

Australian statement of hazardous nature : Classified as hazardous according to criteria of Safe Work Australia

## Section 1 - Identification

Product Name n-Hexane

Product Code	AJA251, ALF032454, ALF039199, ALF042100, ALF043263, ALFL09938, FSBH/0350, FSBH/0355, FSBH/0400, FSBH/0402, FSBH/0403, FSBH/0406, FSBH/0409, FSBH300, FSBH302, FSBH306
Address	ThermoFisher Scientific Australia Pty Ltd 5 Caribbean Drive, Scoresby VICTORIA 3179, Australia
Emergency Tel.	<b>CHEMTREC®</b> <b>03 9757 4559 or +613 9757 4559</b>
Telephone / Fax Numbers	Tel: 1300 735 292 Fax: 1800 067 639
E-mail address	<a href="mailto:auinfo@thermofisher.com">auinfo@thermofisher.com</a>

Recommended Use Laboratory chemicals.

## Section 2 - Hazard(s) Identification

### Classification under Safe Work Australia

Classified as hazardous according to criteria of Safe Work Australia

#### Physical hazards

Flammable liquids

Category 2

#### Health hazards

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

#### Environmental hazards

Chronic aquatic toxicity

Category 2

#### Label Elements



Flame



Health Hazard



Exclamation Mark



Environment

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 through prolonged or repeated exposure  
 H411 - Toxic to aquatic life with long lasting effects

**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  
 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 face, hands and any exposed skin thoroughly after handling  
 P271 - Use only outdoors or in a well-ventilated area  
 P280 - Wear 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 to fresh air and keep at rest in a position 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  
 P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
 P501 - Dispose of contents/ container to an approved waste disposal plant

**Other information**

No information available

## Section 3 - Composition and Information on Ingredients

Component	CAS-No	Weight %
Hexane	110-54-3	>95
2-Methylpentane	107-83-5	<2.5
3-Methylpentane	96-14-0	<1

## Section 4 - First Aid Measures

<b>Inhalation</b>	Risk of serious damage to the lungs.
<b>Ingestion</b>	Do not induce vomiting. Call a physician or Poison Control Center immediately. If vomiting occurs naturally, have victim lean forward.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
<b>Protection of First-aiders</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

<b>First Aid Facilities</b>	Eyewash, safety shower and washroom.
<b>Most important symptoms/effects</b>	Breathing difficulties. . Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
<b>Notes to Physician</b>	Treat symptomatically. Symptoms may be delayed.

## Section 5 - Fire Fighting Measures

### Suitable Extinguishing Media

Cool closed containers exposed to fire with water spray.

### 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.

### Special protective equipment and precautions for fire fighters

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

### Emergency procedures

Remove all sources of ignition. Take precautionary measures against static discharges.

### Environmental Precautions

Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

### Methods for Containment and Clean Up

Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges.

### Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

## Section 7 - Handling and Storage

### Precautions for Safe Handling

Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges. Use explosion-proof equipment.

### 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. Flammables area. AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals  
AS 1940-2004 - The storage and handling of flammable and combustible liquids

## Section 8 - Exposure Controls and Personal Protection

### Exposure limits

**AUS** - Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:3008(1995)]  
Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)] updated in August, 2005. Safe Work Australia **ACGIH** - Threshold Limit Values - Ceiling (TLV-C) guidelines by the American Conference of Governmental Industrial Hygienists (ACGIH) for controlling worker exposure to airborne chemical concentrations in the workplace. **UK** - EH40/2005 Containing the workplace exposure limits (WELs) for use with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). Updated by September 2006 official press release and October 2007 Supplement. **DE** - MAK and BAT values of Hazardous Chemical Compounds in the Work Area. Published by German Research Foundation on July 1, 2011

Component	Australia	New Zealand WEL	ACGIH TLV	The United Kingdom	Germany
-----------	-----------	-----------------	-----------	--------------------	---------

