

(Isohexadecane)

DATE PREPARED: 11/11/2016

#### Section 1. Product and Company Identification

**Product Name** Isohexadecane 93685-80-4 **CAS Number** 

Parchem - fine & specialty chemicals

415 Huguenot Street New Rochelle, NY 10801

**)** (914) 654-6800 **(914)** 654-6899

parchem.com

**™** info@parchem.com

**EMERGENCY RESPONSE NUMBER** 

CHEMTEL

Toll Free US & Canada: 1 (800) 255-3924

All other Origins: 1 (813) 248-0585

Collect Calls Accepted

Section 2. Hazards Identification

### Classification of the substance or mixture **OSHA/HCS Status**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

#### Classification of the substance or mixture

Acute Toxicity (Inhalation) - Category 4 Aspiration Hazard - Category 1

**GHS Label Elements** 

**Pictograms:** 



Signal word: DANGER

#### Hazard and precautionary statements **Hazard Statements**

Harmful if inhaled.

May be fatal if swallowed and enters airways.

#### **Precautionary Statements**

General: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

**Prevention:** Do not ingest. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Response: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.



(Isohexadecane)

DATE PREPARED: 11/11/2016

Storage: Store locked up.

Disposal: Dispose of contents and container in accordance with all local, regional, national and

international regulations.

Hazards not otherwise classified: Repeated exposure may cause skin dryness or cracking.

Section 3. Composition / Information on Ingredients

**Common Name** Isohexadecane

**Synonym(s)** Hydrocarbons, C4, 1,3-Butadiene-Free, Polymd., Pentaisobutylene Fraction,

Hydrogenated

**CAS Number** 93685-80-4

COMPONENT	CAS NUMBER	CONCENTRATION
Isohexadecane	93685-80-4	100%

Section 4. First Aid Measures

#### Description of necessary first-aid measures

**Eye Contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

**Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

**Skin Contact:** Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion:** Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.



(Isohexadecane)

DATE PREPARED: 11/11/2016

# Most important symptoms/effects, acute and delayed Potential acute health effects

**Eye contact:** No known significant effects or critical hazards.

Inhalation: Harmful if inhaled.

**Skin contact:** No known significant effects or critical hazards.

Ingestion: May be fatal if swallowed and enters airways. Do not ingest. If swallowed then seek

immediate medical assistance.

#### Over-exposure signs/symptoms

**Skin contact:** No specific data.

Ingestion: Adverse symptoms may include the following: nausea or vomiting

**Inhalation:** No specific data. **Eye contact:** No specific data.

# Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if

large quantities have been ingested or inhaled. **Specific treatments:** No specific treatment.

**Protection of first-aiders:** No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

#### Section 5. Firefighting Measures

#### Extinguishing media

Suitable extinguishing media: In case of fire, use water spray (fog), foam, dry chemical or

Unsuitable extinguishing media: Do not use water jet

**Specific hazards arising from the chemical:** In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products: No specific data

**Special protective actions for firefighters:** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for firefighters:** Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.



(Isohexadecane)

DATE PREPARED: 11/11/2016

#### Section 6. Accidental Release Measures

#### Personal precautions, protective equipment, and emergency procedures

**For non-emergency personnel:** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders:** If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

**Environmental precautions:** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

#### Methods and materials for containment and cleaning up

**Small spill:** Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. **Large spill:** Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 13 for waste disposal.

#### Section 7. Handling and Storage

#### Precautions tor sate handling

**Protective measures:** Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene:** Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.



(Isohexadecane)

DATE PREPARED: 11/11/2016

**Conditions for safe storage, including any incompatibilities:** Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure Controls / Personal Protection

#### **Control parameters**

Occupational exposure limits: None.

**Appropriate engineering controls:** Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### Individual protection measures

**Hygiene measures:** Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection:** Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side shields.

#### Skin protection

**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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product

**Other skin protection:** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.



(Isohexadecane)

DATE PREPARED: 11/11/2016

**Respiratory protection:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, tile hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and Chemical Properties

Appearance

Physical State: Liquid

Color: Clear Odor: Odorless

Odor threshold: Not available

pH: Not available

Melting point: -70°C (-94°F)

**Boiling point:** 210 - 250°C (410 - 482°F)

Flash point (Closed Cup): 95 - 100°C (203 - 212°F)

Evaporation rate: Not available

Flammability (solid, gas): Not available

Lower and upper explosive (flammable) limits

**Lower:** 0.6% **Upper:** 4.7%

**Vapor pressure:** 0.1 kPa (0.075 mmHg)

Vapor density: Not available Relative density: 0.79 Solubility: Not available

Solubility in water: Not available

Partition coefficient (n-Octanol/water): > 7 Auto-ignition temperature:  $400^{\circ}$ C ( $752^{\circ}$ F) Decomposition temperature: Not available Viscosity: Kinematic ( $40^{\circ}$ C/ $104^{\circ}$ F): 7 mm<sup>2</sup>/s (7 cSt)

Section 10. Stability and Reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability:** The product is stable.

#### Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid: No specific data.





