Safety Data Sheet
Dow Chemical Company Ltd

Product Name: Laddaw EZI-Gun 2 Ceramic Cleaner

Revision Date: 2007/06/01
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Dow Chemical Company Ltd encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Identification of the substance/preparation and of the company/undertaking

Product Name
Laddaw EZI-Gun 2 Ceramic Cleaner

Use of the substance/preparation
Cleaner. For use in automotive applications.

COMPANY IDENTIFICATION
Dow Chemical Company Ltd
Diamond House, Lotus Park
Kingsbury Crescent
TW18 3AG Staines, Middlesex
United Kingdom

Customer Information Number: 0203 139 4000
For questions about this SDS, contact: SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: +44 (0) 1553 761 251
Local Emergency Contact: 00 44 155 37 61 251

2. Hazards Identification

Highly flammable.
Irritating to skin.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Harmful: May cause lung damage if swallowed.
Vapours may cause drowsiness and dizziness.

3. Composition/information on ingredients

Component	Amount	Classification:	CAS #	EC #
Heptane [and isomers]	<= 100.0 %	F: R11; Xn: R65; Xi: R38; R67; N: R50, R53	142-82-5	205-563-8

See Section 16 for full text of R-phrases.

4. First-aid measures

Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Seek medical attention if symptoms occur or irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.
Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.
Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.
Notes to Physician: The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Maintain adequate ventilation and oxygenation of the patient. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
Medical Conditions Aggravated by Exposure: Skin contact may aggravate preexisting dermatitis.

5. Fire Fighting Measures

Extinguishing Media: Carbon dioxide fire extinguishers. Dry chemical fire extinguishers. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
Extinguishing Media to Avoid: Do not use direct water stream.
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves).
Unusual Fire and Explosion Hazards: None known.
Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Absorb with materials such as: Cat litter. If available, use foam to smother or suppress vapors. See Section 13, Disposal Considerations, for additional information.
Personal Precautions: Material becomes slippery when wet. Ventilate area of leak or spill.
Environmental Precautions: Dike to prevent contamination of ground and surface water, then transfer into closed containers.

7. Handling and Storage

Handling
General Handling: Good housekeeping and controlling of dusts are necessary for safe handling of product. Avoid contact with eyes, skin, and clothing.

Storage

Keep container tightly closed and in a well-ventilated place. Store in a cool, dry place.

Storage temperature:

5 - 35 °C

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Heptane [and isomers]	Ireland OELV	TWA	1,600 mg/m3 400 ppm
	Ireland OELV	STEL	2,000 mg/m3 500 ppm
	ACGIH	TWA	400 ppm
	ACGIH	STEL	500 ppm
	EU IOELV	TWA	2,085 mg/m3 500 ppm
	UK WEL	TWA	500 ppm

Personal Protection

Eye/Face Protection: Use safety glasses. Safety glasses should be consistent with EN 166 or equivalent.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Viton. Polyethylene. Neoprene. Chlorinated polyethylene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl alcohol ("PVA"). Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Butyl rubber. Polyvinyl chloride ("PVC" or "vinyl"). Avoid gloves made of: Natural rubber ("latex"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use an approved air-purifying or positive-pressure supplied-air respirator depending on the potential airborne concentration. For emergency and other conditions where the exposure guideline may be exceeded, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply. Use the following CE approved air-purifying respirator: Organic vapor cartridge, type A (boiling point >65 ºC)

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls

Ventilation: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Lethal concentrations may exist in areas with poor ventilation.

9. Physical and Chemical Properties

Physical State	Liquid
Color	Colorless
Odor	Characteristic
Flash Point - Closed Cup	-4 °C *Vendor*
Flammable Limits In Air	**Lower**: No test data available **Upper**: No test data available
Autoignition Temperature	No test data available
Vapor Pressure	No test data available
Boiling Point (760 mmHg)	No test data available.
Vapor Density (air = 1)	No test data available
Specific Gravity (H2O = 1)	0.68 *Vendor*
Freezing Point	No test data available
Melting Point	No test data available
Solubility in Water (by weight)	No test data available
pH	No test data available
Octanol/Water Partition Coefficient	4.397 *Estimated*
Dynamic Viscosity	0.4 mPa.s *Vendor*

10. Stability and Reactivity

Stability/Instability
Stable under recommended storage conditions. See Storage, Section 7.

Incompatible Materials: Strong acids. Strong oxidizers. Strong bases.
Hazardous Decomposition Products: Unlikely to be formed under normal industrial use.

Hazardous Polymerization
Will not occur.

11. Toxicological Information

Acute Toxicity
Ingestion
Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Swallowing may cause gastrointestinal irritation, vomiting and diarrhea. May cause central nervous system effects. Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.
For similar material(s): Estimated LD50, Rat > 3,980 mg/kg
Eye Contact
May cause slight temporary eye irritation. May cause slight temporary corneal injury. May cause pain disproportionate to the level of irritation to eye tissues.
Skin Contact
Brief contact may cause skin irritation with local redness. May cause burning sensation. May cause itching. May cause drying and flaking of the skin. May stain skin.
Skin Absorption
Prolonged or widespread skin contact may result in absorption of harmful amounts.
The dermal LD50 has not been determined.
Inhalation

In confined or poorly ventilated areas, vapor can readily accumulate and can cause unconsciousness and death. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. May cause respiratory irritation and central nervous system depression. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). May cause nausea and vomiting.

Repeated Dose Toxicity

Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects. Heptane is part of a mixture which caused polyneuropathy. However, there is no clear evidence that heptane causes peripheral nervous system effects.

Genetic Toxicology

In vitro genetic toxicity studies were negative.

12. Ecological Information

CHEMICAL FATE

Movement & Partitioning

Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Expected to be relatively immobile in soil (Koc > 5000).
Henry's Law Constant (H): 2.6E+00 atm*m3/mole; 25 °C Estimated
Partition coefficient, n-octanol/water (log Pow): 4.397 Estimated
Partition coefficient, soil organic carbon/water (Koc): 2,040 - 16,000 Estimated

Persistence and Degradability

Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability. Biodegradation rate may increase in soil and/or water with acclimation.

ECOTOXICITY
Material is considered very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in most sensitive species).

Fish Acute & Prolonged Toxicity
LC50, mosquito fish (Gambusia affinis), 96 h: 5,000 mg/l

13. Disposal Considerations

All disposal methods must be in compliance with the EU framework Directives 91/156/EEC, 91/689/EEC and their subsequent adaptations, as implemented in National Laws and Regulations, as well as EU Directives dealing with priority waste streams. Transboundary shipment of wastes must be in compliance with EU Regulation 259/93 and subsequent modifications.
Treatment and disposal methods of used packaging: Empty containers should be recycled or otherwise disposed of by an approved waste management facility. CONTAMINATED PACKAGING: Any disposal of contaminated packaging and washings must be in accordance with State, Territory and/or Local government regulations. After container has been cleaned and labelling has been removed, empty containers can be sent for recycling or disposal. If the container is to be reconditioned, the reconditioning company should be made aware of the nature of the original contents.

14. Transport Information

ROAD & RAIL
Proper Shipping Name: HEPTANES
Hazard Class: 3 **ID Number:** UN1206 **Packing Group:** PG II

Classification: F1
Kemler Code: 33
Tremcard Number: 30S1206

OCEAN
Proper Shipping Name: HEPTANES
Hazard Class: 3 **ID Number:** UN1206 **Packing Group:** PG II
EMS Number: F-E,S-D
Marine pollutant.: No

AIR
Proper Shipping Name: HEPTANES
Hazard Class: 3 **ID Number:** UN1206 **Packing Group:** PG II
Cargo Packing Instruction: 307
Passenger Packing Instruction: 305

INLAND WATERWAYS
Proper Shipping Name: HEPTANES
Hazard Class: 3 **ID Number:** UN1206 **Packing Group:** PG II
Classification: F1
Kemler Code: 33
Tremcard Number: 30S1206

15. Regulatory Information

European Inventory of Existing Commercial Chemical Substances (EINECS)
The components of this product are on the EINECS inventory or are exempt from inventory requirements.

EC Classification and User Label Information

Hazard Symbol :
F - Highly flammable.
Xn - Harmful.
N - Dangerous for the environment.

Risk Phrases :
R11 - Highly flammable.
R38 - Irritating to skin.
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 - Harmful: May cause lung damage if swallowed.
R67 - Vapours may cause drowsiness and dizziness.

Safety Phrases :
S9 - Keep container in a well-ventilated place.
S16 - Keep away from sources of ignition - no smoking.
S29 - Do not empty into drains.
S33 - Take precautionary measures against static discharges.
S60 - This material and its container must be disposed of as hazardous waste.
S61 - Avoid release to the environment. Refer to special instructions/Safety data sheets.
S62 - If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Chemical Name Heptane [and isomers] (EC Label) (EC # 205-563-8)

16. Other Information

Risk-phrases in the Composition section

R11	Highly flammable.
R38	Irritating to skin.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: May cause lung damage if swallowed.
R67	Vapours may cause drowsiness and dizziness.

Revision

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Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

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