

**Hexane (BDH1129-19L, BDH1129-204L, BDH1129-4LP, BDH1129-4LG)**

Version 1

Revision Date 07/29/2009

Print Date 01/03/2011

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Hexane (BDH1129-19L, BDH1129-204L, BDH1129-4LP, BDH1129-4LG)  
MSDS Number : 000000011720  
Product Use Description : Solvent

Manufacturer : Honeywell  
1953 South Harvey Street  
Muskegon, MI 49442

Manufactured for : VWR International LLC  
1310 Goshen Parkway  
West Chester, PA 19380

For more information call : (Monday-Friday, 8.00am-5:00pm)  
1-800-932-5000

In case of emergency call : (24 hours/day, 7 days/week)  
1-800-424-9300 (USA Only)  
**For Transportation Emergencies:**  
1-800-424-9300 (CHEMTREC - Domestic)  
1-613-966-6666 (CANUTEC - Canada)

**SECTION 2. HAZARDS IDENTIFICATION****Emergency Overview**

Form : liquid, clear  
Color : colourless  
Odor : mild hydrocarbon-like

Hazard Summary : Extremely flammable. In use, may form flammable/explosive vapour-air mixture. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Aspiration hazard if swallowed - can enter lungs and cause damage. Irritating to eyes, respiratory system and skin. Contains a peripheral neurotoxin. Signs/symptoms include muscle weakness and a numbing or tingling sensation in the arms, legs or feet. May cause irritation of the gastrointestinal tract. Repeated exposure may cause skin dryness or cracking. This product may cause adverse reproductive effects. Possible risk of impaired fertility.


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**Potential Health Effects**

- Skin** : Irritating to skin.  
 May be harmful if absorbed through skin.  
 May cause systemic poisoning with symptoms paralleling those of inhalation.  
 Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.
- Eyes** : Irritating to eyes.  
 Causes itching, burning, redness and tearing.  
 Causes blurred vision.  
 May cause corneal injury.
- Ingestion** : Aspiration hazard if swallowed - can enter lungs and cause damage.  
 Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.  
 May cause systemic poisoning with symptoms paralleling those of inhalation.
- Inhalation** : Harmful: danger of serious damage to health by prolonged exposure through inhalation.  
 Causes respiratory tract irritation.  
 Causes headache, drowsiness or other effects to the central nervous system.  
 Contains a peripheral neurotoxin.  
 Signs/symptoms include muscle weakness and a numbing or tingling sensation in the arms, legs or feet.  
 Vapours may cause drowsiness and dizziness.  
 Inhalation of high vapour concentrations can cause CNS-depression and narcosis.
- Chronic Exposure** : Repeated and prolonged exposure to solvents may cause brain and nervous system damage.  
 Contains a peripheral neurotoxin.  
 Signs/symptoms include muscle weakness and a numbing or tingling sensation in the arms, legs or feet.  
 Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.  
 This product may cause adverse reproductive effects.  
 Possible risk of impaired fertility.
- Aggravated Medical Condition** : Eye disorders  
 Respiratory disorders  
 Liver disorders  
 Kidney disorders  
 Neurological disorders  
 Skin disorders


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

**Carcinogenicity**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No.	Weight %
n-Hexane	110-54-3	>60.00
HEXANE, ISOMERS OTHER THAN N-HEXANE	-	35.00 - 40.00

**SECTION 4. FIRST AID MEASURES**

Inhalation : Call a physician immediately. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present.

Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician.

Ingestion : Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Call a physician immediately. Never give anything by mouth to an unconscious person.

**Notes to physician**

Treatment : Treat symptomatically.


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**SECTION 5. FIRE-FIGHTING MEASURES**

Flash point	:	-26 °C (-15 °F) closed cup
Ignition temperature	:	225 °C (437 °F)
Lower explosion limit	:	1.2 %(V)
Upper explosion limit	:	7.7 %(V)
Suitable extinguishing media	:	Foam Carbon dioxide (CO <sub>2</sub> ) Dry chemical Cool closed containers exposed to fire with water spray.
Extinguishing media which shall not be used for safety reasons	:	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards during fire fighting	:	Extremely flammable. Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread along floors. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. In case of fire hazardous decomposition products may be produced such as: Carbon monoxide Carbon dioxide (CO <sub>2</sub> )
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus and protective suit.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions	:	Wear personal protective equipment. Unprotected persons must be kept away. Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Remove all sources of ignition. Do not swallow. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided.



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- Do not flush into surface water or sanitary sewer system.  
Prevent product from entering drains.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
- Methods for cleaning up : Ventilate the area.  
No sparking tools should be used.  
Use explosion-proof equipment.  
Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13).

