

EXPW332U

1	PRODUCT AND COMPANY IDENTIFICATION
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Product Identifier: EXPW332U
Common Name: Waterbased aliphatic polyurethane
SDS Number: I47
Revision Date: 6/16/2015
Version: 1
Product Description: Waterbased Aliphatic Urethane / MoS2 dry film lubricant
Supplier Details: Coatings for Industry, Inc.
 319 Township Line Road
 Souderton, PA 18964

Emergency: Infotrac
Contact: USA: 1-800-535-5053 / International :352-323-3500
Phone: 215-723-0919
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2	HAZARDS IDENTIFICATION
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Classification of the substance or mixture**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):**

Health, Acute toxicity, 4 Oral
 Health, Acute toxicity, 3 Dermal
 Health, Skin corrosion/irritation, 2
 Health, Serious Eye Damage/Eye Irritation, 1
 Health, Acute toxicity, 4 Inhalation
 Health, Specific target organ toxicity - Single exposure, 3
 Health, Carcinogenicity, 2
 Health, Reproductive toxicity, 1 B
 Environmental, Hazards to the aquatic environment - Acute, 1
 Environmental, Hazards to the aquatic environment - Chronic, 1

GHS Label elements, including precautionary statements**GHS Signal Word: DANGER****GHS Hazard Pictograms:****GHS Hazard Statements:**

H302 - Harmful if swallowed
 H311 - Toxic in contact with skin
 H315 - Causes skin irritation
 H318 - Causes serious eye damage
 H332 - Harmful if inhaled
 H336 - May cause drowsiness or dizziness
 H351 - Suspected of causing cancer
 H360 - May damage fertility or the unborn child
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects

GHS Precautionary Statements:

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- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P233 - Keep container tightly closed.
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
- P270 - Do not eat, drink or smoke when using this product.
- P271 - Use only outdoors or in a well-ventilated area.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P302+352 - IF ON SKIN: Wash with soap and water.
- P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P308+313 - IF exposed or concerned: Get medical advice/attention.
- P332+313 - If skin irritation occurs: Get medical advice/attention.
- P362 - Take off contaminated clothing and wash before reuse.
- P391 - Collect spillage.
- P501 - Dispose of contents/container to licensed hazardous waste disposal service.

3	COMPOSITION/INFORMATION OF INGREDIENTS
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Ingredients:

Cas#	%	Chemical Name
121-44-8	0.5-1.5%	Triethylamine
872-50-4	6.0-8.0%	1-Methyl-2-pyrrolidone
7732-18-5	25-35%	Water
14807-96-6	10-15%	Talc (containing no asbestos fibers)
7779-90-0	1-5%	Phosphoric acid, zinc salt (2:3)
1317-33-5	5-10%	Molybdenum sulfide (MoS ₂)
0	10-15%	Polyurethane polymer
1333-86-4	0-5%	Carbon black
57-55-6	0-2%	Propylene glycol
112-34-5	1-5%	Diethylene glycol monobutyl ether

4	FIRST AID MEASURES
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- Inhalation:** If inhaled, remove to fresh air. Give oxygen or artificial respiration if needed. Get medical attention if irritation develops.
- Skin Contact:** In case of skin contact, wash affected areas with soap and water. Remove contaminated clothing and footwear immediately, and wash before reuse. Discard clothing and footwear which cannot be decontaminated. Get medical attention if irritation develops.
- Eye Contact:** Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation. Then remove contact lenses, if easily removeable, and continue irrigation for not less than 15 minutes. Get medical attention if irritation develops.
- Ingestion:** If ingested, do not induce vomiting unless directed to do so by medical personnel. Rinse mouth with water. Get medical attention.

5	FIRE FIGHTING MEASURES
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- Flash Point:** Greater than 200F
- Flash Point Method:** TCC
- Extinguishing Media - Alcohol, foam, CO₂, dry chemical
- Unusual Fire and Explosion Hazards - Material will not sustain combustion but closed containers may explode due to build up of steam pressure when exposed to heat.

