



Safety Data Sheet

n-Dodecane-d₂₆

Section 1. Chemical product and company identifications

Product code: D-0882
Chemical formula: C₁₂D₂₆
CAS: 16416-30-1
CAS (unlabelled): 112-40-3
Synonyms:

Supplier / Manufacturer:

C/D/N Isotopes Inc.
88 Leacock Street
Pointe-Claire (Québec) H9R 1H1
Phone: 514-697-6254
Toll-Free (Canada & USA): 1-800-565-4696
Fax: 514-697-6148
Website: www.cdnisotopes.com

In case of emergency:

TOXYSKAN HOTLINE: 1-855-780-0599

Section 2. Hazards identifications

Physical state: Liquid
Warning: Combustible liquid. May be fatal if swallowed and enters airways.
Routes of entry: Inhalation, skin and eyes

GHS (Globally Harmonized System of Classification and Labelling of Chemicals):

GHS Classification: - Flammable liquid (category 4)
- Aspiration hazard (Category 1)

GHS Label elements: - Pictograms: 
- Signal word: Warning

Hazards statement: - H227 Combustible liquid.
- H304 May be fatal if swallowed and enters airways.

Precautionary statement: - P210 Keep away from heat/ hot surfaces/ sparks/ open flames/ ignition sources. No smoking.
- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

Section 3. Composition and information on ingredients

| <u>Name</u> | <u>CAS</u> | <u>Concentration %</u> |
|------------------------------------|------------|------------------------|
| <i>n</i> -Dodecane-d ₂₆ | 16416-30-1 | > 98 |

Section 4. First aid measures

Eye contact: Flush eyes with water as a precaution.
Skin contact: Wash off with soap and plenty of water. Consult a physician.
Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Section 5. Firefighting measures

Flammability of the product: Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

Lower explosion limit: 0.6 Vol%

Upper explosion limit: No data available

Auto-ignition temperature: 205°C (401°F)

Flash point: 71 °C (160 °F) - closed cup

Products of combustion: Hazardous decomposition products formed under fire conditions: Carbon oxides.

Firefighting media and instructions: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Section 6. Accidental release measures

Personal precautions: Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for cleaning up: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

Section 7. Handling and storage

Handling: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.

Storage: Store at room temperature. Adequate ventilation. Protect from heat and ignition sources.

Section 8. Exposure Controls, Personal Protections

Engineering controls: Use mechanical exhaust or laboratory fumehood to avoid exposure.

Eyes: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Respiratory: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US).

Hands: Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Skin/body: Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Section 9. Physical and chemical properties (unlabelled)

Molecular weight: 170.34 g/mol

Physical status: Liquid

Color: Colourless

Odour: Petroleum distillates

Density: 0.749 g/mL at 25 °C (77 °F)

Melting point: -9.6 °C (14.7 °F)

Boiling point: 215 - 217 °C (419 - 423 °F)

Vapour pressure: 1.3 hPa (1 mmHg) at 48°C (118 °F)

Vapour density: 5.88 (Air = 1)

Partition coefficient (octanol/water): log Pow: 6.1

Water solubility: Insoluble

Section 10. Stability and reactivity

Stability and reactivity: Stable under recommended storage conditions.

Incompatibility: Strong oxidizing agents.

Products of combustion: Hazardous decomposition products formed under fire conditions: Carbon oxides.

Reactivity conditions: Exposure to moisture may affect product quality. Heat, flames and sparks.

Section 11. Toxicological information (unlabelled)

Toxicological data: Dodecane

Information on ingredients:

| <u>Name</u> | <u>CAS</u> | <u>LD₅₀</u> | <u>LC₅₀</u> |
|-------------|------------|--|------------------------------------|
| Dodecane | 112-40-3 | Oral - Rat - > 2,000 mg/kg Dermal-Rabbit- > 2,000 mg/kg | Inhalation - Rat - 8 h - > 142 ppm |

Potential acute effects

- **Eyes:** May cause eye irritation.
- **Skin:** May be harmful if absorbed through skin. May cause skin irritation.
- **Inhalation:** Harmful if inhaled. May cause respiratory tract irritation.
- **Ingestion:** May be harmful if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage.

Potential chronic effects

- **Carcinogenic effects:** IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- **Mutagenic effects:** No data available.
- **Teratogenic effects:** No data available.
- **Medical conditions aggravated by overexposure:** No data available.

Section 12. Ecological information

Ecological data:

| <u>Name</u> | <u>Results</u> | <u>Species</u> | <u>Period</u> |
|-------------|---------------------------------------|---|---------------|
| Dodecane | > 1,000 mg/l LC50 57,100 mg/l EC50 | Oncorhynchus mykiss Skeletonema costatum | 96 h 72 h |

Effects on environment: No data available.

Mobility: No data available.

Environmental precautions: No data available.

Persistence and degradability: Aerobic. Result: 83 % - Readily biodegradable. Method: OECD Test Guideline 301F.

Bioaccumulative potential: Leuciscus idus melanotus - 3 d. Bioconcentration factor (BCF): 52.

Section 13. Disposal considerations

Waste disposal: This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Section 14. Transportation information

Classification DOT/IMDG/IATA label:

Shipping name: Not dangerous goods

UN number: None

Class: None

Packaging group: None

Additional information: None

Section 15. Regulatory information

UNITED STATES: NFPA classification



Health: 1
Flammable: 2
Reactivity: 0
Specials conditions: None

Legend: 4: Severe, 3: High, 2: Moderate, 1: Slightly, 0: Not hazardous

U.S. Federal regulations:

TSCA 8(b) inventory: Dodecane

SARA 302/304/311/312 extremely hazardous substances: Not Listed

SARA 302/304 emergency planning and notification: Not Listed

SARA 302/304/311/312 hazardous chemicals: Not Listed

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard: Listed

CWA (Clean Water Act) 307: Not Listed

CWA (Clean Water Act) 311: Not Listed

CAA (Clean Air Act) 112 accidental release prevention: Not Listed

CAA (Clean Air Act) 112 regulated flammable substances: Not Listed

CAA (Clean Air Act) 112 regulated toxic substances: Not Listed

State regulations:

DEA List I Chemicals (Precursor Chemicals): Not Listed

DEA List II Chemicals (Essential Chemicals): Not Listed

Substances in Massachusetts: Not Listed

Dangerous substances in New Jersey: Not Listed

New York – Dangerous substances with acute effects: Not Listed

Dangerous substances in Pennsylvania – right to know: Not Listed

WHMIS (Canada):



B3 – Combustible liquid

Section 16. Additional information

References:

- ANSI Z400.1, MSDS Standard, 2001.
- Manufacturer's Material Safety Data Sheet.
- 29CFR Part1910.1200 OSHA MSDS Requirements.
- 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. -Canada
- Gazette Part II, Vol. 122, No. 2 Registration SOR/88-64 31 December, 1987 Hazardous Products Act "Ingredient Disclosure List".
- Federal act on the controlled products
- Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2002.
- Toxicological repertory, HSC.
- Material safety data sheet from the components.

Date of issue: January 18th, 2017

Version: 1

Elaborated by: Toxyscan Inc., 1-866-780-0599

Notice to reader: To the best of our knowledge, the information contained herein is accurate. However, C/D/N Isotopes Inc., Toxyscan Inc., or any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.