MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name **LPS® Precision Clean (Concentrate)**

Version # 01

Issue date 12-11-2012

CAS # Mixture

Part Number 02701, 02705, 02755

Product use An industrial cleaner designed to remove grime, oils and light grease from metal, concrete and other durable surfaces.

Manufacturer information

LPS Laboratories, a division of Illinois Tool Works
4647 Hugh Howell Rd
Tucker, GA 30084 United States
www.lpslabs.com
1-800-241-8334 / 770-243-8800
Chemtrec 1-800-424-9300

2. Hazards Identification

Emergency overview CAUTION

Harmful if absorbed through skin. Causes skin and eye irritation. Prolonged exposure may cause chronic effects.

OSHA regulatory status This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Routes of exposure Inhalation. Ingestion. Skin contact. Eye contact.

Eyes May irritate eyes. Do not get this material in contact with eyes.

Skin Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Avoid contact with the skin.

Inhalation May cause irritation of respiratory tract. Avoid breathing dust/fume/gas/mist/vapors/spray.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Do not ingest.

Target organs Skin. Eyes. Respiratory system.

Chronic effects Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Signs and symptoms Health injuries are not known or expected under normal use. Irritating to eyes and skin. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Potential environmental effects Ecological injuries are not known or expected under normal use.

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
Silicic acid, DISODIUM SALT	6834-92-0	2.5 - 10
Dipropylene Glycol Monomethyl Ether	34590-94-8	1 - 2.5
Coconut Fatty Acid Diethanolamide	68603-42-9	0.1 - 1
Non-hazardous components	**CAS #**	**Percent**
Tetrapotassium pyrophosphate	7320-34-5	2.5 - 10
Other components below reportable levels		90 - 100

4. First Aid Measures

First aid procedures

Eye contact Remove contact lenses, if present and easy to do. Rinse with plenty of water. Get medical attention if irritation develops and persists.

Skin contact Remove and isolate contaminated clothing and shoes. Wash off with soap and water. For minor skin contact, avoid spreading material on unaffected skin. If skin irritation occurs: Get medical advice/attention. Wash clothing separately before reuse.

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.
Ingestion	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Do not induce vomiting without advice from poison control center. Never give anything by mouth to a victim who is unconscious or is having convulsions. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Call a physician or poison control center immediately.
Notes to physician	Provide general supportive measures and treat symptomatically. Oxygen, if needed. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General advice	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties	None known.
Extinguishing media	
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	None known.
Protection of firefighters	
Protective equipment and precautions for firefighters	Wear suitable protective equipment.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage.

6. Accidental Release Measures

Personal precautions	Local authorities should be advised if significant spillages cannot be contained. Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.
Environmental precautions	Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Avoid release to the environment. Do not contaminate water.
Methods for containment	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Collect spillage. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.
Methods for cleaning up	Ventilate the contaminated area. Wear appropriate protective equipment and clothing during clean-up. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent product from entering drains. Do not allow material to contaminate ground water system. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. 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 in original containers for re-use. Clean up in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste. For waste disposal, see section 13 of the MSDS.
Other information	Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling	DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not breathe vapor. Do not breathe dust. Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid prolonged exposure. Do not get this material on clothing. Use only outdoors or in a well-ventilated area. Wear personal protective equipment. Wash thoroughly after handling. Avoid release to the environment. Do not empty into drains.

Storage Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store in a closed container away from incompatible materials. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Diethanolamine (CAS 111-42-2)	TWA	1 mg/m3	Inhalable fraction and vapor.
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)	STEL	150 ppm	
	TWA	100 ppm	

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)	PEL	600 mg/m3
		100 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Diethanolamine (CAS 111-42-2)	REL	15 mg/m3
		3 ppm
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)	REL	600 mg/m3
		100 ppm
	STEL	900 mg/m3
		150 ppm

Exposure guidelines

US. ACGIH Threshold Limit Values

Diethanolamine (CAS 111-42-2)	Can be absorbed through the skin.
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)	Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)	Can be absorbed through the skin.

Engineering controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye / face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles). Eye wash fountain is recommended.

