SAFETY DATA SHEET

TEDIA®
High Purity Solvents

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N-DECANE — SDS No. M0052

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: n-Decane
Synonyms: Decane
Recommended Use: This product is recommended for laboratory and manufacturing use only. It is not recommended for drug, food or household use.

2. HAZARDS IDENTIFICATION

Classification:
Flammable Liquids: GHS Category 3
Aspiration Hazard: GHS Category 1

Label Elements
Signal Word: DANGER!
Hazard Statements:
H226 – Flammable liquid and vapor.
H304 – May be harmful if swallowed and enters airways.
Precautionary Statements:
P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 – Keep container tightly closed.
P280 – Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P310 -- IF SWALLOWED: Immediately call a POISON CENTER or a doctor.
P303+P361+P353 – IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P331 – Do NOT induce vomiting.
P403+P233 – Store in a well-ventilated place. Keep container tightly closed.
P501 – Dispose of contents/ container to an approved waste disposal plant.

Emergency Overview
May cause irritation to eyes, skin, digestive tract and respiratory tract. Breathing vapors may cause drowsiness and dizziness. May be fatal if swallowed. Aspiration hazard. Can enter lungs and cause serious damage. May cause central

nervous system effects. Flammable liquid and vapor. Target Organs: Central nervous system, respiratory system, eyes, and skin.

HMIS Rating:
Health – 2* Flammability – 2 Physical Hazard – 0 PPE – User supplied
NOTE: HMIS ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. These ratings are based on the inherent properties of this chemical under expected conditions of normal use and are not intended to be used in emergency situations. PPE is determined by the user based on their needs and conditions.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredient	CAS No	Percent	Hazardous
n-Decane	124-18-5	>90%	Yes

4. FIRST-AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Ingestion: Potential aspiration hazard if swallowed. Get medial help immediately. Do not induce vomiting unless directed by medical personnel. If vomiting occurs naturally, have victim lean forward. Never give anything by mouth to an unconscious person.
Skin Contact: Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation persists.
Eye Contact: Check for and remove contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention.
Notes to Physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flammability: Flammable liquid and vapor (GHS Category 3)
Auto-ignition Temperature: 210° C (410° F)
Flash Point: 46° C (115° F)
Flammable Limits: Lower Limit – 0.8 vol %, Upper Limit – 5.4 vol %
Products of Combustion: May decompose into irritating and highly toxic gases under fire conditions (carbon monoxide and carbon dioxide).
Specific Fire Hazards: As in any fire, always wear self-contained breathing apparatus in pressure-demand (MSA/NIOSH approved or equivalent), and full protective gear. Vapors may form explosive mixtures with air. Use water spray to keep fire exposed containers cool. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Vapors are heavier than air and may travel to a source of ignition and flash back. Sensitive to static discharge. Vapors can spread along the ground and collect in low or confined areas.
Fire Fighting Media: Use dry chemical, carbon dioxide, or appropriate foam. Do not use a solid stream of water, since the stream will scatter and spread the fire. Water spray may be used to keep fire exposed containers cool.
National Fire Protective Association: Health - 0, Flammability - 2, Reactivity - 0
NOTE: NFPA ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. They are for use by emergency personnel to address the hazards that are presented by short term, acute exposure to this product under fire, spill, or similar emergencies. Ratings involve data and interpretations that may vary from company to company.

6. ACCIDENTAL RELEASE MEASURES

Use water spray to reduce vapors. Water spray may reduce vapors but still not prevent ignition in closed spaces. Absorb spilled liquid with sorbent pads, socks, or other inert material such as vermiculite, sand, or earth. Do not use sawdust or any combustible material. Use spark-proof tools. Provide ventilation to the affected area and remove all ignition sources.

Approach the spill from upwind and pick up absorbed material and place it in a suitable container. Always use proper personal protective equipment as described in section 8.

7. HANDLING AND STORAGE

Precautions: Always use proper personal protective equipment as described in section 8. Wash thoroughly after handling. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Remove contaminated clothing and wash before reuse. Empty containers contain product residue (liquid and vapor) and can be dangerous. Keep container tightly closed and away from heat, spark, and flame. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks, or open flames. Use with adequate ventilation. Avoid breathing vapor or mist.
Storage: Keep in a flammables area away in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or using the material should be equipped with eyewash station and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.
Personal Protection: Wear protective chemical goggles or other appropriate eye protection. Use butyl rubber gloves and protective clothing to prevent skin exposure. A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever possible. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.
Exposure Limits: None established.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State and Appearance: Clear, colorless liquid.
Odor: Gasoline-like
Molecular Formula: $CH_3(CH_2)_8CH_3$
Molecular Weight: 142.29
Auto-ignition Temperature: 210° C (410° F)
Flash Point: 46° C (115° F)
Flammable Limits: Lower Limit – 0.8 vol %, Upper Limit – 5.4 vol %
pH: Not available.
Boiling Point: 174° C (345° F) @ 760 mm Hg
Freezing/Melting Point: -30.5° C (-22° F)
Decomposition Temperature: Not available
Specific Gravity: 0.73 g/cm^3
Vapor Density (Air=1): 4.9
Vapor Pressure: 1.4 mm Hg @ 25° C.
Evaporation Rate (Butyl acetate = 1): Not available
Viscosity: Not available
Solubility: Insoluble in water

