

SAFETY DATA SHEET

Preparation Date: 06/11/2015

Revision Date: 06/11/2015

Revision Number: G1

Product identifier

Product code: D2098
Product Name: N-DECANE

Other means of identification

Synonyms: Decane
Decyl hydride
CAS #: 124-18-5
RTECS #: HD6550000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: In organic synthesis. Solvent. Standardized hydrocarbon; jet-fuel research; standardization of aircraft engine carburetors; calibration of jet engine nozzles; component of engine fuel.
Uses advised against: No information available

Supplier: Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number: Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Aspiration toxicity	Category 1
Flammable liquids	Category 3

Label elements

Warning

Hazard statements

May be fatal if swallowed and enters airways
Flammable liquid and vapor



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

May be harmful in contact with skin

Precautionary Statements - Prevention

Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/./? /equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Wear protective gloves/protective clothing/eye protection/face protection

In case of fire: Use CO₂, dry chemical, or foam to extinguish.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret
n-Decane 124-18-5	124-18-5	100	*

4. FIRST AID MEASURES

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First aid measures

General Advice:

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126).

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

Eye Contact:

Flush eye with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms

May cause eye irritation. May cause skin irritation. Irritating to respiratory system. Coughing and wheezing. Dyspnea (Shortness of breath and difficulty breathing). Central nervous system effects. Headache. Dizziness. Fainting. Causes digestive (gastrointestinal) tract irritation. Abdominal pain. Nausea. Vomiting. May cause diarrhea. Aspiration hazard if swallowed - can enter the lungs and cause damage. Aspiration into the lungs may cause pulmonary edema. May cause fattening, drying, cracking, inflammation of the skin. May cause dermatitis.

Indication of any immediate medical attention and special treatment needed

Notes to Physician:

Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:

Dry chemical. Carbon dioxide (CO₂). Water spray. Foam.

Unsuitable Extinguishing Media:

Do not use a solid (straight) water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Hazardous Combustion Products:

Carbon oxides

Specific hazards:

Flammable
Will be easily ignited by heat, sparks or flames
Fire may produce irritating, corrosive and/or toxic gases
Vapor may travel considerable distance to source of ignition and flash back
Most vapors are heavier than air. Vapors may spread along ground and collect in low or confined areas (sewers, basements, tanks)

Special Protective Actions for Firefighters

Specific Methods:

For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. All equipment used when handling the product must be grounded. Use personal protective equipment. Evacuate personnel to safe areas. Avoid contact with skin, eyes and clothing. Remove all sources of ignition. Pay attention to flashback. Use spark-proof tools and explosion-proof equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container. In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. Keep away from incompatible materials. All equipment used when handling the product must be grounded.

Safe Handling Advice:

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not ingest. Do not smoke. Keep away from heat and sources of ignition. Use only in well-ventilated areas. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Store away from incompatible materials. Store in a segregated and approved area.

Incompatible Materials:

Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
n-Decane 124-18-5	None	None	None	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
n-Decane 124-18-5	None	None	None	None

Australia and Mexico

Components	Australia	Mexico
n-Decane 124-18-5	None	None

Appropriate engineering controls

Engineering measures to reduce exposure: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Goggles.

Skin and body protection: Long sleeved clothing. Chemical resistant apron. Gloves.

Respiratory protection: Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid	Appearance: No information available	Color: Colorless.
Odor: Slight waxy.	Taste No information available	Molecular/Formula weight: 142.28
Formula: C10H22	Flammability: Flammable	Flash point (°C): 46°C
Flashpoint (°C/°F): 46°C/ 114.8°F	Flash Point Tested according to: Closed cup	Lower Explosion Limit (%): 0.8%
Upper Explosion Limit (%): 5.4%	Autoignition Temperature (°C/°F): 210°C/ 410°F	pH: No information available
Melting point/range(°C/°F): -27.9°C/ -18.2°F	Boiling point/range(°C/°F): 174.1°C/ 345.4°F	Decomposition temperature(°C/°F): No information available
Bulk density: No information available	Specific gravity: 0.73	Vapor pressure @ 20°C (kPa): No information available
Density (g/cm3): 0.73	Evaporation rate: No information available	Vapor density: 4.9
VOC content (g/L): No information available	Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): 5.01
Viscosity: 1.16 mm ² /2	Miscibility: No information available	Solubility: Partially soluble in methanol Partially soluble in diethyl ether Insoluble in cold water Solubility in Ether: > 10% Solubility in Ethanol: > 10%

10. STABILITY AND REACTIVITY

Reactivity

Reactive with oxidizing agents

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials.

