

SAFETY DATA SHEET

MicroDi™ Diamond Suspension Water Base LDS001 – LDS450

1.0 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: MicroDi™ Diamond Suspension, DS001-DS450
MicroDi™ Polycrystalline Diamond Suspension, DSP001- DSP060

Part Number: LDS001 - LDS450

Distributor: Ladd Research

Address: 3 Ewing Place

City, State, Zip: Essex Junction, VT 05452 USA

Phone Number: 802-658-4961

Emergency Phone: 800-424-9300 (Chemtrec)

2.0 HAZARD IDENTIFICATION

GHS Classification: Non-Hazardous

IDLH (Immediate Danger to Life and Health): None

Physical Hazards: Not Classified

Health Hazards: Classification of the Substance of Mixture (Dry Dust / Inhalation):
Eye Irritation – Category 2B

Label Elements:



Chronic Health Hazards



Health Hazards

Signal Word: Warning

Hazard Statement(s):

H318: Causes Serious Eye Damage

H315: Causes Skin Irritation

H335: May Cause Respiratory Irritation

H313: May be Harmful in Contact With Skin

Precautionary Statements:

P202: Do not handle until all safety precautions have been read and understood.

P233: Keep container tightly closed.

P260: Do not breathe dust

P264: Wash thoroughly after handling.

P281: Wear protective gloves, clothing, eye protection, and face protection.

Precautionary Response:

P305: **IF IN EYES:** Rinse cautiously with water for 15 minutes.

P304+P340: **IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P303+P332: **IF ON SKIN:** Wash with plenty of water. If skin irritation occurs: Get medical advice. Take off contaminated clothing and wash it before reuse.

3.0 COMPOSITION & HAZARDOUS INGREDIENTS

The terms "hazardous" and "hazardous materials" as used within this SDS (EU - MSD) should be interpreted as defined by, and accordance with, the OSHA Hazard Communication Standard (29 CFR 1910:1200) and the EU Occupational Exposure Limits (OEL) REGULATION (EC) No 1272/2008 including cited Appendices, Lists, References, etc., all of which are hereby incorporated by reference and stated below as appropriate.

OECD SIDS documents published by UNEP Chemicals in response to its mandate to facilitate the access to information needed for health and environmental risk assessment of chemicals. The documents contain the information gathered and an Initial Assessment performed under the framework of the OECD HPV Chemicals Programme.

Substance	CAS Number	EC Number	Percent by Weight
Propylene Glycol	57-55-6	200-338-0	5.0% - 60.0%
Diamond	7782-40-3	231-111-4	0.25% - 15.0%
Proprietary Non-Hazardous	N/A	N/A	35.0% - 55.0%
Proprietary Non Hazardous Dye	N/A	N/A	0.0% - 1.0%

Hazardous Mixtures: None

(See Section 8.0 for Occupational Exposure Limits)

4.0 FIRST AID MEASURES

First-aid measures general:

If medical advice is needed, have product container or label at hand.

First-aid measures after inhalation:

If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

First-aid measures after skin contact:

Rinse immediately with plenty of water. Gently wash with plenty of soap and water. Obtain medical attention if irritation persists.

First-aid measures after eye contact:

Immediately rinse with water for a prolonged period while holding the eyelids wide open. Seek medical attention if material is embedded in eye. If eye irritation persists: Get medical advice and attention.

First-aid measures after ingestion:

If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. Drink 1 or 2 glasses of water. If vomiting occurs, keep head low so that stomach content does not get into the lungs.

Symptoms/injuries:

Repeated or prolonged inhalation may damage lungs.

Symptoms/injuries after inhalation:

May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.

Symptoms/injuries after skin contact:

Prolonged contact with large amounts of dust may cause mechanical irritation. Dust may cause irritation in skin folds or by contact in combination with tight clothing.

Symptoms/injuries after eye contact:

Redness, pain.

Symptoms/injuries after ingestion:

Abdominal pain.

Chronic symptoms:

Respiratory difficulties.

5.0 FIRE-FIGHTING MEASURES

Fire Hazard:

Will Not Burn

Extinguishing Media:

Use ABC type fire extinguisher for surrounding fire.

Special Firefighting Procedures:

None

Unusual Fire and Explosion Hazards:

None

Reactivity:

Keep away from strong oxidizing agents and from heat and ignition sources.

Protective Equipment for Firefighting:

Self-Contained Breathing Apparatus and clothing for chemical fires.

Protection During Firefighting:

Use normal individual fire protective equipment.

6.0 ACCIDENTAL RELEASE MEASURES

Personal Precautions / Protective Equipment:

Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Keep upwind. Keep out of low lying areas. Ventilate closed spaces before entering.

Environmental Precautions: Prevent further leakage or spillage and comply with local, state and federal regulations.

Methods / Materials for Containment & Clean-up:

If product has dried, avoid generation of dust during clean-up of spills. Recover the dried product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up. Liquid product can be wiped or mopped up and disposed of accordingly.

7.0 HANDLING & STORAGE

Precautions for Safe Handling:

Do not breathe dust. Avoid generation of dust during clean-up of spills. Recover the product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up.

Wear suitable protective clothing, gloves and eye/face protection. If airborne dust is generated, use the appropriate NIOSH approved respiratory protection.

Conditions for Safe Storage:

Store in original tightly closed container. Keep away from food, drink and animal feeding stuffs. Use care in handling / storage. Store in accordance with local / regional / national / international regulation. Keep out of reach of children. Always use oldest stock first.

8.0 EXPOSURE CONTROLS & PERSONAL PROTECTION

Control Parameters: Use in accordance with safest practices.

TLV: Threshold Limit Value of a chemical substance is a level to which it is believed a worker can be exposed day after day for a working lifetime without adverse health effects.

TWA: (Time Weighted Average - TLV-TWA): average exposure on the basis of a 8h/day, 40h/week work schedule

STEL: (Short Term Exposure Level) is an employee's 15-minute time weighted average exposure at any time during a work day and cannot be repeated more than 4 times in a day.

Personal Protective Equipment: Use chemical goggles or safety glasses and chemical resistant gloves while handling under normal conditions.



Respiratory Protection: Use an appropriate NIOSH approved respirator if airborne dust concentrations exceed the appropriate PEL or TLV. All requirements set forth in 29CFR1910.134 must be met.

Protective Gloves: Nitrile gloves are recommended. Be cautious as the liquid may penetrate the glove. Frequent change is advisable.

Ventilation: Provide adequate general and local exhaust ventilation.

Eye protection: Chemical / splash goggles are recommended. Eye wash station must be present.

Other Equipment: None

9.0 PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor:	Liquid, Paste, Slightly Sweet
None Color:	Dependent on size.
Physical State:	Liquid, Paste
pH:	> 6.0
Viscosity:	430 - 690 cPS (Spindle #2 @ 30 RPM)
Specific Gravity:	Not Available
Vapor Density:	Not Available
Vapor Pressure:	Not Available
Melting Point:	Not Applicable
Boiling Point:	Not Available
Flash Point:	Not Applicable
Freezing Point:	< 0° C
Percent Volatility:	Not Applicable
Evaporation Rate (baC=1)	Not Available
Solubility in Water:	Completely Soluble
Solubility in Oil:	Not Available
Solubility in Solvents:	Not Available

10.0 STABILITY AND REACTIVITY

Reactivity: Hazardous reaction will not occur under normal conditions.

Stability: This composition is stable under normal conditions.

Incompatibility (materials to avoid): Strong Oxidizers

Hazardous Decomposition Products: Carbon and Nitrogen Oxides.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Extreme Temperatures

11.0 TOXICOLOGICAL INFORMATION

Diamond – 7782-40-3:

Acute Toxicity – Oral - LD50 - Mouse: 1000 mg / kg

Acute Toxicity: May cause irritation or burns to eyes, skin, and respiratory system.

Skin Corrosion / Irritant: Irritating to skin.

Serious Eye Damage / Irritant: Risk of serious damage to eyes.

Respiratory / Skin Sensitization: Not Classified

Germ Cell Mutagenicity: Not Classified

Carcinogenicity: Not Classified

Reproductive Toxicity: Not Classified

Target Organ Toxicity (Single Exposure): May cause respiratory / skin irritation.

Target Organ Toxicity (Repeated Exposure): May cause respiratory / skin irritation.

Aspiration Hazard: Not Classified

Teratogenicity: Not Classified

12.0 ECOLOGICAL INFORMATION

Ecotoxicity:	This product is not expected to be toxic to the environment. Adopt environmental controls to prevent the product from being released into the environment.
Persistence and Degradability:	Not readily biodegradable.
Bioaccumulative Potential:	Not expected to bioaccumulate
Mobility in Soil:	No information available
Other Adverse Effects:	No information available

13.0 DISPOSAL CONSIDERATION

You may moisten product to be swept. Dispose in a safe manner in accordance with local, state and federal regulations.

14.0 TRANSPORT INFORMATION

US DOT Classification:	Non-regulated
IMO Classification:	Non-regulated
IATA Classification:	Non-regulated
Proper Shipping Name:	Consumer Commodity
UN Number:	Non-regulated
Packing Group:	Non-regulated
Label:	Non-regulated
Reportable Quantity:	Non-regulated
Hazard Class:	Non-regulated

15.0 REGULATORY INFORMATION

U.S. Federal Regulations:

Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA):

No reportable quantity for this product.

Toxic Substance Control Act (TSCA):

All of the components of this material are listed on the TSCA Chemical Substances Inventory.

Clean Water Act (CWA):

None listed under sections of the Clean Water Act. Contact your local / state authorities to determine if substances are regulated under their jurisdiction.

Clean Air Act (CAA):

None listed under various sections of the Clean Water Act. Contact your local / state authorities to determine if substances are regulated under their jurisdiction

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

This product contains the following chemicals subject to annual release reporting requirements Under SARA Title III, Section 313 (40 CFR 372): Methanol – 67-56-1

EUROPEAN/INTERNATIONAL REGULATIONS:

Control of Substances Hazardous to Health (COSHH):

Component(s) are listed under various sections of the COSHH regulation. Contact your local authorities to determine if substances are regulated under their jurisdiction.

Scottish Environmental Protection Agency (SEPA):

Component(s) are listed under various sections of SEPA. Contact your local authorities to determine if substances are regulated under their jurisdiction.

Canada:

Contact your local authorities to determine if substances are regulated under their jurisdiction.

Hazard Classification**European Union Directives 67/548/EEC and 1999/45/EC**

Safety Phrases: S 22 Do not breathe dust.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S 38 In case of insufficient ventilation wear suitable respiratory equipment.
S 36 Wear suitable protective clothing.

U.S. STATE REGULATORY INFORMATION: The components of these products are covered under specific State regulations, as denoted below:

CALIFORNIA PROPOSITION 65: This product does not contain chemicals regulated under California Proposition 65.

U.S. - New Jersey – Right to Know Hazardous Substance List – Not Regulated

International Air Transport Authority (IATA): Not regulated

16.0 OTHER INFORMATION

NFPA health hazard	1 - Exposure would cause irritation with only minor residual injury
NFPA fire hazard	0 - Materials that will not burn.
NFPA reactivity	0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health	1 - Irritation or minor reversible injury possible.
Flammability	0
Physical	0
Personal Protection	E

Reference:

UNEP Publications, OECD SIDS, Chemical Abstract Search (CAS) Database, European Chemicals Agency (ECHA), Workplace Hazard Material Information System (WHMIS)
Material Safety Data Sheets from Manufacturer.

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EU = European Union; WHMIS=Workplace Hazard Material Information System; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; MAK = Maximum Concentration Value in the Workplace; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NTP = National Toxicology Program; STEL = Short-term Exposure Limit; TDG = Transportation of Dangerous Goods; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average

DISCLAIMER

Date of issue: 06/29/2023

All chemicals may pose unknown hazards and should be used with cautions. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Ladd Research assumes no responsibility for the completeness or accuracy of the information contained herein. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and protection of the environment.