### SECTION 7. HANDLING AND STORAGE

#### Handling

- Handling : Wear personal protective equipment.  
Use only in well-ventilated areas.  
Keep container tightly closed.  
Do not smoke.  
Do not swallow.  
Do not breathe vapours or spray mist.  
Avoid contact with skin, eyes and clothing.
- Advice on protection against fire and explosion : Keep away from fire, sparks and heated surfaces.  
Take precautionary measures against static discharges.  
Ensure all equipment is electrically grounded before beginning transfer operations.  
Use explosion-proof equipment.  
Keep product and empty container away from heat and sources of ignition.  
No sparking tools should be used.  
No smoking.

#### Storage

- Requirements for storage areas and containers : Store in area designed for storage of flammable liquids.  
Protect from physical damage.  
Keep containers tightly closed in a dry, cool and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Keep away from heat and sources of ignition.  
Keep away from direct sunlight.  
Store away from incompatible substances.  
Container hazardous when empty.


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Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

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

- Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
- Engineering measures : Use with local exhaust ventilation.  
Prevent vapor buildup by providing adequate ventilation during and after use.
- Eye protection : Do not wear contact lenses.  
Wear as appropriate:  
Safety glasses with side-shields  
If splashes are likely to occur, wear:  
Goggles or face shield, giving complete protection to eyes
- Hand protection : Solvent-resistant gloves  
Gloves must be inspected prior to use.  
Replace when worn.
- Skin and body protection : Wear as appropriate:  
Solvent-resistant apron  
Flame retardant antistatic protective clothing  
If splashes are likely to occur, wear:  
Protective suit
- Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.  
For rescue and maintenance work in storage tanks use self-contained breathing apparatus.  
Use NIOSH approved respiratory protection.
- Hygiene measures : When using, do not eat, drink or smoke.  
Wash hands and face before breaks and immediately after handling the product.  
Keep working clothes separately.  
Remove and wash contaminated clothing before re-use.  
Do not swallow.  
Do not breathe vapours or spray mist.  
Avoid contact with skin, eyes and clothing.

**Exposure Guidelines**

n-Hexane	110-54-3	ACGIH	TWA	50 ppm
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Skin designation:  
Can be absorbed through the skin.

NIOSH	REL	50 ppm	180 mg/m3
US CA OEL	TWA PEL	50 ppm	180 mg/m3

Skin designation:  
Can be absorbed through the skin.

HEXANE, ISOMERS  
OTHER THAN N-  
HEXANE

OSHA Z1	PEL	500 ppm	1,800 mg/m3
OSHA Z1A	TWA	50 ppm	180 mg/m3
NIOSH	REL	100 ppm	350 mg/m3
NIOSH	CEILING	510 ppm	1,800 mg/m3
ACGIH	TLV		500 ppm
ACGIH	STEL		1,000 ppm
OSHA Z1A	TWA	500 ppm	1,800 mg/m3
OSHA Z1A	STEL	1,000 ppm	3,600 mg/m3
US CA OEL	TWA	500 ppm	1,800 mg/m3
US CA OEL	STEL	1,000 ppm	3,600 mg/m3

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Form	: liquid, clear
Color	: colourless
Odor	: mild hydrocarbon-like
pH	: not applicable
Melting point/range	: -95 °C (-139 °F)
Boiling point/boiling range	: 68.7 °C (155.7 °F)

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Vapor pressure	:	165.32 hPa at 20 °C (68 °F)
Relative vapour density	:	3 (Air = 1.0)
Density	:	0.659 - 0.673 g/cm <sup>3</sup> at 20 °C (68 °F)
Water solubility	:	negligible

**SECTION 10. STABILITY AND REACTIVITY**

Conditions to avoid	:	Heat, flames and sparks. Keep away from direct sunlight.
Materials to avoid	:	Oxidizing agents Halogens Oxygen May attack many plastics, rubbers and coatings.
Hazardous decomposition products	:	In case of fire hazardous decomposition products may be produced such as: Carbon monoxide Carbon dioxide (CO <sub>2</sub> )
Hazardous reactions	:	Hazardous polymerisation does not occur. Stable under recommended storage conditions.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute oral toxicity	:	LD50 rat Dose: 25 g/kg Test substance: n-Hexane
Acute dermal toxicity	:	LD50 rabbit Dose: 3,000 mg/kg Test substance: n-Hexane
Acute inhalation toxicity	:	LC50 rat Dose: 48000 ppm Exposure time: 4 h Test substance: n-Hexane
Skin irritation	:	rabbit




