

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Heptane, Reagent Grade

Product Number: RSOH0005

Other Identifying Product Numbers: RSOH0005-20E4, RSOH0005-4C, RSOH0005-5E4

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company: Ricca Chemical Company

Address: 448 West Fork Drive

Arlington, TX 76012 USA

Telephone: 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA)

800-424-9300

CHEMTREC (International)

1+ 703-527-3887

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statements	Precautionary Statements:
Skin Corrosion / Irritation	Category 2	H315	P264, P280, P302+P352, P321, P332+P313, P362
Specific Target Organs/Systemic Toxicity Following Single Exposure	Category 3	H335, H336	P261, P271, P304+P340, P312, P403+P233, P405, P501
Aspiration Hazard	Category 1	H304	P301+P310, P331, P405, P501
Flammable Liquids	Category 2	H225	P210, P233, P240, P241, P242, P243, P280, P303+P361+P353, P370+P378, P403+P235, P501
Hazardous to the Aquatic Environment (Acute)	Category 1	H400	P273, P391, P501
Hazardous to the Aquatic Environment (Chronic)	Category 1	H410	P273, P391, P501

2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H225	Highly flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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Precautionary Statements:

Precautionary Number	Precautionary Statement
P210	Keep away from heat, sparks and open flame. No smoking.
P233	Keep container tightly closed.
P240	Ground container and receiving equipment.
P241	Use explosion-proof equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or physician.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER or physician if you feel unwell.
P321	Specific treatment (Wash areas of contact with water).
P331	Do NOT induce vomiting.
P332+P313	If skin irritation occurs: Get medical attention.
P362	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.
P391	Collect spillage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
n-Heptane	C ₇ H ₁₆	100.20 g/mol	142-82-5	100.00

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SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Results in drying and cracking which can lead to secondary infections and dermatitis.

Ingestion: IF SWALLOWED: Immediately call a POISON CENTER or physician. Aspiration hazard. Do not induce vomiting, vomiting may occur spontaneously. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Call a physician.

4.2. Most Important Symptoms and Effects, Acute and Delayed

May be fatal if swallowed and enters airways. Causes skin irritation. May cause respiratory irritation. May cause drowsiness or dizziness. DANGER! Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness. EYE CONTACT: May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva. SKIN CONTACT: Results in drying and cracking which can lead to secondary infections and dermatitis.

4.3. Medical Attention or Special Treatment Needed

Specific treatment (Wash areas of contact with water). Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops. Aspiration hazard. Do not induce vomiting, vomiting may occur spontaneously. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Call a physician.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. Foam, dry chemical, carbon dioxide Water may be ineffective because it may not cool the material below its flash point.

5.2. Specific Hazards Arising from the Substance or Mixture

Highly flammable liquid and vapor. Extremely flammable liquid and vapor. Contact with strong oxidizers may cause fire. Vapor may cause flash fire. Sensitive to static discharge. Vapors can flow along surfaces to distant ignition source and flashback. Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills or vapors away from fire. Explosion hazard when exposed to heat, flame or oxidizers.

5.3. Special Protective Equipment for Firefighters

Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye protection.

6.2. Cleanup and Containment Methods and Materials

Remove all sources of ignition. Contain spill. Do not flush to sewer. Absorb with suitable inert material (vermiculite, dry sand, etc) and place in a chemical waste container for proper disposal in an approved waste disposal facility. Ventilate area of spill. Have extinguishing agent available in case of fire. Use non-sparking tools and equipment. Dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Store in secure, flammable storage area away from all sources of ignition. Empty containers may be hazardous since they retain product residues.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
n-Heptane (142-82-5)	TWA	USA	500 ppm TWA; 2000 mg/m ³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
n-Heptane (142-82-5)	TLV-STEL	USA	500 ppm STEL (listed under Heptane, all isomers)	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
n-Heptane (142-82-5)	TLV-TWA	USA	400 ppm TWA (listed under Heptane, all isomers)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
n-Heptane (142-82-5)	TLV-STEL	USA	500 ppm STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
n-Heptane (142-82-5)	TLV-TWA	USA	400 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

8.2. Exposure Controls

Engineering Controls: Use only outdoors or in a well-ventilated area. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.

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Respiratory Protection: If the TLV is exceeded, a half-mask organic vapor respirator may be worn for up to 10 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full facepiece organic vapor respirator may be worn for up to 50 times the exposure limit, or the maximum use concentration specified by the respirator supplier, whichever is lowest.

Skin Protection: Wear protective gloves and eye protection. Chemical resistant gloves.

Eye Protection: Wear protective gloves and eye protection. Safety glasses or goggles.

