 °F)

SOLUBILITY IN WATER: Insoluble.

BOILING POINT: 330-400°C (626-752°F).

VAPOR PRESSURE, mm Hg @ 20°C: Negligible.

pH: Not applicable.

ODOR THRESHOLD: Not available.

COEFFICIENT WATER/OIL DISTRIBUTION: Not available.

APPEARANCE AND COLOR: This product is a clear, yellow liquid, with a slight, hydrocarbon odor.

HOW TO DETECT THIS SUBSTANCE (warning properties): The appearance may act as a distinguishing characteristic of this product.

10. STABILITY and REACTIVITY

STABILITY: Stable

DECOMPOSITION PRODUCTS: Ignition of this product can produce carbon dioxide, carbon monoxide, and other organic decomposition products.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Strong oxidizers.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Contact with strong oxidizers.

PART IV

Is there any other useful information about this material?

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: Additional toxicology information for components greater than 1 percent in concentration is provided below.

HYDROCARBON MIXTURE:

LD₅₀ (oral, rat) > 2000 mg/kg

11. TOXICOLOGICAL INFORMATION (Continued)

SUSPECTED CANCER AGENT: The ingredients of this product are not listed on the following lists: U.S. FEDERAL OSHA Z LIST, NTP, IARC or CAL/OSHA, and therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT: Repeated or prolonged exposure to this product may cause irritation to contaminated tissues.

SENSITIZATION TO THE PRODUCT: No components of this product are reported to be sensitizers.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: This product is not reported to produce mutagenic effects in humans.

Embryotoxicity: This product is not reported to produce embryotoxic effects in humans.

Teratogenicity: This product is not reported to cause teratogenic effects in humans.

Reproductive Toxicity: This product is not reported to cause reproductive effects in humans.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: No medical condition is currently reported to be aggravated by exposure to this substance.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and reduce exposures.

ACGIH BIOLOGICAL EXPOSURE INDICES: Currently, there are no ACGIH Biological Indices (BEIs) associated with the components of this product.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: The components of this product will slowly be degraded over time into organic compounds.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: This product may be harmful to contaminated plant and animal life (especially if large quantities are released). Refer to Section 11 (Toxicological Information) for specific information regarding effects of this product's components on test animals.

EFFECT OF CHEMICAL ON AQUATIC LIFE: This product may be harmful to aquatic life if large quantities are released into bodies of water.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, or those of Canada and its Provinces. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

U.S. EPA WASTE NUMBER: Not applicable to wastes consisting only of this product.

14. TRANSPORTATION INFORMATION

THIS MATERIAL IS NOT HAZARDOUS, PER 49 CFR 172.101 (THE U.S. DEPARTMENT OF TRANSPORTATION).

PROPER SHIPPING NAME: Not Applicable

HAZARD CLASS NUMBER and DESCRIPTION: Not Applicable

UN IDENTIFICATION NUMBER: Not Applicable

PACKING GROUP: Not Applicable

DOT LABEL(S) REQUIRED: Not Applicable

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER(1996): Not Applicable

MARINE POLLUTANT: No component of this product is classified as a Marine Pollutant, as per Appendix B to 49 CFR 172.101.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL IS NOT CONSIDERED AS DANGEROUS GOODS.

15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA THRESHOLD PLANNING QUANTITY: Not applicable.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

U.S. STATE REGULATORY INFORMATION: Components of this product are not covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: No.

California - Permissible Exposure Limits for Chemical Contaminants: No.

Florida - Substance List: No.

Illinois - Toxic Substance List: No.

Kansas - Section 302/313 List: No.

Massachusetts - Substance List: No.

Michigan - Critical Materials Register: No.

Minnesota - List of Hazardous Substances: No.

Missouri - Employer Information/Toxic Substance List: No.

New Jersey - Right to Know Hazardous Substance List: No.

North Dakota - List of Hazardous Chemicals, Reportable Quantities: No.

Pennsylvania - Hazardous Substance List: No.

Rhode Island - Hazardous Substance List: No.

Texas - Hazardous Substance List: No.

West Virginia - Hazardous Substance List: No.

Wisconsin - Toxic and Hazardous Substances: No.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No component of this product is on the California Proposition 65 lists.

ANSI LABELING (Z 129.1): **CAUTION!** MAY CAUSE EYE IRRITATION. HARMFUL IF SWALLOWED-ASPIRATION HAZARD. Avoid breathing mists or sprays. Do not get on skin or in eyes. Avoid prolonged contact with skin. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Wear gloves, safety goggles, and appropriate body protection when using this product. Use gloves and safety goggles and appropriate body protection. **FIRST-AID:** In case of contact, immediately flush skin or eyes for at least 15 minutes. If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, do not induce vomiting. Get medical attention. **IN CASE OF FIRE:** Use water fog, foam, dry chemical of CO₂. **IN CASE OF SPILL:** Absorb with inert material and place in suitable container. Flush area with water. Refer to MSDS for additional information.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: The components of this product are on the DSL Inventory.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: The components of this product are not on the CEPA Priorities Substances Lists.

CANADIAN WHMIS SYMBOLS: Not applicable.

16. OTHER INFORMATION

PREPARED BY:

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The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Loikits assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Loikits assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:

CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent. It is used for computer-related searching.

EXPOSURE LIMITS IN AIR:

ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits. **TLV** - Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average (**TWA**), the 15-minute Short Term Exposure Limit, and the instantaneous Ceiling Level (**C**). Skin absorption effects must also be considered.

OSHA - U.S. Occupational Safety and Health Administration.

PEL - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order. **IDLH** - Immediately Dangerous to Life and Health - This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. **The DFG - MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (**OSHA**). NIOSH issues exposure guidelines called Recommended Exposure Levels (**RELs**). When no exposure guidelines are established, an entry of **NE** is made for reference.

HAZARD RATINGS:

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: Health Hazard: **0** (minimal acute or chronic exposure hazard); **1** (slight acute or chronic exposure hazard); **2** (moderate acute or significant chronic exposure hazard); **3** (severe acute exposure hazard; onetime overexposure can result in permanent injury and may be fatal); **4** (extreme acute exposure hazard; onetime overexposure can be fatal). Flammability Hazard: **0** (minimal hazard); **1** (materials that require substantial pre-heating before burning); **2** (combustible liquid or solids; liquids with a flash point of 38-93°C [100-200°F]); **3** (Class IB and IC flammable liquids with flash points below 38°C [100°F]); **4** (Class IA flammable liquids with flash points below 23°C [73°F] and boiling points below 38°C [100°F]). Reactivity Hazard: **0** (normally stable); **1** (material that can become unstable at elevated temperatures or which can react slightly with water); **2** (materials that are unstable but do not detonate or which can react violently with water); **3** (materials that can detonate when initiated or which can react explosively with water); **4** (materials that can detonate at normal temperatures or pressures).

NATIONAL FIRE PROTECTION ASSOCIATION: Health Hazard: **0** (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); **1** (materials that on exposure under fire conditions could cause irritation or minor residual injury); **2** (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); **3** (materials that can on short exposure could cause serious temporary or residual injury); **4** (materials that under very short exposure causes death or major residual injury). Flammability Hazard and Reactivity Hazard: Refer to definitions for "Hazardous Materials Identification System".

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (**NFPA**). Flash Point - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD₅₀** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC₅₀** - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m³** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TD₀**, **LDLo**, and **LD₀**, or **TC**, **TC₀**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause lethal or toxic effects.

Cancer Information: The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information:** **BEI** - ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV. **Ecological Information:** **EC** is the effect concentration in water. **BCF** = Bioconcentration Factor, which is used to determine if a substance will concentrate in lifeforms which consume contaminated plant or animal matter. Coefficient of Oil/Water Distribution is represented by **log K_{ow}** or **log K_{oc}** and is used to assess a substance's behavior in the environment.

REGULATORY INFORMATION:

This section explains the impact of various laws and regulations on the material. **U.S.:** **EPA** is the U.S. Environmental Protection Agency. **DOT** is the U.S. Department of Transportation. **SARA** is the Superfund Amendments and Reauthorization Act. **TSCA** is the U.S. Toxic Substance Control Act. **CERCLA (or Superfund)** refers to the Comprehensive Environmental Response, Compensation, and Liability Act. Labeling is per the American National Standards Institute (**ANSI Z129.1**). **CANADA:** **CEPA** is the Canadian Environmental Protection Act. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **TC** is Transport Canada. **DSL/NDSL** are the Canadian Domestic/Non-Domestic Substances Lists.

High Temperature Bath Fluid Specifications Sheet

Typical Properties – Techne High Temperature bath fluid Catalog #7012603

AppearanceClear colorless

Boiling Point>330°C/627°F

CompositionSynthetic organic hydrocarbon based liquid

Fire point.....200°C/392°F

Flash point180°C/355°F

Auto ignition temperature330°C/627°F

Specific Heat~0.50 Btu/(lb)(°F) @ 50°C (122°F)

Viscosity12cP @ 50°C

Minimum pumpability limit ... 0°C/32°F

Odor.....Bland

Volumetric Expansion from 0°C to 350°C30.5%

Thermal Conductivity at 20°C/68°F.....0.135 W/m.K (0.078 Btu/ft. hr. °F)

Recommended Use Range50°C to 250°C (122°F to 482°F)

Notes:

- 1) Techne high temperature bath fluid or its vapor, like many other heat transfer fluids, may ignite if released into the environment and exposed to hot surfaces, sparks, open flames, or other source of ignition.
- 2) A fume hood is recommended for operation above 125°C.



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