SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier **Hexadecane**

Synonyms: Cetane, n-Cetane, n-Hexadecane

Chemical Abstracts Registry No: 544-76-3

1.2. Relevant identified uses of the substance or mixture and uses advised against

Coatings
Solvent, organic intermediate, ignition standard for diesel fuels

1.3. Details of the supplier of the safety data sheet

Techniche LLC
2575 Pioneer Ave, St 101
Vista CA 92081
United States

e-mail Address: **info@techniche-intl.com**

1.4. **Emergency telephone number** **CHEMTREC: 800-424-9300 (collect calls accepted)**
CHEMTREC (International): +1-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture (According to Regulation (EC) No 1272/2008, 29 CFR 1910.1200 and the Globally Harmonized System)

Aspiration Hazard Category 1

2.2. Label elements

Hazard Symbols (Pictogram):

Signal Word: Danger

Hazard Precautions: H304 - May be fatal if swallowed and enters airways.

Prevention Precautionary Statements: P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P331 - Do NOT induce vomiting

SAFETY DATA SHEET

SECTION 3: Composition/information on ingredients

3.1. Substances or 3.2. Mixtures

Ingredient	CAS Number	Concentration (weight %)	EC Number	CLP Inventory / Annex VI	EU CLP Classification (1272/2008)
Hexadecane	544-76-3	~ 100	208-878-9	Not listed.	Asp. Tox. 1; H304

NOTE: See Section 8 for exposure limit data for these ingredients. See Section 15 for trade secret information (where applicable). See Section 16 for the full text of the R-phrases above.

SECTION 4: First aid measures

4.1. Description of first aid measures

Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

Eye Contact: Immediately flush the eyes with plenty of water for at least 15 minutes. Call a physician.

Inhalation: Remove from exposure. If not breathing, give artificial respiration and call a physician.

Ingestion: If swallowed, do not induce vomiting. Get prompt medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Acute: May cause pulmonary edema; symptoms may be delayed.

Delayed Effects: Aspiration may cause pulmonary edema and pneumonitis.

4.3. Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Appropriate Extinguishing Media: Dry chemical, Water fog, Foam, Carbon dioxide

5.2. Special hazards arising from the substance or mixture

Hazardous Products of Combustion: As with other organic materials, combustion will produce carbon monoxide and carbon dioxide.

Potential for Dust Explosion: Not applicable.

Special Flammability Hazards: Vapor may be ignited by a static discharge.

5.3. Advice for firefighters

SAFETY DATA SHEET

Basic Fire Fighting Guidance: Wear self-contained breathing apparatus and full protective clothing (i.e.,Bunker gear). Skin and eye contact should be avoided. Normal firefighting procedures may be used.

SAFETY DATA SHEET

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuation Procedures: Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Special Instructions: See Section 8 for personal protective equipment recommendations. Remove all contaminated clothing to prevent further absorption. Decontaminate affected personnel using the first aid procedures in Section 4. Leather shoes that have been saturated must be discarded. Water may be used to cool sealed exposed containers

6.2. Environmental precautions

Prevent releases to soils, drains, sewers and waterways.

6.3. Methods and material for containment and cleaning up

Ventilate the area of spill or leak. Wear protective equipment during clean-up. Contain spilled liquid with sand or vermiculite and place in chemical waste container. Prevent runoff from entering drains, sewers, and streams. Dispose of contents & container in accordance with local, regional, national or international regulations. After collection of material, flush area with water.

6.4. Reference to other sections

Refer to section 8 for information on selecting personal protective equipment. Refer to section 13 for information on spilled product, absorbent and clean up material disposal instructions.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for Unique Hazards: Not applicable.

Practices to Minimize Risk: Wear appropriate protective equipment when performing maintenance on contaminated equipment.

Wash hands thoroughly before eating or smoking after handling this material. Do not eat, drink or smoke in work areas. Prevent contact with incompatible materials. Avoid spills and keep away from drains.
Handle in a manner to prevent generation of aerosols, vapors or dust clouds. Provide good ventilation to prevent build up of vapors. Use proper grounding procedures to avoid state electricity generation.

Special Handling Equipment: Not applicable.

