SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 03/29/2016 Version 1.2

SECTION 1.Identification

Product identifier

Product number	HX0295
Product name	*n*-Hexane 95% For HPLC, Spectrophotometry and Gas Chromatography OmniSolv®
CAS-No.	110-54-3

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 | General Inquiries: +1-978-715-4321 | Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)

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

Flammable liquid, Category 2, H225
Skin irritation, Category 2, H315
Reproductive toxicity, Category 2, H361
Specific target organ systemic toxicity - single exposure, Category 3, Central nervous system, H336
Specific target organ systemic toxicity - repeated exposure, Category 2, Inhalation, Central nervous system, H373
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
H225 Highly flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.

Precautionary Statements
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P321 Specific treatment (see supplemental first aid instructions on this label).
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards
None known.

SECTION 3. Composition/information on ingredients

Formula	$CH_3(CH_2)_4CH_3$	C_6H_{14} (Hill)
Molar mass	86.18 g/mol	

Hazardous ingredients
Chemical Name (Concentration)
CAS-No.

n-Hexane (>= 90 % - <= 100 %)
110-54-3

Exact percentages are being withheld as a trade secret.

SECTION 4. First aid measures

Description of first-aid measures

Inhalation
After inhalation: fresh air. Call in physician.

Skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

Eye contact
After eye contact: rinse out with plenty of water. Call in ophthalmologist.

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

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

irritant effects, somnolence, Drowsiness
narcosis, Nausea, Tiredness, CNS disorders, paralysis symptoms
Risk of corneal clouding.
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.

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
Foam, Carbon dioxide (CO2), Dry powder

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

Special hazards arising from the substance or mixture

Combustible.
Pay attention to flashback.
Vapors are heavier than air and may spread along floors.
Development of hazardous combustion gases or vapors possible in the event of fire.
Forms explosive mixtures with air at ambient temperatures.

Advice for firefighters

Special protective equipment for fire-fighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information
Remove container from danger zone and cool with water. 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: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

Environmental precautions
Do not let product enter drains. Risk of explosion.

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

SECTION 7. Handling and storage

Precautions for safe handling
Work under hood. Do not inhale substance/mixture. Avoid generation of vapors/aerosols.

Observe label precautions.

Advice on protection against fire and explosion
Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Store at room temperature.

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Ingredients

Basis	Value	Threshold limits	Remarks
n-Hexane 110-54-3			
ACGIH	Time Weighted Average (TWA): Skin designation:	50 ppm	 Can be absorbed through the skin.
NIOSH/GUIDE	Recommended exposure limit (REL):	50 ppm 180 mg/m³	
OSHA_TRANS	PEL:	500 ppm 1,800 mg/m³	
Z1A	Time Weighted Average (TWA):	50 ppm 180 mg/m³	

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.

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.

Other protective equipment:

Flame retardant antistatic protective clothing.

Respiratory protection

required when vapors/aerosols are generated.

SECTION 9. Physical and chemical properties

Physical state	liquid

Color	colorless
Odor	benzine-like
Odor Threshold	No information available.
pH	Not applicable
Melting point	-94.3 °C
Boiling point/boiling range	69 °C (69 °C) at 1,013 hPa
Flash point	-22 °C (-22 °C) Method: c.c.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	1.0 %(V)
Upper explosion limit	8.1 %(V)
Vapor pressure	160 hPa at 20 °C (20 °C)
Relative vapor density	2.79
Density	0.66 g/cm3 at 20 °C (20 °C)
Relative density	No information available.
Water solubility	0.0095 g/l at 20 °C (20 °C)
Partition coefficient: n-octanol/water	log Pow: 4.11 (calculated) (Lit.) Potential bioaccumulation
Autoignition temperature	No information available.
Decomposition temperature	Distillable in an undecomposed state at normal pressure.
Viscosity, dynamic	0.326 mPa.s at 20 °C (20 °C)
Explosive properties	Not classified as explosive.

Oxidizing properties	none
Ignition temperature	240 °C (240 °C) Method: DIN 51794
Viscosity, kinematic	0.50 mm2/s at 20 °C (20 °C)

SECTION 10. Stability and reactivity

Reactivity
Vapors may form explosive mixture with air.

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

Possibility of hazardous reactions
Risk of explosion with:

Strong oxidizing agents, nitrogen oxides

Violent reactions possible with:

halogens

Risk of ignition or formation of inflammable gases or vapors with:

SODIUM PEROXIDE

Conditions to avoid
Warming.

Incompatible materials
rubber, various plastics

Hazardous decomposition products
no information available

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure
Inhalation, Eye contact, Skin contact

Target Organs
Eyes
Skin
Respiratory system
Central nervous system
Peripheral nervous system

Acute oral toxicity
LD50 Rat: 16,000 mg/kg
OECD Test Guideline 401

Symptoms: Nausea

Acute inhalation toxicity
LC50 Rat: 172 mg/l; 4 h ; vapor
(RTECS)

Symptoms: Irritation symptoms in the respiratory tract.

Acute dermal toxicity
LD50 Rabbit: > 2,000 mg/kg
(ECHA)

absorption

Skin irritation

Causes skin irritation.

Eye irritation
Risk of corneal clouding.

Genotoxicity in vivo
Micronucleus test
Result: negative
(National Toxicology Program)

Genotoxicity in vitro
In vitro mammalian cell gene mutation test
MOUSE LYMPHOMA TEST
Result: Positive results were obtained in some in vitro tests.
Method: OECD Test Guideline 476

Ames test
Salmonella typhimurium
Result: negative
Method: OECD Test Guideline 471

CMR effects
Teratogenicity:
Suspected of damaging the unborn child.
Reproductive toxicity:
Suspected of damaging fertility.

Specific target organ systemic toxicity - single exposure
Target Organs: Central nervous system
May cause drowsiness or dizziness.

Specific target organ systemic toxicity - repeated exposure
Target Organs: Nervous system
May cause damage to organs through prolonged or 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 carcinogen by ACGIH.

Further information
After absorption:
Tiredness, narcosis
After long-term exposure to the chemical:
CNS disorders, paralysis symptoms
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.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Ecotoxicity

Toxicity to fish
LC50 Pimephales promelas (fathead minnow): 2.5 mg/l; 96 h (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates
EC50 Daphnia magna (Water flea): 2.1 mg/l; 48 h (Lit.)

Persistence and degradability
No information available.

Bioaccumulative potential
Partition coefficient: n-octanol/water
log Pow: 4.11
(calculated)
(Lit.) Potential bioaccumulation

Mobility in soil
No information available.

Other adverse effects

Henry constant
183000 Pa*m³/mol
(HSDB) 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)

UN number	UN 1208
Proper shipping name	HEXANES
Class	3
Packing group	II
Environmentally hazardous	--

Air transport (IATA)

UN number	UN 1208
Proper shipping name	HEXANES
Class	3
Packing group	II
Environmentally hazardous	--
Special precautions for user	no

Sea transport (IMDG)

UN number	UN 1208
Proper shipping name	HEXANES
Class	3
Packing group	II
Environmentally hazardous	--
Special precautions for user	yes
EmS	F-E S-D

SECTION 15. Regulatory information

United States of America

SARA 313

The following components are subject to reporting levels established by SARA Title III, Section 313:

Ingredients

n-Hexane	110-54-3	*100 %*

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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.

DEA List I

Not listed

DEA List II

Not listed

US State Regulations

Massachusetts Right To Know

Ingredients

n-Hexane

Pennsylvania Right To Know

Ingredients

n-Hexane

New Jersey Right To Know

Ingredients

n-Hexane

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

TSCA:	All components of the product are listed in the TSCA-inventory.
DSL:	All components of this product are on the Canadian DSL

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Labeling

Hazard pictograms



Signal Word

Danger

Hazard Statements

H225 Highly flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs (Nervous system, Central nervous system) through prolonged or repeated exposure if inhaled.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P240 Ground/bond container and receiving equipment.
P273 Avoid release to the environment.
Response
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P314 Get medical advice/ attention if you feel unwell.
Storage
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

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

H225	Highly flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled.

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.

Revision Date03/29/2016

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.

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