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6	ACCIDENTAL RELEASE MEASURES
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Avoid breathing vapors. Ventilate area. Remove with inert absorbent.

7	HANDLING AND STORAGE
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Handling Precautions: Avoid repeated or prolonged contact with skin.
Do not take internally.

Storage Requirements: Do not store above 120 F.
Keep from freezing.
Do not leave containers open.

8	EXPOSURE CONTROLS/PERSONAL PROTECTION
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Engineering Controls: Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable and stated limits.

Personal Protective Equipment: Eye/face protection: Tightly fitting safety goggles or glasses. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact: Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 480 min
Material tested: Camatril (KCL 730 / Aldrich Z677442, Size M)

Splash contact: Material: Nitrile rubber Minimum layer thickness: 0.2 mm Break through time: 49 min
Material tested: Dermatril P (KCL 743 / Aldrich Z677388, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Components with workplace control parameters

Triethylamine (121-44-8)

TWA 1 ppm USA. ACGIH Threshold Limit Values (TLV)
Visual impairment
Not classifiable as a human carcinogen
Danger of cutaneous absorption

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STEL 3 ppm USA. ACGIH Threshold Limit Values (TLV)
 Visual impairment
 Not classifiable as a human carcinogen
 Danger of cutaneous absorption

TWA 10 ppm (40 mg/m³) USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
 STEL 15 ppm (60 mg/m³) USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

1-Methyl-2-pyrrolidone (872-50-4)

Skin: TWA 10 ppm USA. Workplace Environmental Exposure Levels (WEEL)

Talc (containing no asbestos fibers) (14807-96-6)

TWA 20 Million particles per ft³ of air USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
 Millions of particles per cubic foot of air, based on impinger samples counted by light-field techniques. Containing less than 1% quartz; if 1% quartz or more, use quartz limit. mppcf X 35.3 = million particles per cubic meter = particles per c.c

TWA 2 mg/m³ USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
 TWA 2 mg/m³ USA. NIOSH Recommended Exposure Limits
 TWA 2 mg/m³ USA. ACGIH Threshold Limit Values (TLV)
 Lower Respiratory Tract irritation The value is for particulate matter containing no asbestos and < 1% crystalline silica Not classifiable as a human carcinogen

Phosphoric acid, zinc salt (2:3) (7779-90-0)

Total dust ACGIH-91/93 TLV: TWA (USA) 10 mg/m³
 (no special effect)

Molybdenum sulfide (MoS₂) (1317-33-5)

TWA 15 mg/m³ USA. Occupational Exposure Limits (OSHA) - Table Z- 1 Limits for Air Contaminants
 TWA 10 mg/m³ USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
 TWA 3 mg/m³ USA. ACGIH Threshold Limit Values (TLV)
 TWA 10 mg/m³ USA. ACGIH Threshold Limit Values (TLV)
 TWA 3 mg/m³ USA. ACGIH Threshold Limit Values (TLV)

Carbon black (1333-86-4)

TWA 3.5 mg/m³ USA. ACGIH Threshold Limit Values (TLV)
 Not classifiable as a human carcinogen

TWA 3.5 mg/m³ USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
 TWA 3.5 mg/m³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
 TWA 3.5 mg/m³ USA. NIOSH Recommended Exposure Limits
 TWA 0.1 mg/m³ USA. NIOSH Recommended Exposure Limits
 Potential Occupational Carcinogen Carbon black in presence of polycyclic aromatic hydrocarbons (PAHs)
 See Appendix C
 See Appendix A

Propylene glycol (57-55-6)

TWA 10 mg/m³ USA. Workplace Environmental Exposure Levels (WEEL)

Diethylene glycol monobutyl ether (112-34-5)

ACGIH TWA Inhalable fraction and vapor 10 ppm

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9	PHYSICAL AND CHEMICAL PROPERTIES
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Appearance:	Clear to milky white	Odor:	Slight ammonia odor
Physical State:	Liquid	Solubility:	Miscible in water
Spec Grav./Density:	1.05-1.15	Percent Volatile:	65-70%

