SAFETY DATA SHEET

1. Identification

Product identifier **LPS® Precision Clean (Concentrate)**

Other means of identification

Part Number 02701, 02705, 02755

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

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Manufacturer

Company name LPS Laboratories, a division of Illinois Tool Works, Inc.

Address 4647 Hugh Howell Rd.
Tucker, GA 30084

Country (U.S.A.)

Tel: +1 770-243-8800

In Case of Emergency 1-800-424-9300 (inside U.S.)
+001 703-527-3887 (outside U.S.)

Website www.lpslabs.com

E-mail sds@lpslabs.com

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2B

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Warning

Hazard statement Causes skin irritation. Causes eye irritation.

Precautionary statement

Prevention Wash thoroughly after handling. Wear protective gloves.

Response If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If on skin: Wash with plenty of water. Specific treatment (see this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Supplemental information Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Dipropylene Glycol Monomethyl Ether		34590-94-8	1 - 5

Chemical name	Common name and synonyms	CAS number	%
Silicic acid, DISODIUM SALT		6834-92-0	1 - 5
Tetrapotassium pyrophosphate		7320-34-5	1 - 5
Tripropylene Glycol methyl ether		25498-49-1	1 - 5

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed Treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protection recommended in Section 8 of the SDS.

Methods and materials for containment and cleaning up This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. 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 to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Avoid prolonged exposure. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value	Form
Copper, Copper Compounds (CAS 7440-50-8)	PEL	1 mg/m3	Dust and mist.
		0.1 mg/m3	Fume.
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)	PEL	600 mg/m3	
		100 ppm	
Glycerin (CAS 56-81-5)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Morpholine (CAS 110-91-8)	PEL	70 mg/m3	
		20 ppm	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Copper, Copper Compounds (CAS 7440-50-8)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)	STEL	150 ppm	
	TWA	100 ppm	
Morpholine (CAS 110-91-8)	TWA	20 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Copper, Copper Compounds (CAS 7440-50-8)	TWA	1 mg/m3	Dust and mist.
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)	STEL	900 mg/m3	
		150 ppm	
	TWA	600 mg/m3	
		100 ppm	
Morpholine (CAS 110-91-8)	STEL	105 mg/m3	
		30 ppm	
	TWA	70 mg/m3	
		20 ppm	

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - California OELs: Skin designation

Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8) Can be absorbed through the skin.
Morpholine (CAS 110-91-8) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Morpholine (CAS 110-91-8) Skin designation applies.

US - Tennesse OELs: Skin designation

Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8) Can be absorbed through the skin.
Morpholine (CAS 110-91-8) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8) Can be absorbed through the skin.
Morpholine (CAS 110-91-8) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8) Can be absorbed through the skin.
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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.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.

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

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

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear suitable protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards None known.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Greenish-blue.

Odor Citrus

Odor threshold Not available.

pH 13

Melting point/freezing point Not available.

Initial boiling point and boiling range 212 °F (100 °C)

Flash point None

Evaporation rate 1 BuAc

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not Established

Flammability limit - upper (%) Not Established

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure < 17 mm Hg @20°C

Vapor density > 1

Relative density Not available.

Solubility(ies)

Solubility (water) 100 % (in water)

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Density 8.87 lb/gal

Percent volatile > 90 %

Specific gravity 1.06

VOC (Weight %)	1.5 % per U.S. State and Federal Consumer Product Regulations

10. Stability and reactivity

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

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Components	Species	Test Results
Copper, Copper Compounds (CAS 7440-50-8)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Inhalation		
LC50	Rat	0.733 mg/l
Oral		
LD50	Rat	300 - 500 mg/kg
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)		
Acute		
Dermal		
LD50	Rabbit	10 ml/kg
		9.5 g/kg
	Rat	> 19020 mg/kg
		> 20 ml/kg
Inhalation		
LC50	Rat	> 275 ppm
Oral		
LD50	Dog	7.5 ml/kg
	Rat	> 5000 mg/kg
		5.4 ml/kg
Glycerin (CAS 56-81-5)		
Acute		
Dermal		
LD50	Guinea pig	45 ml/kg
Oral		
LD50	Guinea pig	>= 10000 mg/kg
	Mouse	23000 mg/kg

Components	Species	Test Results
		20.81 ml/kg
	Rat	20 - 39800 mg/kg
Morpholine (CAS 110-91-8)		
Acute		
Dermal		
LD50	Rabbit	0.5 ml/kg
Oral		
LD50	Guinea pig	0.09 g/kg
	Mouse	720 mg/kg
	Rat	1050 mg/kg
		1.05 g/kg
Silicic acid, DISODIUM SALT (CAS 6834-92-0)		
Acute		
Dermal		
LD50	Rat	> 5000 mg/kg
Inhalation		
LC50	Rat	> 2.06 mg/l
Oral		
LD50	Mouse	661.5 - 896.3 mg/kg
	Rat	600 mg/kg
Tetrapotassium pyrophosphate (CAS 7320-34-5)		
Acute		
Dermal		
LD50	Rabbit	> 300 mg/kg
	Rat	> 2000 mg/kg
Inhalation		
LC50	Rat	> 0.58 mg/l
Oral		
LD100	Rat	<= 5000 mg/kg
LD50	Mouse	2.3 g/kg
	Rat	300 - 2000 mg/kg
Other		
LD50	Rat	233 mg/kg
Tripropylene Glycol methyl ether (CAS 25498-49-1)		
Acute		
Dermal		
LD50	Rabbit	> 19300 mg/kg
Oral		
LD50	Dog	4835 mg/kg
	Rat	3400 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not classified.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

ACGIH Carcinogens

Morpholine (CAS 110-91-8) A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Morpholine (CAS 110-91-8) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not classified.

Chronic effects Prolonged or repeated contact may cause drying, cracking, or irritation.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Copper, Copper Compounds (CAS 7440-50-8)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.036 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	0.0319 - 0.0544 mg/l, 96 hours
Glycerin (CAS 56-81-5)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	51000 - 57000 mg/l, 96 hours
Morpholine (CAS 110-91-8)			
Aquatic			
Fish	LC50	Zebra danio (Danio rerio)	> 1 mg/l, 96 hours

Persistence and degradability Expected to biodegrade.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Glycerin	-1.76
Morpholine	-0.86

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations Dispose in accordance with all applicable regulations.

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

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).

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

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

15. Regulatory information

US federal regulations

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Copper, Copper Compounds (CAS 7440-50-8) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Copper, Copper Compounds (CAS 7440-50-8)
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)
Glycerin (CAS 56-81-5)
Morpholine (CAS 110-91-8)

US. New Jersey Worker and Community Right-to-Know Act

Copper, Copper Compounds (CAS 7440-50-8)
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)
Glycerin (CAS 56-81-5)
Morpholine (CAS 110-91-8)

US. Pennsylvania Worker and Community Right-to-Know Law

Copper, Copper Compounds (CAS 7440-50-8)
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)
Glycerin (CAS 56-81-5)
Morpholine (CAS 110-91-8)

US. Rhode Island RTK

Copper, Copper Compounds (CAS 7440-50-8)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

16. Other information, including date of preparation or last revision

Issue date	04-03-2014
Version #	01
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Revision Information	Product and Company Identification: Product and Company Identification Composition / Information on Ingredients: Ingredients Physical & Chemical Properties: Multiple Properties Transport Information: Material Transportation Information Regulatory Information: United States HazReg Data: North America GHS: Classification