Incompatible Materials: Oxidizing agents.

Hazardous decomposition products: Carbon oxides.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Skin. Eyes. Inhalation. Ingestion.

Acute Toxicity

Component Information

n-Decane - 124-18-5

LD50/oral/rat = > 5000 mg/kg Oral LD50 Rat

LD50/oral/mouse = No information available

LD50/dermal/rat = > 2000 mg/kg

LD50/dermal/rabbit = No information available

LC50/inhalation/rat = 1369 ppm Inhalation LC50 Rat 8 h

LC50/inhalation/mouse = 72300 mg/m³ Inhalation LC50 Mouse

Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = > 5000mg/kg

LD50/oral/mouse =

Value - Acute Tox Oral = No information available

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat

VALUE -Acute Tox Dermal = > 2000mg/kg

LC50/inhalation/rat

VALUE-Vapor = 1369ppm
 VALUE-Gas = No information available
 VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
 VALUE-Vapor = 72300 mg/m³
 VALUE - Gas = No information available
 VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation. It can be absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation Causes respiratory tract irritation with coughing, wheezing, mild inflammation, cause shortness of breath (dyspnea) or suffocation and affect behavior/central nervous system and cause dizziness, headache, lightheadness, passing out, and other narcotic or CNS depression effects.
Ingestion Causes gastrointestinal tract irritation with abdominal spasms, nausea, vomiting, and diarrhea. Aspiration hazard if swallowed Aspiration may lead to pulmonary edema.
Aspiration hazard May be fatal if swallowed and enters airways.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Prolonged or repeated skin contact may cause dermatitis and defatting, dryness, and cracking of the skin.
Sensitization: No information available
Mutagenic Effects: No information available
Carcinogenic effects: Not considered carcinogenic

Components	ACGIH - Carcinogens	IARC	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
n-Decane	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

Reproductive toxicity No data is available
Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available
STOT - repeated exposure No information available
Target Organs: Central nervous system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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Ecotoxicity effects: Aquatic environment.

n-Decane - 124-18-5

Water Flea Data: 0.029 mg/L EC50 Daphnia magna 48 h

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
n-Decane	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN2247
Proper Shipping Name: n-Decane
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: III
ERG No: 128
Marine Pollutant: No data available
DOT RQ (lbs): No information available

Symbol(s):

TDG (Canada)

UN-No: UN2247
Proper Shipping Name: n-Decane
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

ADR

UN-No: UN2247
Proper Shipping Name: n-Decane
Hazard Class: 3
Packing Group: III
Subsidiary Risk: No information available

14. TRANSPORT INFORMATION

Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG

UN-No: UN2247
Proper Shipping Name: n-Decane
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: III
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
EMS: F-E
MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: UN2247
Proper Shipping Name: n-Decane
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: III
Classification Code: No information available
Description: No information available

ICAO

UN-No: UN2247
Proper Shipping Name: n-Decane
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

IATA

UN-No: UN2247
Proper Shipping Name: n-Decane
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 3L
Description: No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>n-Decane</i>	Present	Present KE-09400	Present	Present (2)-10	Present	Present	Present 204-686-4

U.S. Regulations

n-Decane

New Jersey RTK Hazardous Substance List: 0600
Pennsylvania RTK: Present

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Product code: D2098

Product name: N-DECANE

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Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
n-Decane	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
n-Decane	None	None	None	None	None

U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
n-Decane	Not Applicable	Not Applicable

Canada**WHMIS hazard class:**

B3 Combustible liquid
D2B Toxic materials

n-Decane

B3 D2B

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

Components	Canada (DSL)	Canada (NDSL)
n-Decane	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
n-Decane	Not listed	Not listed

EU Classification**R-phrases)**

R10 - Flammable.

S -phrase(s)

S 9 - Keep container in a well-ventilated place.

S16 - Keep away from sources of ignition - No smoking.

S23 - Do not breathe gas/fumes/vapor/spray.

S24 - Avoid contact with skin.

S28 - After contact with skin, wash immediately with plenty of water

S33 - Take precautionary measures against static discharges.

S37 - Wear suitable gloves.

Components	Classification	Concentration Limits:	Safety Phrases
n-Decane		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Flammable

16. OTHER INFORMATION

16. OTHER INFORMATION

Preparation Date: 06/11/2015
Revision Date: 06/11/2015
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet