

ACR17666

Hexanes

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

产品说明: 己烷
Product Description: Hexanes

Cat No. : 176660000; 176660010; 176660025; 176660051; 176660250
Synonyms Hex
CAS No 92112-69-1
Molecular Formula C6 H14

Supplier

UK entity/business name
Fisher Scientific UK
Bishop Meadow Road,
Loughborough, Leicestershire LE11 5RG, United Kingdom
General info; Tel: +44 (0)1509 231166

EU entity/business name
Acros Organics BVBA
Janssen Pharmaceuticaan 3a, 2440 Geel, Belgium
General Info; Tel: +32-14-57 52 11 (info@acros.com)
Technical Support; Tel +32-14-56 56 00 (acros.techsupport@thermofisher.com)

Emergency Telephone Number For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

E-mail address begel.sdsdesk@thermofisher.com

Recommended Use Laboratory chemicals.
Uses advised against No Information available

SECTION 2. HAZARD IDENTIFICATION

Physical State
Liquid

Appearance
Colorless

Odor
No information available

Emergency Overview

Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness and dizziness. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

Classification of the substance or mixture

Flammable liquids.	Category 2
Aspiration Toxicity	Category 1
Skin Corrosion/Irritation	Category 2
Reproductive Toxicity	Category 2
Specific target organ toxicity - (single exposure)	Category 3
Specific target organ toxicity - (repeated exposure)	Category 2
Chronic aquatic toxicity	Category 2

Label Elements

Hexanes



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
 H373 - May cause damage to organs through prolonged or repeated exposure
 H411 - Toxic to aquatic life with long lasting effects
 H361 - Suspected of damaging fertility or the unborn child

Precautionary Statements**Prevention**

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
 P240 - Ground/bond container and receiving equipment
 P241 - Use explosion-proof electrical/ ventilating/ lighting equipment
 P242 - Use non-sparking tools
 P243 - Take precautionary measures against static discharge
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P271 - Use only outdoors or in a well-ventilated area
 P280 - Wear eye protection/ face protection

Response

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 person to fresh air and keep comfortable for breathing
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P308 + P313 - IF exposed or concerned: Get medical advice/attention
 P331 - Do NOT induce vomiting
 P332 + P313 - If skin irritation occurs: Get medical advice/attention
 P363 - Wash contaminated clothing before reuse
 P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

Storage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

Physical and Chemical Hazards

Highly flammable. Vapors may cause flash fire or explosion.

Health Hazards

Aspiration hazard if swallowed - can enter lungs and cause damage. Causes skin irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

Environmental hazards

Toxic to aquatic life with long lasting effects. Will likely be mobile in the environment due to its volatility. The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hexanes

Component	CAS No	Weight %
Hexane, branched and linear	92112-69-1	100

Note REACH registration as UVCB (Distillates (petroleum), C6-rich), EC 925-292-5, Hydrocarbons, C6, n-alkanes, isoalkanes, cyclics, n-hexane rich

SECTION 4. FIRST AID MEASURES**General Advice**

If symptoms persist, call a physician.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur. Risk of serious damage to the lungs (by aspiration).

Ingestion

Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward.

Most important symptoms and effects

Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Causes central nervous system depression

Self-Protection of the First Aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Notes to Physician

Treat symptomatically. Symptoms may be delayed.

SECTION 5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

Extinguishing media which must not be used for safety reasons

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

Specific Hazards Arising from the Chemical

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

Protective Equipment and Precautions for Firefighters

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

SECTION 6. ACCIDENTAL RELEASE MEASURES**Personal Precautions**

Use personal protective equipment as required. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

Hexanes

Environmental Precautions

Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment.

Refer to protective measures listed in Sections 8 and 13.

SECTION 7. HANDLING AND STORAGE**Handling**

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Flammables area. Keep away from heat, sparks and flame.

Specific Use(s)

Use in laboratories

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control Parameters**

Component	China	Taiwan	Hong Kong	The United Kingdom
Hexane, branched and linear	-	TWA: 500 ppm TWA: 1760 mg/m ³	-	-

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	European Union
Hexane, branched and linear		(Vacated) TWA: 500 ppm (Vacated) TWA: 1800 mg/m ³ (Vacated) STEL: 1000 ppm (Vacated) STEL: 3600 mg/m ³		

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS70 General methods for sampling airborne gases and vapours MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

Exposure Controls**Engineering Measures**

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment. Ensure adequate ventilation, especially in confined areas. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

Personal protective equipment**Eye Protection**

Wear safety glasses with side shields (or goggles) (European standard - EN 166)

Hand Protection

Protective gloves

Hexanes

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Nitrile rubber Viton (R)	See manufacturers recommendations	-	EN 374	(minimum requirement)

