



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	1,4-DIMETHYL-1,4-CYCLOHEXADIENE, 96%
Version #	01
Issue date	December-01-2015
CAS #	4074-22-0
Product code	5724
Product use	professional, scientific and technical activities: scientific research and development
Manufacturer information	GFS Chemicals, Inc. P.O. Box 245 Powell, OH 43065 United States service@gfschemicals.com www.gfschemicals.com Phone 740-881-5501 Toll Free 800-858-9682 Fax 740-881-5989 Emergency Assistance Chemtrec 800-424-9300
Supplier	Not available.

2. Hazards Identification

Potential health effects	
Routes of exposure	Not available.
Eyes	Health injuries are not known or expected under normal use.
Skin	Health injuries are not known or expected under normal use.
Inhalation	Health injuries are not known or expected under normal use.
Ingestion	Health injuries are not known or expected under normal use.
Potential environmental effects	May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

The components are not hazardous or are below required disclosure limits.

4. First Aid Measures

First aid procedures	
Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
General advice	If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties	Not flammable by WHMIS criteria.
Extinguishing media	
Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Fire fighting equipment/instructions	Not available.

Explosion data	
Sensitivity to static discharge	Not available.
Sensitivity to mechanical impact	Not available.
Hazardous combustion products	Not available.

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. For personal protection, see section 8 of the MSDS.
Environmental precautions	Do not contaminate water.
Methods for containment	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.
Methods for cleaning up	Should not be released into the environment.
	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the MSDS.

7. Handling and Storage

Handling	Avoid release to the environment.
Storage	Material should be stored under an inert atmosphere. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the MSDS).

8. Exposure Controls / Personal Protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Engineering controls	Not available.
Personal protective equipment	
Eye/face protection	Not normally needed.
Skin protection	Wear suitable protective clothing.
Respiratory protection	No personal respiratory protective equipment normally required.
Hand protection	Not normally needed.

9. Physical & Chemical Properties

Appearance	
Physical state	Liquid.
Form	Liquid.
Color	Colorless.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Boiling point	257 °F (125 °C) estimated
Melting point/Freezing point	Not available.
Solubility (water)	Not available.
Specific gravity	Not available.
Relative density	Not available.
Flash point	73.4 °F (23.0 °C) estimated
Flammability limits in air, upper, % by volume	Not available.

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Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	Not available.
Evaporation rate	Not available.
Partition coefficient (n-octanol/water)	Not available.
Molecular weight	108.18 g/mol
Molecular formula	C8H12

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Not available.
Hazardous decomposition products	Not available.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data	No data available.
Acute effects	The toxicological properties of this material have not been fully investigated and its handling and use may be hazardous.
Sensitization	Not available.
Chronic effects	Not expected to be hazardous by WHMIS criteria.
Carcinogenicity	Not available.
Skin corrosion/irritation	Not available.
Serious eye damage/irritation	Not available.
Mutagenicity	Not available.
Reproductive effects	Not available.
Teratogenicity	Not available.
Synergistic materials	Not available.

12. Ecological Information

Ecotoxicological data	No ecotoxicity data noted for the ingredient(s).
Ecotoxicity	Contains a substance which causes risk of hazardous effects to the environment.
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Aquatic toxicity	Not available.
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

TDG	
UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (1,4-DIMETHYL-1,4-CYCLOHEXADIENE)

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Transport hazard class(es)

Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	Marine pollutant only when containing 10% or more substances identified as marine pollutants or severe marine pollutant when containing 1% or more substances identified as severe marine pollutants
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

IATA

UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (1,4-DIMETHYL-1,4-CYCLOHEXADIENE)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	3H
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (1,4-DIMETHYL-1,4-CYCLOHEXADIENE)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-E, <u>S</u> -E
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

IATA; IMDG; TDG**15. Regulatory Information**

Canadian regulations This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status Non-controlled

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information

HMIS® ratings	Health: 0 Flammability: 3 Physical hazard: 0
NFPA ratings	Health: 0 Flammability: 3 Instability: 0
Disclaimer	GFS Chemicals cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.
Prepared by	Not available.