(Isohexadecane)

DATE PREPARED: 11/11/2016

**Incompatible materials:** Reactive or incompatible with the following materials: oxidizing materials.

**Hazardous decomposition products:** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

# Information on toxicological effects Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
hydrocarbons, C4, 1,3-	LC50	Rat	> 1.73 mg/L	4 Hours
butadiene-free, polymd.,	Inhalation			
pentaisobutylene fraction,	Dusts and Mists			
hydrogenated				

#### **Mutagenicity**

**Conclusion/Summary:** No component of this product at levels greater than 0.1% is classified by established regulatory criteria as a mutagen.

#### **Carcinogenicity**

**Conclusion/Summary:** No component of this product at levels greater than 0.1% is identified as a carcinogen by ACGIH, the International Agency for Research on Cancer (IARC) or the European Commission (EC).

#### Reproductive Toxicity

**Conclusion/Summary:** No known significant effects or critical hazards.

#### **Teratogenicity**

**Conclusion/Summary:** No component of this product at levels greater than 0.1% is classified by established regulatory criteria as teratogenic or embryotoxic.

#### **Aspiration Hazard**

Name	Result	
hydrocarbons, C4, 1 ,3-butadiene-free, polymd.,	ASPIRATION HAZARD- Category 1	
pentaisobutylene fraction, hydrogenated		

**Information on the likely routes of exposure:** Routes of entry anticipated: Oral, Dermal, Inhalation.

#### Potential acute health effects

**Eye contact:** No known significant effects or critical hazards.

**Inhalation:** Harmful if inhaled.



(Isohexadecane)

DATE PREPARED: 11/11/2016

**Skin contact:** No known significant effects or critical hazards.

Ingestion: May be fatal if swallowed and enters airways. Do not ingest. If swallowed then seek

immediate medical assistance.

#### Symptoms related to the physical, chemical, and toxicological characteristics

Eye contact: No specific data.
Inhalation: No specific data.
Skin contact: No specific data.

**Ingestion:** Adverse symptoms may include the following: nausea or vomiting

## Delayed and immediate effects and also chronic effects from short and long term

exposure

General: No known significant effects or critical hazards

**Carcinogenicity:** No known significant effects or critical hazards **Mutagenicity:** No known significant effects or critical hazards **Teratogenicity:** No known significant effects or critical hazards

Developmental effects: No known significant effects or critical hazards

Fertility effects: No known significant effects or critical hazards

### Section 12. Ecological Information

**Toxicity:** Not available.

Conclusion/Summary: Not available.

Persistence and degradability: Not available.

Conclusion/Summary: Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
hydrocarbons, C4, 1, 3-butadiene-	-	-	Readily
free, polymd., pentaisobutylene			
fraction, hydrogenated			

**Bioaccumulative potential** 

Product/ingredient name	Log Pow	BCF	Potential
Hydrocarbons, C4, 1, 3-butadiene-free,	> 7	-	low
polymd., tetraisobutylene fraction,			
hydrogenated			

#### **Mobility in Soil**

Soil/water partition coefficient (Koc): 7.1



(Isohexadecane)

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**Mobility:** This product is not likely to move rapidly with surface or groundwater flows because of its low water solubility. This product is not likely to volatilize rapidly into the air because of its low vapor pressure.

Other adverse effects: No known significant effects or critical hazards

Section 13. Disposal Considerations

**Waste Treatment Methods:** Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

#### Not classified as hazardous for transport (DOT, IMDG, IATA)

**Special precautions for user:** Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73178 and the IBC Code: Not available.

Section 15. Regulatory Information

US Federal Regulations United States Inventory (TSCA 8b): Not determined. Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): Not listed

Clean Air Act Section 602 Class I Substances: Not listed Clean Air Act Section 602 Class II Substances: Not listed DEA List I Chemicals (Precursor Chemicals): Not listed DEA List II Chemicals (Essential Chemicals): Not listed

**SARA 302/304** 

Composition/information on ingredients: No products were found.

SARA 304 RQ: Not applicable.

SARA 311/312 Fire Hazard: No

Sudden release of pressure: No

Reactive: No

Immediate (acute) health hazard: Yes Delayed (chronic) health hazard: No

**SARA313:** Not applicable.

**State Regulations** 

Massachusetts: This material is not listed.

New York: This material is not listed.

New Jersey: This material is not listed.



(Isohexadecane)

DATE PREPARED: 11/11/2016

**Pennsylvania:** This material is not listed.

California Prop. 65: None of the components are listed.

International Lists

Korea Inventory: This material is listed or exempted.

Europe Inventory: This material is listed or exempted.

Japan Inventory: This material is listed or exempted.

United States Inventory (TSCA 8b): Not determined.

Australia Inventory (AICS): Not determined.

China Inventory (IECSC): This material is listed or exempted.

Malaysia Inventory (EHS Register): Not determined.

New Zealand Inventory of Chemicals (NZioC): Not determined. Philippines Inventory (PICCS): This material is listed or exempted. Taiwan Inventory (CSNN): This material is listed or exempted.

Canada Inventory: This material is listed or exempted.

**HMIS Rating** 

Health: 2

Flammability: 1 Reactivity: 0

**NFPA Rating** 

Health: 2

Flammability: 1
Reactivity: 0

Section 16. Other Information

**Disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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