



# Fisher Scientific

Part of Thermo Fisher Scientific

## Material Safety Data Sheet

Creation Date 29-Jul-2010

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Revision Number 1

### 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	Hexanes (Certified ACS)
<b>Cat No.</b>	H292-1; H292-4; H292-20; H292-20LC; H292-200; H292-500; H292FB-19; H292FB-50; H292FB-115; H292FB-200; H292POPB-50; H292RB-19; H292RB-50; H292RB-115; H292RB-200; H292RS-19; H292RS-28; H292RS-50; H292RS-115; H292RS-200; H292SK-4; H292SS-28; H292SS-50; H292SS-115; H292SS-200; H292SS-1350
<b>Synonyms</b>	n-Hexane with various Methylpentanes
<b>Recommended Use</b>	Laboratory chemicals
<b>Company</b>	<b>Emergency Telephone Number</b>
Fisher Scientific	CHEMTREC®, Inside the USA: 800-
One Reagent Lane	424-9300
Fair Lawn, NJ 07410	CHEMTREC®, Outside the USA: 703-
Tel: (201) 796-7100	527-3887

### 2. HAZARDS IDENTIFICATION

#### DANGER!

#### Emergency Overview

Extremely flammable liquid and vapor. Irritating to eyes, respiratory system and skin. Inhalation may cause central nervous system effects. Aspiration hazard if swallowed - can enter lungs and cause damage. Danger of serious damage to health by prolonged exposure. Possible risk of impaired fertility. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Appearance** Colorless

**Physical State** Liquid

**odor** Characteristic

#### Target Organs

Skin, Respiratory system, Eyes, Central nervous system (CNS), Heart, Blood, Liver, Kidney, Reproductive System

#### Potential Health Effects

##### Acute Effects

##### Principle Routes of Exposure

**Eyes**  
**Skin**

Irritating to eyes.  
Irritating to skin. May be harmful in contact with skin.

**Inhalation** Inhalation may cause central nervous system effects. Irritating to respiratory system. May be harmful if inhaled.

**Ingestion** Aspiration hazard. May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic Effects** Tumorigenic effects have been reported in experimental animals.. Experiments have shown reproductive toxicity effects on laboratory animals. Possible risk of impaired fertility. Danger of serious damage to health by prolonged exposure. May cause adverse liver effects. May cause adverse kidney effects.

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions** Central nervous system disorders. Preexisting eye disorders. Skin disorders.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Haz/Non-haz

Component	CAS-No	Weight %
Hexane	110-54-3	> 65
3-Methylpentane	96-14-0	5 - 20
Methylcyclopentane	96-37-7	5 - 20
2-Methylpentane	107-83-5	0 - 10

### 4. FIRST AID MEASURES

**Eye Contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

**Inhalation** Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Obtain medical attention.

**Ingestion** Do not induce vomiting. Call a physician or Poison Control Center immediately.

**Notes to Physician** Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Flash Point** -6.7°C / 20°F

**Method** No information available.

**Autoignition Temperature** No information available.

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Suitable Extinguishing Media** CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Cool closed containers exposed to fire with water spray.

**Unsuitable Extinguishing Media** Water may be ineffective. This material is lighter than water and insoluble in water. The fire could easily be spread by the use of water in an area where the water cannot be contained..

**Hazardous Combustion Products**

No information available.

**Sensitivity to mechanical impact**  
**Sensitivity to static discharge**No information available.  
No information available.**Specific Hazards Arising from the Chemical**

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

**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. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA****Health 1****Flammability 3****Instability 0****Physical hazards N/A****6. ACCIDENTAL RELEASE MEASURES****Personal Precautions**

Use personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges.

**Environmental Precautions**

Should not be released into the environment.

**Methods for Containment and Clean Up**

Soak up with inert absorbent material. Keep in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

**7. HANDLING AND STORAGE****Handling**

Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use explosion-proof equipment. Take precautionary measures against static discharges.

**Storage**

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

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Engineering Measures

Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hexane	TWA: 50 ppm Skin	(Vacated) TWA: 180 mg/m <sup>3</sup> (Vacated) TWA: 50 ppm TWA: 500 ppm TWA: 1800 mg/m <sup>3</sup>	IDLH: 1100 ppm TWA: 180 mg/m <sup>3</sup> TWA: 50 ppm
3-Methylpentane	TWA: 500 ppm STEL: 1000 ppm	(Vacated) TWA: 500 ppm (Vacated) TWA: 1800 mg/m <sup>3</sup> (Vacated) STEL: 3600 mg/m <sup>3</sup> (Vacated) STEL: 1000 ppm	TWA: 350 mg/m <sup>3</sup> TWA: 100 ppm Ceiling: 510 ppm Ceiling: 1800 mg/m <sup>3</sup>

