



MATERIAL SAFETY DATA SHEET

according to the Hazard Communication Standard (29 CFR 1910.1200)

Date of issue: 12/20/2012

Version 1.0

SECTION 1. Identification

Product identifier

Product number 109609
Product name n-Tridecane reference substance for gas chromatography

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

Identified uses Reagent for analysis

Details of the supplier of the safety data sheet

Company EMD Millipore Corporation | 290 Concord Road, Billerica, MA 01821, United States of America | SDS Phone Support: +1-978-715-1335 | General Inquiries: +1-978-751-4321 | Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)

e-mail: mm_sds@merckgroup.com

Emergency telephone 800-424-9300 CHEMTREC (USA)
+1-703-527-3887 CHEMTREC (International)
24 Hours/day; 7 Days/week

SECTION 2. Hazards identification

GHS Classification

Aspiration hazard, Category 1, H304

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

Hazard pictograms



Signal Word

Danger

Hazard Statements

H304 May be fatal if swallowed and enters airways.

Precautionary Statements

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

P331 Do NOT induce vomiting.

MATERIAL SAFETY DATA SHEET

according to the Hazard Communication Standard (29 CFR 1910.1200)

Product number

109609

Version 1.0

Product name

n-Tridecane reference substance for gas chromatography

OSHA Hazards

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Formula	$\text{CH}_3(\text{CH}_2)_{11}\text{CH}_3$	$\text{C}_{13}\text{H}_{28}$ (Hill)
CAS-No.	629-50-5	
Molar mass	184.36 g/mol	

Hazardous ingredients

Chemical Name (Concentration)

CAS-No.

n-tridecane (>= 90 % - <= 100 %)

629-50-5

SECTION 4. First aid measures

Description of first-aid measures

Inhalation

After inhalation: fresh air.

Skin contact

After skin contact: wash off with plenty of water. Remove contaminated clothing.

Eye contact

After eye contact: rinse out with plenty of water.

Ingestion

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

irritant effects, narcosis

Drying-out effect resulting in rough and chapped skin.

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂), Foam, Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

MATERIAL SAFETY DATA SHEET

according to the Hazard Communication Standard (29 CFR 1910.1200)

Product number

109609

Version 1.0

Product name

n-Tridecane reference substance for gas chromatography

Special hazards arising from the substance or mixture

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapors possible in the event of fire.

Advice for firefighters

Special protective equipment for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Do not breathe vapors, aerosols. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

Environmental precautions

Do not empty into drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent material (e.g. Chemisorb®). Dispose of properly. Clean up affected area.

SECTION 7. Handling and storage

Precautions for safe handling

Observe label precautions.

Conditions for safe storage, including any incompatibilities

Tightly closed.

Storage temperature: no restrictions.

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Contains no substances with occupational exposure limit values.

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

MATERIAL SAFETY DATA SHEET
according to the Hazard Communication Standard (29 CFR 1910.1200)

Product number 109609
Product name n-Tridecane reference substance for gas chromatography

Version 1.0

Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

Eye/face protection

Safety glasses

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Respiratory protection

required when vapors/aerosols are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

Physical state	liquid
Color	colorless
Odor	benzine-like
Odor Threshold	No information available.
pH	No information available.
Melting point	23 °F (-5 °C)
Boiling point/boiling range	455 °F (235 °C) at 1,013 hPa
Flash point	174 °F (79 °C) Method: c.c.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	0.6 %(V)
Upper explosion limit	6.5 %(V)
Vapor pressure	< 0.5 hPa at 68 °F (20 °C)
Relative vapor density	No information available.
Relative density	0.757 g/cm ³ at 68 °F (20 °C)

MATERIAL SAFETY DATA SHEET
according to the Hazard Communication Standard (29 CFR 1910.1200)

Product number 109609 Version 1.0
Product name n-Tridecane reference substance for gas chromatography

Water solubility at 77 °F (25 °C)
practically insoluble

Partition coefficient: n-
octanol/water log Pow: 6.73
(calculated)
(Lit.) Potential bioaccumulation

Autoignition temperature No information available.