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.
(Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Skin and body protection	Long sleeved clothing
Respiratory Protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly
Large scale/emergency use	Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced Recommended Filter type: Organic gases and vapours filter Type A Brown conforming to EN14387
Small scale/Laboratory use	Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141 When RPE is used a face piece Fit Test should be conducted
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.
Environmental exposure controls	Prevent product from entering drains. Do not allow material to contaminate ground water system.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless
Physical State	Liquid
Odor	No information available
Odor Threshold	No data available
pH	No information available
Melting Point/Range	-95 °C / -139 °F
Softening Point	No data available
Boiling Point/Range	69 °C / 156.2 °F
Flash Point	-22 °C / -7.6 °F
Evaporation Rate	No data available
Flammability (solid,gas)	Not applicable
Explosion Limits	Lower 1.1 vol% Upper 7.5 vol%
Vapor Pressure	160 mbar @ 20°C
Vapor Density	No data available
Specific Gravity / Density	0.659
Bulk Density	Not applicable
Water Solubility	Immiscible
Solubility in other solvents	No information available
Partition Coefficient (n-octanol/water)	
Component	log Pow
Hexane, branched and linear	4.11
Autoignition Temperature	223 °C / 433.4 °F
Decomposition Temperature	No data available

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Viscosity	0.31 mPa s @ 20 °C	
Explosive Properties		Vapors may form explosive mixtures with air
Oxidizing Properties	No information available	
Molecular Formula	C6 H14	
Molecular Weight	86.18	

SECTION 10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Hazardous Reactions	None under normal processing.
Hazardous Polymerization	Hazardous polymerization does not occur.
Conditions to Avoid	Incompatible products. Excess heat. Exposure to light. Keep away from open flames, hot surfaces and sources of ignition.
Materials to avoid	Strong oxidizing agents.
Hazardous Decomposition Products	Carbon monoxide (CO). Carbon dioxide (CO ₂).

SECTION 11. TOXICOLOGICAL INFORMATION

Product Information

(a) acute toxicity;

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hexane, branched and linear	LD50 = 15000 mg/kg (Rat)	LD50 = 3350 mg/kg (Rabbit)	LC50 = 259354 mg/m ³ (Rat) 4h

(b) skin corrosion/irritation;	Category 2
(c) serious eye damage/irritation;	Based on available data, the classification criteria are not met
(d) respiratory or skin sensitization;	
Respiratory	Based on available data, the classification criteria are not met
Skin	Based on available data, the classification criteria are not met
(e) germ cell mutagenicity;	Based on available data, the classification criteria are not met
(f) carcinogenicity;	Based on available data, the classification criteria are not met There are no known carcinogenic chemicals in this product
(g) reproductive toxicity;	Category 2
Reproductive Effects	Possible risk of impaired fertility.
(h) STOT-single exposure;	Category 3
Results / Target organs	Central nervous system (CNS)
(i) STOT-repeated exposure;	Category 2
Target Organs	Heart, Central nervous system (CNS).

Hexanes

(j) aspiration hazard; Category 1

Symptoms / effects, both acute and delayed Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Causes central nervous system depression

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Based on available literature. Data from closely analogous substances.

Persistence and Degradability

Persistence

Persistence is unlikely, based on information available.

Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Bioaccumulative Potential

Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Hexane, branched and linear	4.11	No data available

Mobility in soil

The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. Will likely be mobile in the environment due to its volatility. Disperses rapidly in air.

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors.

Persistent Organic Pollutant

This product does not contain any known or suspected substance.

Ozone Depletion Potential

This product does not contain any known or suspected substance.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from Residues/Unused Products

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

Other Information

Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be landfilled or incinerated, when in compliance with local regulations. Do not let this chemical enter the environment. Do not empty into drains.

SECTION 14. TRANSPORT INFORMATION

Road and Rail Transport

UN-No UN1208
 Proper Shipping Name Hexanes (Mixture)
 Hazard Class 3
 Packing Group II

IMDG/IMO

UN-No UN1208
 Proper Shipping Name Hexanes (Mixture)

Hexanes

Hazard Class 3
Packing Group II

IATA

UN-No UN1208
Proper Shipping Name Hexanes (Mixture)
Hazard Class 3
Packing Group II

Special Precautions for User No special precautions required

SECTION 15. REGULATORY INFORMATION

International Inventories

X = listed, China (IECSC), Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDL), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), Korea (KECL).

Component	The Inventory of Hazardous Chemicals (2015 Edition)	List of dangerous goods GB 12268 - 2012	TCSI	IECSC	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	AICS	KECL
Hexane, branched and linear	-	X	X	-	295-570-2	-	-	-	X	X	X	-

Note REACH registration as UVCB (Distillates (petroleum), C6-rich), EC 925-292-5, Hydrocarbons, C6, n-alkanes, isoalkanes, cyclics, n-hexane rich

National Regulations

SECTION 16. OTHER INFORMATION

Creation Date 15-Jun-2009
Revision Date 22-Feb-2022
Revision Summary Not applicable.

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

Chemical incident response training.

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

Hexanes

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

Predicted No Effect Concentration (PNEC)

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/MDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC (volatile organic compound)

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet