





SAFETY DATA SHEET

Protective Clothing	NFPA Rating USA	EC Classification	WHMIS Canada	Transportation
		 Irritant		Not Regulated

Section 1: Product and Company Information

Product Name: Tech Kewl ,Cool Pax
Product Code: 6665,7065,6661 ,6662,6663,6664,6668,6690
Product Use: Phase Change Cooling
Chemical Family: Alkanes
Synonyms: Cetane; N-Cetane; N-Hexadecane, N-Tetradecane
Manufacturer: Techniche International
1261 Liberty Way, Suite A
Vista CA 92081
Phone Number: 888-823-2665
Fax: 760-931-8884
24-hour Emergency: CHEMTREC: 800-424-9300

Section 2: Composition and Ingredient Information

Hazardous Ingredients

Common Name	Chemical Name	CAS No.	Wt. %	EINECS/ELINCS	Symbol	Risk Phrases
n-Hexadecane	n-Hexadecane	544-76-3	99-100	208-878-9	Xi	R36/37/38

Hazardous Ingredients

Common Name	Chemical Name	CAS No.	Wt. %	EINECS/ELINCS	Symbol	Risk Phrases
n-Tetradecane	n-Tetradecane	629-59-4	88-100	208-878-9	Xi	R36/37/38

Note: See Section 8 of this MSDS for exposure limit data for these ingredients.
See Section 16 for the full text of the R-phrases above.

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Section 3: Hazards Identification

Preparation Hazards and Classification: Irritating to eyes, respiratory system and skin.

USA: This product is a hazardous material as defined by 29 CFR 1910.1200, OSHA Hazard Communication Evaluation.

Canada: This is a controlled product under WHMIS.

European Communities (EC): This substance is classified in the Annex I of Directive 67/548/EEC. This substance is considered dangerous and has been classified according to Directive 1999/33/EC and its adaptations. Classification: Irritant

Appearance, Color and Odor: Colorless liquid. Odor type: Slight odor.

Primary Route(s) of Exposure: Inhalation, Ingestion, Eye contact, Skin contact

Potential Health Effects: ACUTE (short term): see Section 8 for exposure controls

Inhalation: High concentrations of vapors and mists of this product are severely irritating to the upper respiratory tract.

Ingestion: Severely irritating to the gastro intestinal tract irritation with nausea, vomiting and diarrhea. Risk of aspiration into the lungs during swallowing and vomiting; aspiration of this substance may cause severe lung injury.

Skin: Direct contact causes severe skin irritation.

Eyes: Direct contact causes severe eye irritation. High concentrations of vapors or mists may cause eye irritation.

CHRONIC (long term): see Section 11 for additional toxicological data

Prolonged or repeated skin exposure may cause drying and reddening of the skin.

Medical Conditions Aggravated by Exposure: Not available

Section 4: First Aid Measures

Inhalation: Remove source of contamination or move victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. Do not allow victim to move about unnecessarily. Symptoms of pulmonary edema can be delayed up to 48 hours after exposure. Immediately transport victim to an emergency care facility.

Eye Contact: Quickly and gently, blot or brush away excess chemical. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the chemicals is removed, while holding the eyelids open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately.

Skin Contact: Quickly and gently, blot or brush away excess chemical. Wash gently and thoroughly with warm water and non-abrasive soap for 20 minutes or until the chemical is removed. Under running water, remove contaminated clothing shoes, and leather goods (watch bands, belts).

Ingestion: Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Do Not Induce Vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Obtain medical attention immediately.

Note to Physicians: Aspiration of this substance into the lungs during vomiting may result in aspiration of the light hydrocarbon liquid, which may cause pneumonitis.

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Section 5: Fire Fighting Measures

Extinguishing Media: Dry chemical, CO2, alcohol foam. Use water spray to cool fire exposed containers.

Unusual Fire and Explosion Hazards: Sensitivity to mechanical impact: May be sensitive
Sensitivity to static discharge: May be sensitive

This substance will burn but it is not easily ignited. May form flammable or explosive mixtures with air at temperatures above the substance flash point.

Fire Fighting Instructions: As for any fire, evacuate the area and fight the fire from a safe distance. Wear a pressure-demand, self-contained breathing apparatus and full protective gear. Using water on fires involving this substance may cause frothing with increasing fire intensity.

Prevent contaminated water from being released into soil or surface waters.

Hazardous Combustion Products: During a fire, irritating and toxic gases, fumes and vapors may be generated. Products of combustion may include carbon monoxide, carbon dioxide and dense smoke.

Section 6: Accidental Release Measures

Personal Precautions: Wear all proper personal protective equipment as indicated in Section 8. Prevent skin and eye contact. Avoid inhaling vapors and mists of this product. Remove all sources of ignition and heat.

Environmental Precautions: Prevent material from contaminating soil and from entering sewers or waterways.

Methods for Containment: Isolate the spill area. Stop the leak if it is safe to do so. Contain the liquid immediately using a suitable inert absorbent (sand, clay, vermiculite or commercial hydrocarbon absorbents).

Methods for Clean-up: Scoop up contaminated absorbents and place into suitable, covered chemical disposal containers. Large spills may be cleaned up by pumping liquid into closed containers, using equipment appropriate for a combustible, hydrocarbon liquid.

Report all spills of this material that could reach any surface waters, contaminate soils or enter drainage and sewer systems.

Section 7: Handling and Storage

Handling Use only in a well-ventilated area. Do not get on skin or in eyes. Do not ingest or inhale. Wash thoroughly with detergent and water after handling, before eating, drinking, smoking or using the toilet. Remove contaminated clothing and wash before reuse. Follow all MSDS and label precautions even after the container is emptied because they may retain product residues.

Storage: Store in a cool, dry area, out of direct sunlight. Keep containers closed when not in use.

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Section 8: Exposure Controls and Personal Protection

Exposure Limits

Ingredient	ACGIH TLV (8-hr. TWA)	U.S. OSHA PEL (8-hr. TWA)	Ontario (Canada) TWAEV	UK OEL (8-hr. TWA)
n-Hexadecane	Not established	Not established	Not established	Not established

Exposure Controls

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control sources of mist or vapor.

Personal Protection:

Respiratory Protection: Not required for normal use. Wear an approved organic vapor respirator as needed to control exposure. Wear a positive pressure supplied air respirator for uncontrolled releases or when the organic vapor respirator limitations may be exceeded.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 or Canadian Standards Association (CSA) Standard Z94.4-93 must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Wear chemical protective gloves and body-covering clothing to prevent skin exposure.

Eye Protection: Wear chemical goggles. Wear a face-shield when necessary to prevent contact with skin and eyes.

Other Protective Equipment: Have a safety shower and eye-wash fountain readily available in the immediate work area.

Hygiene Measures: Remove contaminated clothing promptly. Keep contaminated clothing in closed containers. Launder contaminated clothing before re-wearing or discard. Do not eat, drink or smoke in work areas. Wash hands thoroughly after handling this material. Maintain good housekeeping. Avoid skin and eye contact. Avoid inhaling mists and vapors.

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Section 9: Physical and Chemical Properties

Physical State:	Liquid	Vapor Pressure: <mm Hg @ 20°C)	1mm Hg @ 105.3 °C
Appearance:	Colorless	Vapor Density: <Air = 1)	7.8
pH:	Not available	Solubility in Water:	Insoluble
Relative Density: {water = 1}	0.773	Water / Oil distribution coefficient:	Not available
Boiling Point:	287 °C (548 °F)	Odor Type:	Slight
Freezing Point:	12 °C (54 °F)	Odor Threshold:	Not available
Viscosity:	Not available	Evaporation Rate: <n-BuMAcetate = 1)	Not available
Oxidizing Properties:	Not applicable	Auto Ignition Temperature C°C:	202 °C (396 °F)
Flash Point and Method {°C}:	135 °C (275 °F) cc	Flammability Limits {%}:	Not available

Section 10: Stability and Reactivity

Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Avoid contact with incompatible materials, and excess heat and ignition sources.
Incompatible Materials:	Strong oxidizing agents, strong bases and strong acids.
Hazardous Decomposition Products:	Decomposition products may include carbon monoxide, carbon dioxide.
Possibility of Hazardous Reactions:	Hazardous polymerization will not occur.

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Section 11: Toxicological Information

Acute Toxicity Data

Ingredient	.bQso Oral (mg/kg)	.bQso Dermal (mg/kg)	.bQso Inhalation (mg/m:J, 4 hrs.)
n-Hexadecane	>10 000 (rat)	Not available	Not available

Chronic Toxicity Data

Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen.

Ingredient	ACGIH	IARC	NTP	OSHA
n-Hexadecane	Not listed	Not listed	Not listed	Not listed

Carcinogenicity Designations:

ACGIH: American Conference of Governmental Industrial Hygienists
 IARC: International Agency for Research on Cancer
 NTP: National Toxicity Program
 OSHA: Occupational Safety and Health Administration

Irritation: Product is severely irritating to skin, eyes and gastrointestinal tract. High concentrations of mist and vapors are expected to be irritating to the upper respiratory system. Draize Test, Skin (Rabbit); 100mg/24h. Reaction: Severe.

Sensitization: Not applicable

Neurological Effects: Not applicable

Teratogenicity: Not applicable

Reproductive Toxicity: Not applicable

Mutagenicity (Genetic Effects): Not applicable

Toxicologically Synergistic Materials: Not available

Section 12: Ecological Information

Ecotoxicity: Not available

Mobility: Hexadecane may have high adsorption in soil.

Persistence and degradability: Expected to biodegrade in natural soil, fresh water, sea water and sediments.

Bioaccumulative potential: Hexadecane has the potential to bioaccumulate in aquatic organisms.

Other adverse effects: Not available

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Section 13: Disposal Considerations

Waste Disposal Method: Do NOT dump into any sewers, on the ground or into any body of water. Store material for Disposal as indicated in Section 7 Handling and Storage.

Dispose of in accordance with local, state and federal laws and regulations.
 RCRA Waste numbers: None listed

Canada: Dispose of in accordance with local, provincial and federal laws and regulations.

Waste must be disposed of in accordance with relevant EC Directives and national, regional and local environmental control regulations. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

Section 14: Transport Information:

U.S. Hazardous Materials Regulation (DOT 49CFR): Not regulated

Canadian Transportation of Dangerous Goods CTDG: Not regulated

ADR/RID: Not regulated

Not regulated

Marine Pollutants: Not regulated

ICAO/ATA : Not regulated

Section 15: Regulatory Information

NEPA Hazard Rating

Category	NFPA
Acute Health	1
Flammability	1
Instability	0

HMS Hazard Rating

Category	HMS
Acute Health	1
Flammability	1
Physical Hazard	0

TSCA Status: This substance is listed on the TSCA inventory.

SARA Title III:
 Sec.302.1304: None
 Sec.311/312: None
 Sec.313: None
 CERCLA RQ: None

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Canada

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*.

WHMS Classification: 028

NSNR Status <New
Substance Notification
Regulations):

This substance is listed on the Canadian Domestic Substance List (DSL).

NPRI Substances
<National Pollutant
Release Inventory):

None

EC Classification for the
Substance/Preparation:

Symbol:



Irritant

Risk Phrases: R36/37/38: Irritating to eyes, respiratory system and skin.

Safety Phrases:

S25: Avoid contact with eyes.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S27: Take off immediately all contaminated clothing.
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Australia:

Present on Inventory of Chemical Substances (AICS).

China:

Present on Chemical Inventory.

Japan:

Existing and New Chemical Substances (ENCS): 2-10

Philippines

Present on inventory of Chemicals and Chemical Substances (PICCS).

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Section 16: Other Information

Full Text of R-phrases appearing in Section 2: R36/37/38: Irritating to eyes, respiratory system and skin.

Preparation Information

Prepared by: Techniche International
1261 Liberty Way, Suite A
Vista CA 92081
WWW.TECHNICHE-INTL.COM

Phone: 888-823-2665

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