Decomposition temperature No information available.

Viscosity, dynamic No information available.

Explosive properties Not classified as explosive.

Ignition temperature > 399 °F (> 204 °C)

SECTION 10. Stability and reactivity

Reactivity

Forms explosive mixtures with air on intense heating.

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

Violent reactions possible with:
Strong oxidizing agents

Conditions to avoid

Strong heating.
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

Incompatible materials

no information available

Hazardous decomposition products

no information available

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure
Eye contact, Skin contact

Acute oral toxicity
LD50 rat: > 5,000 mg/kg (IUCLID)

MATERIAL SAFETY DATA SHEET
according to the Hazard Communication Standard (29 CFR 1910.1200)

Product number 109609
Product name n-Tridecane reference substance for gas chromatography

Version 1.0

Acute inhalation toxicity

Symptoms: Irritation symptoms in the respiratory tract.

Acute dermal toxicity

LD50 rat: > 2,000 mg/kg
OECD Test Guideline 402

Skin irritation

rabbit

Result: slight irritation
OECD Test Guideline 404

Drying-out effect resulting in rough and chapped skin.

Eye irritation

rabbit

Result: No eye irritation
OECD Test Guideline 405

Sensitization

Sensitization test (Magnusson and Kligman): guinea pig

Result: negative

Method: OECD Test Guideline 406

Genotoxicity in vitro

Ames test

Result: negative

Method: OECD Test Guideline 471

Specific target organ systemic toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Aspiration hazard, Aspiration may cause pulmonary edema and pneumonitis.

Carcinogenicity

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential

MATERIAL SAFETY DATA SHEET

according to the Hazard Communication Standard (29 CFR 1910.1200)

Product number

109609

Version 1.0

Product name

n-Tridecane reference substance for gas chromatography

carcinogen by ACGIH.

Further information

After absorption of large quantities:
narcosis

It generally applies for aliphatic hydrocarbons with 6 - 18 carbon atoms that they may cause pneumonia, in some cases also pulmonary oedema, upon direct inhalation, i.e. in conditions that can occur only in very special circumstances (nebulizations, spraying, inhalation of aerosols and similar). After absorption of very large quantities: narcosis.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Ecotoxicity

Toxicity to fish

LC50 *Oncorhynchus mykiss* (rainbow trout): > 1,000 mg/l; 96 h

OECD Test Guideline 203

Persistence and degradability

Biodegradability

83 %; 28 Days

OECD Test Guideline 301F

Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: 6.73

(calculated)

(Lit.) Potential bioaccumulation

Mobility in soil

No information available.

Other adverse effects

Henry constant

291744 Pa*m³/mol

Method: (calculated)

(Lit.) Distribution preferentially in air.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

Not classified as dangerous in the meaning of transport regulations.

Air transport (IATA)

MATERIAL SAFETY DATA SHEET

according to the Hazard Communication Standard (29 CFR 1910.1200)

Product number

109609

Version 1.0

Product name

n-Tridecane reference substance for gas chromatography

Not classified as dangerous in the meaning of transport regulations.

Sea transport (IMDG)

Not classified as dangerous in the meaning of transport regulations.

SECTION 15. Regulatory information

United States of America

OSHA Hazards

Combustible Liquid

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

SARA 311/312 Hazards

Fire Hazard

SARA 313

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

US State Regulations

Massachusetts Right To Know

Remarks

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Ingredients

n-tridecane

New Jersey Right To Know

Ingredients

n-tridecane

California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

MATERIAL SAFETY DATA SHEET

according to the Hazard Communication Standard (29 CFR 1910.1200)

Product number	109609	Version 1.0
Product name	n-Tridecane reference substance for gas chromatography	

TSCA: On TSCA Inventory

DSL: This product contains one or several components listed in the Canadian NDSL.

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Full text of H-Statements referred to under sections 2 and 3.

H304 May be fatal if swallowed and enters airways.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Date of issue:12/20/2012

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

All rights reserved. Millipore and the "M" Mark are registered trademarks of Merck KGaA, Darmstadt, Germany.