10. STABILITY AND REACTIVITY

Stability: Stable under normal temperature and pressure.
Conditions to Avoid: Ignition sources, excess heat, confined spaces.
Incompatibility with Various Substances: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, skin absorption, skin contact
Acute Exposure Hazards:

INHALATION HAZARD: Moderately irritating to the respiratory tract, especially in high concentrations. Coughing, mild inflammation and possible dizziness or other narcotic effects can be expected.

INGESTION HAZARD: Mildly irritating to the gastro-intestinal tract, causing abdominal spasms, nausea, vomiting (aspiration hazard!) and diarrhea.

SKIN CONTACT HAZARD: Mild irritant and may cause inflammation and skin cracking due to defatting action.

EYE CONTACT HAZARD: Mild irritant, especially if splashed into the eye. Inflammation, tearing, pain can result.

Chronic Exposure Hazards: Continued or repeated skin contact may cause dermatitis.
Animal Toxicity:
Inhalation, mouse: LC50 = 72,300 mg/m^3/4H;
Carcinogenicity: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65
Epidemiology: Investigated as a tumorigen.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Mutagenicity: No information available.
Neurotoxicity: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity: No information found.
Environmental Fate: When released into the soil, this material may biodegrade to a moderate extent. When released into the soil, this material is not expected to leach into groundwater. When released into the soil, this material is expected to quickly evaporate. When released into water, this material may biodegrade to a moderate extent. When released to water, this material is expected to quickly evaporate. This material has an estimated bioconcentration factor (BCF) of greater than 100. This material has a log octanol-water partition coefficient of greater than 3.0. This material may bioaccumulate to some extent. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is not expected to be degraded by photolysis. When released into the air, this material is expected to have a half-life between 1 and 10 days.

13. DISPOSAL CONSIDERATIONS

Material that cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing use or contamination of this product may change the waste management options. Waste generators must decide if discarded material is a hazardous waste. State and local disposal regulations may differ from federal disposal definitions found in 40 CFR 261.3. Dispose of container and unused contents in accordance with federal, state and local requirements. This material is a “U” listed waste (U031 – ignitable waste).

14. TRANSPORT INFORMATION

US DOT, ITA, IMO
Proper Shipping Name: n-Decane
Hazard Class: 3
UN Number: UN2247
Packing Group: III

Canada TDG
Additional Information: Flashpoint 46 C

15. REGULATORY INFORMATION

US Federal Regulations:
TSCA: CAS# 124-18-5 is listed on the TSCA Inventory.

Health and Safety Reporting List: Not listed.
Chemical Test Rules: CAS# 124-18-5: Not listed.
Section 12b: Not listed.
TSCA Significant New Use Rule: Does not have an SNUR under TSCA.
CERCLA Hazardous Substances: Does not have a final RQ
SARA Section 302: Does not have a TPQ
SARA Codes: CAS# 124-18-5 – acute, chronic, fire
Section 313: n-Decane (CAS# 124-18-5) is not subject to SARA Title III Section 313 and 40 CFR 373 reporting requirements.
Clean Air Act: CAS# 124-18-5 is not listed as a hazardous air pollutant (HAP). It is not a Class 1 Ozone Depleter. It is not a Class 2 Ozone Depleter.
Clean Water Act: CAS# 124-18-5 is not listed as a Hazardous Substance. It is not a Priority Pollutant. It is not a Toxic Pollutant.
OSHA: Not considered highly hazardous by OSHA.

US State Regulations:

CAS# 124-18-5 is on the following state right-to-know lists: Pennsylvania, and New Jersey.
California Prop 65: California No Significant Risk Level: Not listed

Canada:

DSL/NDSL: CAS# 124-18-5 is listed on Canada's DSL list.
WHMIS: B3, D2B (proposed). This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and this MSDS contains all the information required by those regulations.

DSCL (EEC):

Hazard Symbols: Xn, F
Risk Phrases: R10 – Flammable; R37/38 – Irritating to respiratory system and skin; R41 – Risk of serious damage to eyes.
Safety Phrases: S7/9 – Keep container tightly closed and in a well-ventilated place; S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice; S37/39 – Wear suitable gloves and eye/face protection; S46 – If swallowed, seek medical advice immediately and show this container or label.
WGK (Water Danger/protection): CAS# 124-18-5: 3

16. OTHER INFORMATION

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The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. 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 and the protection of the environment.

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