Hexane	TWA: 20 ppm TWA: 72 mg/m <sup>3</sup>	TWA: 20 ppm TWA: 72 mg/m <sup>3</sup>	TWA: 50 ppm Skin	TWA: 72 mg/m <sup>3</sup> TWA: 20 ppm STEL: 60 ppm STEL: 216 mg/m <sup>3</sup>	TWA: 180 mg/m <sup>3</sup> TWA: 50 ppm
2-Methylpentane			TWA: 500 ppm STEL: 1000 ppm		TWA: 500 ppm (8 Stunden). AGW - exposure factor 2 TWA: 1800 mg/m <sup>3</sup> (8 Stunden). AGW - exposure factor 2 TWA: 500 ppm (8 Stunden). MAK TWA: 1800 mg/m <sup>3</sup> (8 Stunden). MAK Höhepunkt: 1000 ppm Höhepunkt: 3600 mg/m <sup>3</sup>
3-Methylpentane			TWA: 500 ppm STEL: 1000 ppm		TWA: 500 ppm (8 Stunden). AGW - exposure factor 2 TWA: 1800 mg/m <sup>3</sup> (8 Stunden). AGW - exposure factor 2 TWA: 500 ppm (8 Stunden). MAK TWA: 1800 mg/m <sup>3</sup> (8 Stunden). MAK Höhepunkt: 1000 ppm Höhepunkt: 3600 mg/m <sup>3</sup>

**Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Component	Australia	New Zealand	European Union	United Kingdom	Germany
Hexane		5 mg/L (urine) end of shift (2,5-Hexanedione)			2,5-Hexandione plus 4,5-Dihydroxy-2-hexanone: 5 mg/L urine (end of shift after hydrolysis)

**Exposure Controls****Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment.

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**

Safety glasses with side-shields (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

**Hand Protection**

Protective gloves

Glove material	Breakthrough time	Glove thickness	AUS/NZ Standard	Glove comments
Nitrile rubber	See manufacturers	-	AS/NZS 2161.1	(minimum requirement)
Viton (R)	recommendations			

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**

Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use

<b>Recommended Filter type:</b>	and maintenance of respiratory protective devices Organic gases and vapours filter Type A Brown conforming to EN14387 (or AUS/NZ equivalent)
<b>Recommended half mask:-</b>	Valve filtering: EN405 or Half mask: EN140 plus filter, EN 141 (or AUS/NZ equivalent) When RPE is used a face piece Fit Test should be conducted
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Environmental exposure controls</b>	Prevent product from entering drains. Do not allow material to contaminate ground water system.

## Section 9 - Physical and Chemical Properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Colorless	
<b>Physical State</b>	Liquid	
<b>Odor</b>	No information available	
<b>Odor Threshold</b>	No data available	
<b>pH</b>	No information available	
<b>Melting Point/Range</b>	-95 °C / -139 °F	
<b>Softening Point</b>	No data available	
<b>Boiling Point/Range</b>	69 °C / 156.2 °F	
<b>Flash Point</b>	-22 °C / -7.6 °F	<b>Method</b> - No information available
<b>Evaporation Rate</b>	No data available	
<b>Flammability (solid,gas)</b>	Not applicable	Liquid
<b>Explosion Limits</b>	No data available	
<b>Vapor Pressure</b>	No data available	
<b>Vapor Density</b>	No data available	(Air = 1.0)
<b>Specific Gravity / Density</b>	No data available	
<b>Bulk Density</b>	Not applicable	Liquid
<b>Water Solubility</b>	Insoluble in water	
<b>Solubility in other solvents</b>	No information available	
<b>Partition Coefficient (n-octanol/water)</b>		
<b>Component</b>	<b>log Pow</b>	
Hexane	4.11	
<b>Autoignition Temperature</b>	No data available	
<b>Decomposition Temperature</b>	No data available	
<b>Viscosity</b>	No data available	
<b>Explosive Properties</b>	No information available	Vapors may form explosive mixtures with air
<b>Oxidizing Properties</b>	No information available	
<b>Other information</b>		
<b>Molecular Formula</b>	C6 H14	
<b>Molecular Weight</b>	86.18	

## Section 10 - Stability and Reactivity

<b>Reactivity</b>	None known, based on information available
<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Keep away from open flames, hot surfaces and sources of ignition.
<b>Hazardous Decomposition Products</b>	None under normal use conditions.
<b>Hazardous Polymerization</b>	No information available.

## Section 11 - Toxicological Information

### Information on Toxicological Effects

#### Product Information

##### (a) acute toxicity;

Oral

Based on available data, the classification criteria are not met

Dermal

Based on available data, the classification criteria are not met

Inhalation

Based on available data, the classification criteria are not met

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

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

Respiratory

No data available

Skin

No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; Category 2

(h) STOT-single exposure; Category 3

(i) STOT-repeated exposure; Category 2

Target Organs

No information available.