Component	Quebec	Mexico OEL (TWA)	Ontario TWA/EV
Hexane	TWA: 176 mg/m <sup>3</sup> TWA: 50 ppm Skin	TWA: 176 mg/m <sup>3</sup> TWA: 50 ppm	TWA: 176 mg/m <sup>3</sup> TWA: 50 ppm
3-Methylpentane	TWA: 1760 mg/m <sup>3</sup> TWA: 500 ppm STEL: 1000 ppm STEL: 3500 mg/m <sup>3</sup>	TWA: 1760 mg/m <sup>3</sup> TWA: 500 ppm STEL: 1000 ppm STEL: 3500 mg/m <sup>3</sup>	TWA: 1760 mg/m <sup>3</sup> TWA: 500 ppm STEL: 1000 ppm STEL: 3520 mg/m <sup>3</sup>

**NIOSH IDLH:** Immediately Dangerous to Life or Health

### Personal Protective Equipment

#### Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

#### Skin and body protection Respiratory Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical State

Liquid

### Appearance

Colorless

### odor

Characteristic

### Odor Threshold

No information available.

### pH

No information available.

### Vapor Pressure

No information available.

### Vapor Density

No information available.

### Viscosity

No information available.

### Boiling Point/Range

65.5 - 68.3°C / 150 - 155°F

### Melting Point/Range

No information available.

### Decomposition temperature

No information available.

### Flash Point

-6.7°C / 20°F

### Evaporation Rate

< 1.0 (Ether = 1.0)

### Specific Gravity

< Water

### Solubility

negligible

### log Pow

No data available

### Molecular Weight

86.17

### Molecular Formula

C6 H14

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Incompatible products. Heat, flames and sparks.
<b>Incompatible Materials</b>	Strong oxidizing agents, Strong acids, Bases, Amines
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Thermal decomposition can lead to release of irritating gases and vapors
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions .</b>	None under normal processing.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hexane	25 g/kg ( Rat )	3000 mg/kg ( Rabbit )	48000 ppm ( Rat ) 4 h

<b>Irritation</b>	Irritating to eyes, respiratory system and skin
<b>Toxicologically Synergistic Products</b>	No information available.
<b><u>Chronic Toxicity</u></b>	
<b>Carcinogenicity</b>	There are no known carcinogenic chemicals in this product
<b>Sensitization</b>	No information available.
<b>Mutagenic Effects</b>	Mutagenic effects have occurred in experimental animals.
<b>Reproductive Effects</b>	Experiments have shown reproductive toxicity effects on laboratory animals.
<b>Developmental Effects</b>	Developmental effects have occurred in experimental animals.
<b>Teratogenicity</b>	Teratogenic effects have occurred in experimental animals..
<b>Other Adverse Effects</b>	Tumorigenic effects have been reported in experimental animals.. See actual entry in RTECS for complete information.
<b>Endocrine Disruptor Information</b>	No information available

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. .

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Hexane	Not listed	Not listed	Not listed	EC50: 3.87 mg/L/48h

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available

### Mobility

Component	log Pow
Hexane	4.11
Methylcyclopentane	3.37

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. TRANSPORT INFORMATION

### DOT

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

### TDG

UN-No UN1208  
 Proper Shipping Name HEXANES  
 Hazard Class 3  
 Packing Group II

### IATA

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

### IMDG/IMO

UN-No UN1208

## 14. TRANSPORT INFORMATION

Proper Shipping Name Hexanes  
 Hazard Class 3  
 Packing Group II

## 15. REGULATORY INFORMATION

## International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Hexane	X	X	-	203-777-6	-		X	X	X	X	KE-18626 X
3-Methylpentane	X	X	-	202-481-4	-		X	X	X	X	KE-24700 X
Methylcyclopentane	X	X	-	202-503-2	-		X	-	X	X	KE-23724 X
2-Methylpentane	X	X	-	203-523-4	-		X	X	X	X	KE-24699 X

## Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

## U.S. Federal Regulations

TSCA 12(b) Not applicable

## SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Hexane	110-54-3	> 65	1.0

## SARA 311/312 Hazardous Categorization

Acute Health Hazard Yes  
 Chronic Health Hazard No  
 Fire Hazard Yes  
 Sudden Release of Pressure Hazard No

**Reactive Hazard**

No

**Clean Water Act**

Not applicable

**Clean Air Act**

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Hexane	X		-

**OSHA**

Not applicable

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Hexane	5000 lb	-

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Hexane	X	X	X	X	X
3-Methylpentane	X	-	X	-	-
Methylcyclopentane	X	X	X	-	X
2-Methylpentane	X	X	X	-	-

**U.S. Department of Transportation**

Reportable Quantity (RQ): Y  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** Serious risk, Grade 3

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Class**

B2 Flammable liquid  
 D2A Very toxic materials  
 D2B Toxic materials





**16. OTHER INFORMATION**

**Prepared By** Regulatory Affairs  
Thermo Fisher Scientific  
Tel: (412) 490-8929

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**Revision Summary** "\*\*\*\*", and red text indicates revision

**Disclaimer**

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

**End of MSDS**