7.2. Conditions for safe storage, including any incompatibilities

Storage Precautions & Recommendations: This product should be stored at ambient temperature in a dry, well-ventilated location. Keep away from heat, sparks, and flame Store away from heat

Avoid excessive heat, strong acids and oxidizing

Dangerous Incompatibility Reactions: agents. None known

Incompatibilities with Materials of Construction:

7.3. Specific end use(s)

SAFETY DATA SHEET

If a chemical safety assessment has been completed an exposure scenario is attached as an annex to this Safety Data Sheet. Refer to this annex for the specific exposure scenario control parameters for uses identified in subsection 1.2.

SAFETY DATA SHEET

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limit Not applicable.

Air Monitoring Method: Not applicable.

8.2. Exposure controls

Also see the annex to this SDS (if applicable) for specific exposure scenario controls.

Personal Protective Equipment: PVC or nitrile gloves Safety glasses or chemical goggles. Where overexposures are a concern, use NIOSH-approved dust/mist respirator as necessary.

Respirator Caution: Observe OSHA regulations for respirator use (29 CFR 1910.134). Air-purifying respirators must not be used in oxygen-deficient atmospheres.

Thermal Hazards: Not applicable.

Environmental Exposure Controls: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance, State & Odor (ambient temperature): Colorless liquid, slight odor.

Molecular Formula:	C16H34	**Molecular Weight:**	226.44 g/mol
Vapor Pressure:	0.4 Pa @ 20°C	**Evaporation Rate:**	Not determined
Specific Gravity or Density:	0.773 g/cm3 @15C	**Vapor Density (air = 1):**	No data available.
Boiling Point:	285 °C	**Freezing / Melting Point:**	18 °C
Solubility in Water:	Not soluble	**Octanol / Water Coefficient:**	8.2@25C
pH:	No data available.	**Odor Threshold:**	No data available.
Viscosity:	4.29 mm2/s @20C	**Autoignition Temperature:**	>200 °C @ 101.325kPa
Flash Point and Method:	233°F (112°C)	**Flammable Limits:**	No data available. (LEL)
Flammability (solid, gas):	Not applicable	**Decomposition Temperature:**	No data available.
Explosive Properties:	Not explosive.	**Oxidizing Properties:**	Not an oxidizer.

SAFETY DATA SHEET

SECTION 10: Stability and reactivity

10.1. **Reactivity** Not classified as dangerously reactive.

10.2. **Chemical stability** Stable

10.3. **Possibility of hazardous reactions** Polymerization is not expected to occur

10.4. **Conditions to avoid** Elevated temperatures, sparks, flames

10.5. **Incompatible materials** Avoid excessive heat, strong acids and oxidizing agents.

10.6. **Hazardous decomposition products** Decomposition products may include carbon monoxide, carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Oral LD_{50}:	Oral LD50 (rat) > 5000 mg/kg	Hexadecane
Acute Dermal LD_{50}:	(rabbit) 3160 mg/kg	Hexadecane
Acute Inhalation LC_{50}:	(rat) 5.27 mg/L, 4 hrs	Hexadecane
Skin Irritation:	Non-irritating to skin.	
Eye Irritation:	Non-irritating to eyes.	
Skin Sensitization:	Not expected to be a sensitizer.	
Mutagenicity:	No data available.	
Reproductive / Developmental Toxicity:	No data available.	
Carcinogenicity:	None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as being carcinogens.	
Target Organs:	No data available.	
Aspiration Hazard:	In inadequately ventilated areas, where workplace limits are exceeded, where unpleasant odors exist or where aerosols are in use, or smoke and mist occur, use self-contained breathing apparatus or breathing apparatus with a type A filter or appropriate combined filter (e.g. where aerosols are in use, or smoke and mist occur, A-P2 or ABEK-P2), in compliance with EN 141.	
Primary Route(s) of Exposure:	Skin contact and absorption, eye contact, and inhalation. Ingestion is not likely to be a primary route of exposure.	
Most important symptoms and effects, both acute and delayed	May cause pulmonary edema; symptoms may be delayed. Delayed Effects: Aspiration may cause pulmonary edema and pneumonitis.	
Additive or Synergistic effects:	None known.	

SAFETY DATA SHEET

SECTION 12: Ecological information

12.1. **Toxicity**

LL50 (96H) Fish > 1028 mg/L
LL50 (24H) Cyprinus carpio > 3193 mg/L
EL50 (8D) Ceriodaphnia dubia >
100 mg/L EC50 (3h) Activated
Sludge > 100 mg/L
EL50 (72H) Skeletonema costatum (diatom) >
1000 mg/L

Hexadecane

12.2. Persistence and degradability

Readily biodegradable. Not expected to bioaccumulate.

12.3. **Bioaccumulative potential** No data available

12.4. **Mobility in soil** No data available Environmental modeling indicates this substance should not be mobile in soil and

should not pose a threat to groundwater.

12.5. Results of PBT and vPvB assessment This substance is not a PBT or vPvB.

12.6. **Other adverse effects** No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

US EPA Waste Number: Not applicable

Waste Classification: (per US regulations) Non-Hazardous

Waste Disposal: NOTE: Generator is responsible for proper waste characterization. State hazardous waste regulations may differ substantially from federal regulations. Dispose of this material responsibly, and in accordance with standard practice for disposal of potentially hazardous materials as required by applicable international, national, regional, state or local laws, and environmental protection duty of care principles. Do NOT dump into any sewers, on the ground, or into any body of water. For disposal within the EC, the appropriate classification code according to the European Community List of Wastes should be used.
Note that disposal regulations may also apply to empty containers and equipment rinsates.

SECTION 14: Transport information

The following information applies to all shipping modes (DOT/IATA/ICAO/IMDG/ADR/RID/ADN), unless otherwise indicated:

14.1. UN number Not applicable **14.2. UN**

SAFETY DATA SHEET

		roper shipping name	Chemicals, n.o.s. (Hexadecane)
14.3. Transport hazard class(es)		Not applicable	**14.4. Packing group** Not applicable
14.5.	**Environmental hazards**	Not applicable	
14.6. Special precautions for user	Not applicable		
NA Emergency Guidebook Numbers:	Not applicable	**IMDG EMS:**	Not applicable;
14.7.			**Transport in bulk according to**
Annex II of MARPOL73/78 and the IBC Code			Not applicable.

SAFETY DATA SHEET

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemical Inventory Lists:	Status:		
USA TSCA:	Listed	**EINECS:**	208-878-9
Canada(DSL/NDSL):	DSL	**Japan:**	(2)-10
Korea:	KE-18435	**Australia:**	Listed
China:	Listed	**Philippines:**	Listed
Taiwan:	Listed	**New Zealand:**	Listed

German Water Hazard Classification: WGK 1 (Reg. No. 7915) *(Hexadecan)*

SARA 313: Not listed.

HMIS IV:

NFPA:

15.2. Chemical safety assessment

A chemical safety assessment has not been performed on this substance.

SECTION 16: Other information

Legend of Abbreviations:

ACGIH = American Conference on Governmental Industrial Hygienists. CAS = Chemical Abstracts Service. CFR = Code of Federal Regulations. DSL/NDSL = Domestic Substances List/Non-Domestic Substances List. EC = European Community. EINECS = European Inventory of Existing Commercial Chemical Substances. ELINCS = European List of Notified Chemical Substances. EU = European Union. GHS = Globally Harmonized System. LC = Lethal Concentration. LD = Lethal Dose. NFPA = National Fire Protection Association. NIOSH = National Institute of Occupational Safety and Health. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration PEL = Permissible Exposure Limit. RQ = Reportable Quantity. SARA = Superfund Amendments and Reauthorization Act of 1986. TLV = Threshold Limit Value. WHMIS = Workplace Hazardous Materials Information System.

Important Note: Please note that the information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. The information contained herein may change without prior notice. THIS SAFETY DATA SHEET SUPERSEDES ALL PREVIOUS EDITIONS.

Revision Date: 14 Apr 2016 **Original Date of Issue:** 28 February 2005

Issued by: Regulatory Management Department **Email:** maryanne@technicheanz.com

SAFETY DATA SHEET

Revision Details: Revised in all sections to GHS format.