

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name: CHDM 90%

Synonyms, Trade Names: CHDM 90

Additional identification

Chemical name: 1,4-cyclohexanedimethanol
CAS-No.: 105-08-8

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Chemical Intermediate

Uses advised against: None known.

Details of the supplier of the safety data sheet

Manufacturer / Supplier

Silver Fern Chemical Inc.
2226 Queen Anne Ave., North
Seattle, WA 98109
Phone: 1-866-282-3384

Customer Service: 1-866-282-3384

Emergency telephone number:

For 24 hour emergency contact: Infotrac 1- 800-535-5053 (USA& Canada)

For 24 hour emergency service all other countries contact: Infotrac 1-352-323-3500

SECTION 2: Hazards identification

Hazard classification:

Health hazards

Serious eye damage/eye irritation Category 1

OSHA Specified Hazards: not applicable

Warning label items including precautionary statement:

Pictogram:



Signal words: DANGER!

Hazard Statement(s): H318: Causes serious eye damage.

Precautionary statement:

Prevention: P280: Wear eye protection/face protection.

Response: P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/physician.

Hazard(s) not otherwise classified (HNOC): None known.

SECTION 3: Composition/information on ingredients

Substances / Mixtures

General information:

Chemical name	Concentration	Additional identification	Notes
1,4-cyclohexanedimethanol	90%	CAS-No.: 105-08-8	#
water	10%	CAS-No.: 7732-18-5	

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

This substance has workplace exposure limit(s).

SECTION 4: First aid measures

Description of first aid measures

Inhalation: Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention. If molten material contacts the eye, immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin contact: Wash with soap and water. Get medical attention if symptoms occur. If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water, and see a physician for removal of adhering material and treatment of burn.

Ingestion: Seek medical advice.

Most important symptoms and effects, both acute and delayed: May irritate and cause redness and pain. Burns should be treated as thermal burns. The material will come off as healing occurs; therefore, immediate removal from the skin is not necessary.

Indication of any immediate medical attention and special treatment needed

Hazards: Contact with molten substance/product may cause severe burns to skin and eyes.

Treatment: Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards:	Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures.
Extinguishing media	
Suitable extinguishing media:	Water spray. Dry chemical. Carbon Dioxide.
Unsuitable extinguishing media:	None known.
Special hazards arising from the substance or mixture:	None known.
Advice for firefighters	
Special fire fighting procedures:	None known.
Special protective equipment for fire-fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Wear appropriate personal protective equipment.
Environmental precautions:	Avoid release to the environment.
Methods and material for containment and cleaning up:	Sweep up and place in a clearly labeled container for chemical waste. Large Spillages: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.
Notification Procedures:	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

SECTION 7: Handling and storage:

Precautions for safe handling:	Do not get in eyes. Avoid contact with molten material. Wash thoroughly after handling.
Conditions for safe storage, including any incompatibilities:	Keep container closed.
Specific end use(s):	Chemical Intermediate

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits

Country specific exposure limits have not been established or are not applicable unless listed below.

Exposure controls

Appropriate engineering controls:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information:

PPE selections vary based on potential exposure conditions such as application, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material is based upon intended, normal usage. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Provide eyewash station and safety shower.

Eye/face protection:

Wear a face shield when working with molten material. Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection:

Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Other:

No data available.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Hygiene measures:

Observe good industrial hygiene practices.

Environmental Controls:

All information for relevant exposure scenarios including risk management measures are listed in the Annex.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical State:	Liquid
Form:	Emulsion
Color:	Off-white
Odor:	Mild
Odor Threshold:	No data available.
pH:	Not applicable
Melting Point	34.62 °C
Boiling Point:	285.5 °C
Flash Point:	168 °C (Setaflash Closed Cup)
Evaporation Rate:	No data available.
Flammability (solid, gas):	Not applicable
Flammability Limit - Upper (%)-:	No data available.
Flammability Limit - Lower (%)-:	No data available.
Vapor pressure:	< 0.24 Pa (20 °C)
Vapor density (air=1):	No data available.
Specific Gravity:	1.082
Solubility(ies)	
Solubility in Water:	34 - 143 g/l (25 °C)
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	log Pow: 0.36 - 1.49
Autoignition Temperature:	316 °C (ASTM E659)
Decomposition Temperature:	No data available.
Dynamic Viscosity:	Not applicable
Kinematic viscosity:	Not applicable
Explosive properties:	Not classified
Oxidizing properties:	Not classified

SECTION 10: Stability and reactivity

Reactivity:	None known.
Chemical stability:	Stable
Possibility of hazardous reactions:	None known.
Conditions to avoid:	None at ambient temperatures.
Incompatible materials:	Strong oxidizing agents.
Hazardous decomposition products:	Carbon Dioxide. Carbon Monoxide.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation:	None known.
-------------	-------------

Ingestion:	None known.
Skin contact:	Molten material will produce thermal burns.
Eye contact:	Causes eye burns. Molten material will produce thermal burns.

Information on toxicological effects

Acute Toxicity

Oral

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol Oral LD-50: (Rat): > 2,000 mg/kg

Dermal

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol Dermal LD-50: (Guinea Pig): > 1,000 mg/kg

Inhalation

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol LCLo (Rat, 6 h): > 1.25 mg/l

Repeated dose toxicity

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol NOEL (Rat(Male.), in drinking water, 90 d): 479 mg/kg
NOEL (Rat(Female.), in drinking water, 90 h): 754 mg/kg

Skin corrosion/irritation:

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol (Rabbit, 24 h): none

Serious eye damage/eye irritation:

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol (Rabbit, 24 h): Severe

Respiratory or skin sensitization:

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol OECD 406: Guinea pig sensitization, (Guinea Pig) - Not a skin sensitizer.

Mutagenicity

In vitro

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol Mutagenicity - Mammalian, In vitro Mammalian Cell Gene Mutation Test : negative +/- activation

In vivo

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol No data available.

Carcinogenicity

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol Not classified

Reproductive toxicity

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol Based on available data, the classification criteria are not met. Not classified as hazardous.

Specific target organ toxicity - single exposure

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol Not classified

Specific target organ toxicity - repeated exposure

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol Not classified

Aspiration hazard

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol No data available.

Other adverse effects: No data available.

SECTION 12: Ecological information

Toxicity

Acute toxicity

Fish

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol LC-50 (Fish, 96 h): > 125.3 mg/l

Aquatic invertebrates

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol LC-50 (Daphnia magna, 48 h): > 100 mg/l

Chronic Toxicity

Fish

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol NOEC >= 125.3 mg/l

Aquatic invertebrates

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol No data available.

Toxicity to Aquatic Plants

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol EC-50 (Alga, 72 h): > 122.9 mg/l
NOEC: (Alga, 72 h): >= 122.9 mg/l

Persistence and degradability

Biodegradation

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol 99.2 % (28 d, Ready Biodegradability: DOC Die Away Test) Readily biodegradable

Biological Oxygen Demand:

Product No data available.

Specified substance(s)

1,4-cyclohexanedimethanol BOD-5: 25 mg/g
BOD-20: 1,400 mg/g

Chemical Oxygen Demand:

Product No data available.

Specified substance(s)

1,4-cyclohexanedimethanol 2,400 mg/g

BOD/COD ratio

Product No data available.

Specified substance(s)

1,4-cyclohexanedimethanol No data available.

Bioaccumulative potential

Product: No data available.

Specified substance(s)

1,4-cyclohexanedimethanol Bioconcentration factor (BCF): 4.45 (Estimated)

Mobility in soil:

No data available.

Known or predicted distribution to environmental compartments

1,4-cyclohexanedimethanol 0.499 - 1.6 (QSAR model)

Results of PBT and vPvB assessment:

No data available.

1,4-cyclohexanedimethanol Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria, Not fulfilling vPvB (very persistent, very bioaccumulative) criteria.

Other adverse effects:

No data available.

SECTION 13: Disposal considerations

Waste treatment methods

General information: No data available.

Disposal methods: Dispose of waste and residues in accordance with local authority requirements. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.

SECTION 14: Transport information

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

DOT

Class not regulated

IMDG - International Maritime Dangerous Goods Code

Class not regulated

IATA

Class not regulated

SECTION 15: Regulatory information

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

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS (Canada) Status: controlled

WHMIS (Canada) Hazard Classification: D/2/B

SARA 311-312 Hazard Classification(s):
immediate (acute) health hazard

US EPCRA (SARA Title III) Section 313 - Toxic Chemical List
NONE

OSHA: hazardous

TSCA (US Toxic Substances Control Act): All components of this product are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): All components of this product are listed on the DSL. Any impurities present in this product are exempt from listing.

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): All components of this product are listed on AICS or otherwise comply with NICNAS.

MITI (Japanese Handbook of Existing and New Chemical Substances): All components of this product are listed in the Handbook or have been approved in Japan by new substance notification.

ECL (Korean Toxic Substances Control Act): All components of this product are listed on the Korean inventory or otherwise comply with the Korean Toxic Substances Control Act.

Philippines Inventory (PICCS) : All components of this product are listed on the Philippine inventory or otherwise comply with PICCS.

Inventory of Existing Chemical Substances in China: All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

SECTION 16: Other information

HMIS® Hazard Ratings: Health - 3, Flammability - 1, Chemical Reactivity - 0

HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

Revision Information: New SDS

Key literature references and sources for data: No data available.

Training information: No data available.

Issue date: 07/09/2014

SDS No.:

Disclaimer: The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.