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	irritating Test substance:n-Hexane
Eye irritation	: rabbit irritating Test substance: n-Hexane
Repeated dose toxicity	: Inhalation rat central nervous system effects, structural abnormalities in sperm, 5,000 ppm Exposure time: 8 d Test substance: n-Hexane
Repeated dose toxicity	: Oral rat central nervous system effects, testicular effects, No observed adverse effect level 1,140 mg/kg Exposure time: 90 d Test substance: n-Hexane
Repeated dose toxicity	: Oral rat central nervous system effects, testicular effects, Lowest observed adverse effect level 4,000 mg/kg Exposure time: 90 d Test substance: n-Hexane
Repeated dose toxicity	: Inhalation rat Developmental Toxicity, NOAEL (maternal toxicity), 1000 ppm, NOAEL (developmental toxicity), 5,000 ppm Test substance: n-Hexane
Genotoxicity in vitro	: Test substance: n-Hexane In vitro tests did not show mutagenic effects
Genotoxicity in vivo	: Test substance: n-Hexane In vivo tests did not show mutagenic effects

**SECTION 12. ECOLOGICAL INFORMATION**

Toxicity to fish	: LC50 Species: Oncorhynchus mykiss (rainbow trout) Dose: 4.14 mg/l Exposure time: 96 h Test substance: n-Hexane
Toxicity to fish	: LC50 Species: Pimephales promelas (fathead minnow) Dose: 2.5 mg/l


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	Exposure time: 96 h
	Test substance: n-Hexane
Toxicity to fish	: LC50
	Species: Lepomis macrochirus (Bluegill sunfish)
	Dose: 4.12 mg/l
	Exposure time: 96 h
	Test substance: n-Hexane
Toxicity to daphnia and other aquatic invertebrates.	: LC50
	Species: Daphnia magna (Water flea)
	Dose: 3.87 mg/l
	Exposure time: 96 h
	Test substance: n-Hexane
Additional ecological information	: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Should not be released into the environment.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Waste Information: Observe all Federal, State, and Local Environmental regulations.

**SECTION 14. TRANSPORT INFORMATION**

<b>DOT</b>	UN-Number	: 1208
	Proper shipping name	: Hexanes
	Class	3
	Packing group	II
	Hazard Label	3
<b>IATA</b>	UN Number	: 1208
	Description of the goods	: Hexanes
	Class	: 3
	Packaging group	: II
	Hazard Label	: 3
	Packing instruction (cargo aircraft)	: 307
	Packing instruction (passenger aircraft)	: 305
Packing instruction (passenger aircraft)	: Y305	
<b>IMDG</b>	Substance No.	: UN 1208
	Description of the goods	: Hexanes


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Class	: 3
Packaging group	: II
Hazard Label	: 3
EmS Number	: F-E
Marine pollutant	: no

**SECTION 15. REGULATORY INFORMATION**
**Inventories**

EU. EINECS	: On the inventory, or in compliance with the inventory
US. Toxic Substances Control Act	: On TSCA Inventory
Australia. Industrial Chemical (Notification and Assessment) Act	: On the inventory, or in compliance with the inventory
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	: All components of this product are on the Canadian DSL list.
Japan. Kashin-Hou Law List	: On the inventory, or in compliance with the inventory
Korea. Toxic Chemical Control Law (TCCL) List	: On the inventory, or in compliance with the inventory
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	: On the inventory, or in compliance with the inventory

**National regulatory information**

<b>SARA 313 Components</b>	: n-Hexane	110-54-3
<b>SARA 311/312 Hazards</b>	: Fire Hazard Acute Health Hazard Chronic Health Hazard	
<b>CERCLA Reportable Quantity</b>	: 5000 lbs	



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**California Prop. 65** : WARNING! This product contains a chemical known in the State of California to cause cancer.  
Benzene 71-43-2

: WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.  
Benzene 71-43-2

**Massachusetts RTK** : n-Hexane 110-54-3  
: Benzene 71-43-2

**New Jersey RTK** : n-Hexane 110-54-3  
: HEXANE, ISOMERS OTHER THAN N-HEXANE

**Pennsylvania RTK** : n-Hexane 110-54-3  
: HEXANE, ISOMERS OTHER THAN N-HEXANE

**WHMIS Classification** : B2  
D2A  
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

**SECTION 16. OTHER INFORMATION**

	<b>HMIS III</b>	<b>NFPA</b>
Health Hazard	: 1*	1
Flammability	: 3	3
Physical Hazard	: 0	
Instability	:	0



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**Further information**

\* - Chronic health hazard