SAFETY DATA SHEET

Date: June 2015

Section #1: PRODUCT AND COMPANY IDENTIFICATION

Lapmaster Wolters, LLC
501 W. Algonquin Road
Mt. Prospect, IL 60056

www.lapmaster.com

Telephone: (224) 659-7101 (Office Hours 8:00 a.m. to 5:30 p.m. CST)
Emergency Phone: 24 Hours/Chemtrec – 1-800-424-9300

Product Identification: Water Soluble Diamond Suspension Number 4425
Product Name: Diamond Slurry Formulation METS-DSUS-XXX-00XX

2. Hazards Identification

Acute Toxicity: Oral, Category 4

GHS Signal Word:	**Warning**
GHS Hazard Phrases:	H302 - Harmful if swallowed.
GHS Precaution Phrases:	P264 - Wash hands thoroughly after handling. P270 - Do not eat, drink or smoke when using this product.
GHS Response Phrases:	P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 - Rinse mouth.
GHS Storage and Disposal Phrases:	P501 - Dispose of contents/container to ...
Potential Health Effects (Acute and Chronic):	Chronic ingestion may cause lactic acidosis and possible seizures. Repeated excessive exposure to ethylene glycol may cause irritation of the upper respiratory tract. In humans, effects have been reported on the central nervous system, including nystagmus (involuntary, rapid, rhythmic movement of the eyeball). Exposure to large doses may cause central nervous system depression.
Inhalation:	No hazard expected in normal industrial use. Low hazard for normal industrial handling. Inhalation of a mist of this material may cause respiratory tract irritation. Material has a low vapor pressure at room temperature, so exposure to vapor is not likely. If ethylene glycol is heated or misted in work areas that are poorly ventilated, vapor/mist may accumulate and cause respiratory irritation and symptoms such as headache and nausea. Material has a very low vapor pressure at room temperature, so inhalation exposures are not expected unless material is heated or misted. May cause respiratory tract irritation.
Skin Contact:	May be absorbed through damaged or abraded skin in harmful amounts. Allergic reactions have been reported. A single prolonged skin exposure is not likely to result in the material being absorbed in harmful amounts. Repeated exposures may cause problems. Negative results have consistently been obtained in guinea pigs studies for sensitization. 1,,2-Propylene glycol is not considered an occupational skin sensitizer. (CHEMINFO) Low hazard for normal industrial handling. May cause skin irritation.
Eye Contact:	May cause slight transient injury. May cause moderate eye irritation. Dust may cause

mechanical irritation.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Low hazard for usual industrial handling. May cause hemoglobinuric nephrosis. May cause changes in surface EEG. The lethal dose in adult humans for ethylene glycol is about 100 ml (1/3 cup). Swallowing may cause nausea, vomiting or diarrhea. Excessive exposure may cause CNS effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. Toxicity follows 3-stage progression. (1) involves central nervous system effects including paralysis of eye muscles, convulsions, and coma. Metabolic acidosis and cerebral swelling may also occur. (2) involves cardiopulmonary system with symptoms of hypertension, rapid heart beat, and possible cardiac failure. (3) involves severe kidney abnormalities including possible renal failure. May cause irritation of the digestive tract.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration	
7732-18-5	Water	<60.0 %	
57-55-6	Propylene glycol	<25.0 %	
107-21-1	Ethylene glycol	<20.0 %	
7782-40-3	Diamond	<10.0 %	
110-82-7	Cyclohexane	< 0.05 %	
4418-26-2	Sodium 1-(3,4-dihydro-6-methyl-2,4-dioxo-2H-pyran-3-ylidene)ethanolate	< 0.05 %	
102-71-6	Triethanolamine	<50.0 PPM	
67-63-0	Isopropyl alcohol	< 1.0 PPM	

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Get medical aid. Remove from exposure and move to fresh air immediately.

In Case of Skin Contact: No specific treatment is necessary, since this material is not likely to be hazardous. In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

In Case of Eye Contact: No specific treatment is necessary, since this material is not likely to be hazardous. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid. Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Do NOT allow victim to rub eyes or keep eyes closed. If irritation develo ps, get medical aid.

In Case of Ingestion: No specific treatment is necessary, since this material is expected to be non-hazardous. Never give anything by mouth to an unconscious person. Get medical aid. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Wash mouth out with water. Get medical aid if irritation or symptoms occur.

Note to Physician: Treat symptomatically and supportively. Persons with impaired kidney function may be more susceptible to the effects of this substance.

5. Fire Fighting Measures

Flash Pt: Method Used: Estimate

Explosive Limits: LEL: UEL:

Autoignition Pt:

Suitable Extinguishing Media: Not available. Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam. Substance is noncombustible; use agent most appropriate to extinguish surrounding fire. Use agent most appropriate to extinguish fire.

Fire Fighting Instructions: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Material will not burn. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use extinguishing media appropriate to surrounding fire conditions.

Flammable Properties and Hazards:

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Use proper personal protective equipment as indicated in Section 8. Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation. Avoid generating dusty conditions.

7. Handling and Storage

Precautions To Be Taken in Handling: No special handling procedures are required. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Avoid breathing spray or mist. Wash hands before eating. Minimize dust generation and accumulation.

Precautions To Be Taken in Storing: No special storage requirements. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture. No special precautions indicated.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
7732-18-5	Water			
57-55-6	Propylene glycol			
107-21-1	Ethylene glycol		CEIL: 100 mg/m3 (H)	
7782-40-3	Diamond			
110-82-7	Cyclohexane	PEL: 300 ppm	TLV: 100 ppm	
4418-26-2	Sodium 1-(3,4-dihydro-6-methyl-2,4-dioxo-2H-pyran-3-ylidene)ethanolate			
102-71-6	Triethanolamine		TLV: 5 mg/m3	
67-63-0	Isopropyl alcohol	PEL: 400 ppm	TLV: 200 ppm STEL: 400 ppm	

Respiratory Equipment (Specify Type):	Respirator protection is not normally required. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Eye Protection:	Eye protection is not normally required. Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Wear chemical splash goggles.
Protective Gloves:	Protective garments not normally required. Wear appropriate protective gloves to prevent skin exposure. Glove protection is not normally required.
Other Protective Clothing:	Protective garments not normally required. Wear appropriate protective clothing to prevent skin exposure.
Engineering Controls (Ventilation etc.):	There are no special ventilation requirements. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate

9. Physical and Chemical Properties

Physical States:	[ ] Gas [X] Liquid [ ] Solid
Appearance and Odor:	Suspension. No apparent odor.
Melting Point:	NA -60.00 - 500.00 C
Boiling Point:	100.00 C - 197.00 C
Flash Pt:	Method Used: Estimate
Evaporation Rate:	
Flammability (solid, gas):	
Explosive Limits:	LEL: UEL:
Vapor Pressure (vs. Air or mm Hg):	
Vapor Density (vs. Air = 1):	
Specific Gravity (Water = 1):	
Density:	~ 1.067 G/ML
Solubility in Water:	
Percent Volatile:	
Autoignition Pt:	

10. Stability and Reactivity

Stability:	Unstable [ ] Stable [X]
Conditions To Avoid - Instability:	Excess heat, moist air, Moisture, dust generation.
Incompatibility - Materials To Avoid:	None. Strong oxidizing agents, Strong acids, isocyanates, aliphatic amines, caustics.
Hazardous Decomposition or Byproducts:	None. Carbon monoxide, Carbon dioxide.
Possibility of Hazardous Reactions:	Will occur [ ] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	

11. Toxicological Information

Toxicological Information: Epidemiology: No data available.
Reproductive Effects: Mutagenicity: Neurotoxicity: Other Studies: No information available.

Carcinogenicity/Other Information: CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 57-55-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 107-21-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 7782-40-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

General Ecological Information: Ecotoxicity: Water flea Daphnia: EC50 10000 mg/L; 48 HrUnspecified, Bacteria: Phytobacterium phosphoreum: EC50 = 710 mg/L; 30 min; Microtox testFish: Goldfish: LC50 5000 mg/L; 24 Hr; UnspecifiedFish: Guppy: LC50 1000 mg/L; 48 Hr; Unspecified If released to water, 1,2-propanediol is expected to degrade relatively rapidly via biodegradation. If released to soil, relatively rapid biodegradation should also occur. If released to the atmosphere, it is degraded rapidly by reaction with photochemically produced hydroxyl radicals (typical half-life of 32 hr). Physical removal from air by rainfall is possible.
Physical: No information available.
Other: No information available. Exists solely in particulate phase and will eventually settle out.

13. Disposal Considerations

Waste Disposal Method: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not regulated as a hazardous material. Not Regulated.
DOT Hazard Class:
UN/NA Number:

LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: No information available. Not Regulated.

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
7732-18-5	Water	No	No	No
57-55-6	Propylene glycol	No	No	No
107-21-1	Ethylene glycol	No	Yes 5000 LB	Yes
7782-40-3	Diamond	No	No	No
110-82-7	Cyclohexane	No	Yes 1000 LB	Yes
4418-26-2	Sodium 1-(3,4-dihydro-6-methyl-2,4-dioxo-2H-pyran-3-ylidene)ethanolate	No	No	No

102-71-6	Triethanolamine	No	No	No
67-63-0	Isopropyl alcohol	No	No	Yes

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:	[X] Yes [ ] No	Acute (immediate) Health Hazard
	[ ] Yes [X] No	Chronic (delayed) Health Hazard
	[ ] Yes [X] No	Fire Hazard
	[ ] Yes [X] No	Sudden Release of Pressure Hazard
	[ ] Yes [X] No	Reactive Hazard

16. Other Information

Revision Date: 05/19/2015

Hazard Rating System:

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