8.3. Personal Protective Equipment

Wear protective gloves and eye protection. If the TLV is exceeded, a half-mask organic vapor respirator may be worn for up to 10 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full facepiece organic vapor respirator may be worn for up to 50 times the exposure limit, or the maximum use concentration specified by the respirator supplier, whichever is lowest. Chemical resistant gloves. Safety glasses or goggles.

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Colorless liquid

Physical State: Liquid

Odor: Gasoline-like

Odor Threshold: Data not available.

pH: Data not available.

Melting/Freezing Point: -90.6°C

Initial Boiling Point/Range: 98.4°C - 98.4°C

Flash Point: -4°C

Evaporation Rate: Data not available.

Flammability: Data not available.

Flammability/Explosive Limits: 1.0 - 6.7

Vapor Pressure: 53 hPa at 22.3°C

Vapor Density: 3.52

Relative Density: 0.68

Solubility: 3 µG/mL at 20°C

Partition Coefficient: 4.66

Auto-Ignition Temperature: 223°C

Decomposition Temperature: Data not available.

Viscosity: 386 µPa s

Explosive Properties: Data not available.

Oxidizing Properties: Data not available.

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SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Strong oxidizers, strong alkalis, strong acids, heat, sparks, open flame. May attack some forms of plastics.

10.4. Hazardous Decomposition Products

Will not occur.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not applicable.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

LC50, Inhalation, Rat: (n-Heptane) 103 gm/m³/4H.

Skin Corrosion and Irritation:

Causes skin irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (Wash areas of contact with water). If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.

Serious Eye Damage and Irritation:

Not applicable.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

Not applicable.

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

Not applicable.

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Reproductive Toxicity:

Not applicable.

Specific Target Organ Toxicity from Single Exposure:

May cause respiratory irritation. May cause drowsiness or dizziness. Avoid breathing fumes, mist, vapors, or spray. Use only outdoors or in a well-ventilated area. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Repeated Exposure:

Not applicable.

Aspiration Hazard:

May be fatal if swallowed and enters airways. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Very toxic to aquatic life. Avoid release to the environment. Collect spillage. Dispose of contents in accordance with local, state, federal and international regulations. Very toxic to aquatic life with long lasting effects. Avoid release to the environment. Collect spillage. Dispose of contents in accordance with local, state, federal and international regulations.

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

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SECTION 14: Transportation Information

14.1. Transportation by Land-Department of Transportation (DOT, United States of America)

Sizes: 4 L, 5 Gal, 20 L

UN Number: UN1206

Proper Shipping Name: Heptanes

Hazard Class: 3

Packing Group: II

Hazard Label(s):



14.2. Transportation by Air - International Air Transport Association (IATA)

Sizes: 4 L, 5 Gal, 20 L

UN Number: UN1206

Proper Shipping Name: Heptanes

Hazard Class: 3

Packing Group: II

Hazard Label(s):



14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 4 L, 5 Gal, 20 L

UN Number: UN1206

Proper Shipping Name: HEPTANES

Hazard Class: 3

Packing Group: II

Hazard Label(s):



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SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Not listed.

15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Not listed.

15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Not listed.

15.5. Massachusetts Right-to-Know Substance List

n-Heptane (CAS # 142-82-5): Present

15.6. Pennsylvania Right-to-Know Hazardous Substances

n-Heptane (CAS # 142-82-5): Present

15.7. New Jersey Worker and Community Right-to-Know Components

n-Heptane (CAS # 142-82-5): flammable - third degree

n-Heptane (CAS # 142-82-5): sn 1339

15.8. California Proposition 65

Not listed.

15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

n-Heptane (CAS # 142-82-5): Present (DSL)

15.10. United States of America Toxic Substances Control Act (TSCA) List

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

n-Heptane (CAS # 142-82-5): Present (ACTIVE)

n-Heptane (CAS # 142-82-5): Present [T] (ACTIVE)

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

n-Heptane (CAS # 142-82-5): 205-563-8

n-Heptane (CAS # 142-82-5): 271-960-8

n-Heptane (CAS # 142-82-5): 300-230-4

n-Heptane (CAS # 142-82-5): 309-852-0

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SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Very toxic to aquatic life with long lasting effects.

Keep away from heat, sparks and open flame. No smoking. Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves and eye protection.

IF SWALLOWED: Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. Specific treatment (Wash areas of contact with water). Do NOT induce vomiting. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. Collect spillage.

Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.

Dispose of contents in accordance with local, state, federal and international regulations.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

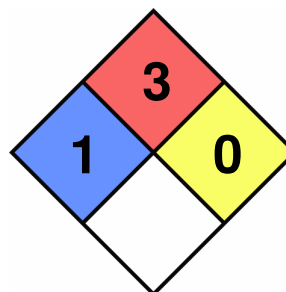
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.

Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health: 1
 Flammability: 3
 Reactivity: 0
 Special Hazard:



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16.4. Document Revision

Last Revision Date: 2023-10-11

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.