(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

## Section 12 - Ecological Information

### Ecotoxicity effects

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Hexane	LC50: 2.1 - 2.98 mg/L, 96h flow-through (Pimephales promelas)	EC50: 3.87 mg/L/48h		

### 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	4.11	No data available

### Mobility

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** Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable 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** Chemical wastes should be disposed through a licensed commercial waste collection service. Do not dispose of waste into sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be incinerated, when in compliance with local regulations. Do not let this chemical enter the environment. Do not empty into drains.

## Section 14 - Transport Information

### IMDG/IMO

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

Component	IMDG Marine Pollutant
Hexane 110-54-3 ( >95 )	IMDG regulated marine pollutant (Listed in the index)

### ADG

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

**Environmental hazards** Dangerous for the environment Product is a marine pollutant according to the criteria set by IMDG/IMO

**Special Precautions** No special precautions required

**Additional information** None known

## Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

### International Inventories

X = listed

Component	AICS	NZIoC	EINECS	ELINCS	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	KECL
Hexane	X	X	203-777-6	438-390-3	X	X	-	X	X	X	X
2-Methylpentane	X	X	203-523-4	438-390-3	X	X	-	X	X	X	X
3-Methylpentane	X	X	202-481-4	438-390-3	X	X	-	X	X	X	X

**Standard for the Uniform** Not Scheduled

**Scheduling of Medicines and Poisons**

Component	Ozone Depletion Potential	Australian Ozone Depleting substance listings	New Zealand Ozone Depleting Substances listing	Persistent Organic Pollutant	IMDG Marine Pollutant
Hexane					IMDG regulated marine pollutant (Listed in the index)

**Prohibition or notification/licensing requirements** Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

**Section 16 - Other Information****Legend**

<b>AICS</b> - Australian Inventory of Chemical Substances	<b>NZIoC</b> - New Zealand Inventory of Chemicals
<b>TSCA</b> - United States Toxic Substances Control Act Section 8(b) Inventory	<b>EINECS/ELINCS</b> - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
<b>DSL/NDL</b> - Canadian Domestic Substances List/Non-Domestic Substances List	<b>ENCS</b> - Japanese Existing and New Chemical Substances
<b>IECSC</b> - Chinese Inventory of Existing Chemical Substances	<b>KECL</b> - Korean Existing and Evaluated Chemical Substances
<b>PICCS</b> - Philippines Inventory of Chemicals and Chemical Substances	<b>CAS</b> - Chemical Abstracts Service
<b>TWA</b> - Time Weighted Average	<b>ACGIH</b> - American Conference of Governmental Industrial Hygienists
<b>IARC</b> - International Agency for Research on Cancer	<b>PNEC</b> - Predicted No Effect Concentration
<b>ICAO/IATA</b> - International Civil Aviation Organization/International Air Transport Association	<b>IMO/IMDG</b> - International Maritime Organization/International Maritime Dangerous Goods Code
<b>MARPOL</b> - International Convention for the Prevention of Pollution from Ships	<b>ADG</b> Australian Code for the Transport of Dangerous Goods by Road and Rail
<b>NZS 5433:2012</b> - Transport of Dangerous Goods on Land	<b>OECD</b> - Organisation for Economic Co-operation and Development
<b>LD50</b> - Lethal Dose 50%	<b>LC50</b> - Lethal Concentration 50%
<b>EC50</b> - Effective Concentration 50%	<b>ATE</b> - Acute Toxicity Estimate
<b>WEL</b> - Workplace Exposure Limit	<b>RPE</b> - Respiratory Protective Equipment
<b>DNEL</b> - Derived No Effect Level	<b>NOEC</b> - No Observed Effect Concentration
<b>POW</b> - Partition coefficient Octanol:Water	<b>BCF</b> - Bioconcentration factor
<b>vPvB</b> - very Persistent, very Bioaccumulative	<b>PBT</b> - Persistent, Bioaccumulative, Toxic
<b>VOC</b> - Volatile Organic Compounds	

**Key literature references and sources for data**

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

**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.

**Revision Date** 12-Sep-2016  
**Revision Summary** Update to Format.

**This safety data sheet complies with the requirements of Safe Work Australia WHS Regulation**

**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**