Skin protection Avoid contact with the skin. Avoid contact with clothing. Wear protective gloves. Use personal protective equipment as required.

Respiratory protection Do not breathe dust/fume/gas/mist/vapors/spray. If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

General hygiene considerations When using, do not eat, drink or smoke. Do not breathe dust. Avoid contact with skin. Avoid contact with eyes. Do not get this material on clothing. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance Liquid.

Physical state Liquid.

Form Liquid.

Color Greenish-blue.

Odor Citrus

Odor threshold Not available.

pH 12.8

Vapor pressure < 17.5 mm Hg estimated

Vapor density	> 1
Boiling point	212 °F (100 °C)
Melting point/Freezing point	Not available.
Solubility (water)	100 %
Specific gravity	1.06
Relative density	Not available.
Flash point	None
Flammability limits in air, upper, % by volume	Not Established
Flammability limits in air, lower, % by volume	Not Established
Auto-ignition temperature	Not available.
VOC	1.5 %
Evaporation rate	1 BuAc
Percent volatile	Not established
Other data	
Density	8.84 lb/gal

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Reacts violently with strong acids. This product may react with oxidizing agents. Do not mix with other chemicals.
Incompatible materials	Oxidizing agents.
Hazardous decomposition products	Carbon oxides. Nitrogen oxides (NOx).
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Sensitization	Not classified.
Acute effects	May be harmful if inhaled.
Local effects	May irritate eyes and skin. May cause irritation of respiratory tract.
Chronic effects	Hazardous by OSHA criteria. Prolonged inhalation may be harmful. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged exposure may cause chronic effects.
Carcinogenicity	Possible cancer hazard - may cause cancer based on animal data.

ACGIH Carcinogens

Diethanolamine (CAS 111-42-2)	A3 Confirmed animal carcinogen with unknown relevance to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Coconut Fatty Acid Diethanolamide (CAS 68603-42-9)	2B Possibly carcinogenic to humans.
Diethanolamine (CAS 111-42-2)	2B Possibly carcinogenic to humans.

Skin corrosion/irritation	Hazardous by OSHA criteria. None known.
Epidemiology	No epidemiological data is available for this product.
Mutagenicity	Not available.
Neurological effects	Hazardous by OSHA criteria.
Reproductive effects	Not available.
Symptoms and target organs	None known.
Further information	Symptoms may be delayed.

12. Ecological Information

Ecotoxicity	Not expected to be harmful to aquatic organisms.
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Aquatic toxicity May cause long-term adverse effects in the aquatic environment.

Persistence and degradability Expected to biodegrade.

Bioaccumulation / Accumulation

Bioaccumulative potential

Octanol/water partition coefficient log Kow

Diethanolamine	-1.43

Partition coefficient

Diethanolamine	-1.43

13. Disposal Considerations

Waste codes D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]

Disposal instructions Contract with a disposal operator licensed by the Law on Disposal and Cleaning. This material and its container must be disposed of as hazardous waste. Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste.

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). Avoid discharge into water courses or onto the ground.

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

General This material is not regulated by any mode of transportation.

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components of this product are TSCA inventory listed and/or are exempt.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Diethanolamine (CAS 111-42-2)	1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Diethanolamine (CAS 111-42-2)	Listed.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	No

State regulations

US - New Jersey RTK - Substances: Listed substance

Diethanolamine (CAS 111-42-2)	Listed.
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)	Listed.

US. Massachusetts RTK - Substance List

Diethanolamine (CAS 111-42-2)
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)

US. Pennsylvania RTK - Hazardous Substances

Diethanolamine (CAS 111-42-2)	Listed.
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)	Listed.

US. Rhode Island RTK

Diethanolamine (CAS 111-42-2)
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)

16. Other Information

Further information	HMIS® is a registered trade and service mark of the NPCA.
HMIS® ratings	Health: 1 Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 1 Flammability: 0 Instability: 0
Disclaimer	This safety data sheet was prepared in accordance with the Safety Data Sheet for Chemical Products (JIS Z 7250:2010). Additional information is given in the Material Safety Data Sheet. The information in the sheet was written based on the best knowledge and experience currently available.