10	STABILITY AND REACTIVITY
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Chemical Stability:	This product is stable
Conditions to Avoid:	Protect from freezing
Materials to Avoid:	Oxidizing agents, isocyanates
Hazardous Decomposition:	By Fire: Carbon Dioxide Carbon Monoxide Nitrogen oxides (NOx), Amines, other aliphatic fragments which have not been determined
Hazardous Polymerization:	Hazardous polymerization will not occur.

11	TOXICOLOGICAL INFORMATION
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Triethylamine (121-44-8) [0.5-1.5%]

Information on toxicological effects

Acute toxicity:

LD50 Oral - rat - 730 mg/kg

LC50 Inhalation - rat - 4 h - 7.1 mg/l

LD50 Dermal - rabbit - 580 mg/kg

no data available

Skin corrosion/irritation: Skin - rabbit Result: Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

RTECS: YE0175000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting

Central nervous system - Irregularities - Based on Human Evidence

1-Methyl-2-pyrrolidone (872-50-4) [6.0-8.0%]

Information on toxicological effects

Acute toxicity:

LD50 Oral - rat - 3,914 mg/kg

LDLO Inhalation - rat - 4 h - > 5100 ppm

LD50 Dermal - rabbit - 8,000 mg/kg

no data available

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: Eyes - rabbit Result: Eye irritation

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Damage to fetus possible

no data available

Specific target organ toxicity - single exposure: Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

RTECS: UY5790000

prolonged or repeated exposure can cause:, Vomiting, Diarrhoea, Abdominal pain, Rats exposed to 1-methyl-2- pyrrolidinone at a concentration of 1 mg/L as an aerosol for 10 days showed depletion of hematopoietic cells in the bone marrow and atrophy of the lymphoid tissues of the thymus, spleen, and lymph nodes.

Bone marrow - Irregularities - Based on Human Evidence

Dipropylene glycol methyl ether (34590-94-8) [3.5-4.5%]

Information on toxicological effects

Acute toxicity:

Oral LD50 LD50 Oral - rat - 5,152 mg/kg

Inhalation LC50 no data available

Dermal LD50

Other information on acute toxicity

Skin corrosion/irritation: Serious eye damage/eye irritation:

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Eyes - rabbit - Mild eye irritation - 24 h

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):
no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects: no data available

Additional Information:

RTECS: JM1575000

12**ECOLOGICAL INFORMATION**

Triethylamine (121-44-8) [0.5-1.5%]

Information on ecological effects

Toxicity:

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 43.7 mg/l - 96 h.

LC50 - Oncorhynchus mykiss (rainbow trout) - 126 - 150 mg/l - 60 d

LOEC - Danio rerio (zebra fish) - 320 mg/l - 7 d

Toxicity to daphnia and EC50 - Daphnia magna (Water flea) - 200 mg/l - 48 h.

other aquatic invertebrates

Toxicity to bacteria LC50 - Bacteria - 95 mg/l - 17 h.

Persistence and degradability: no data available

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Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

no data available

1-Methyl-2-pyrrolidone (872-50-4) [6.0-8.0%]

Information on ecological effects

Toxicity:

Toxicity to fish LC50 - other fish - 4,000 mg/l - 96 h.

LC50 - *Leuciscus idus* (Golden orfe) - > 500 mg/l - 96 h

Toxicity to daphnia and EC50 - *Daphnia magna* (Water flea) - > 1,000 mg/l - 24 h.
other aquatic invertebrates

Toxicity to bacteria LC50 - Bacteria - > 9,000 mg/l:

Persistence and degradability: Biodegradability Result: 90 % - Readily biodegradable.

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: no data available

Dipropylene glycol methyl ether (34590-94-8) [3.5-4.5%]

Information on ecological effects

Toxicity:

Toxicity to fish LC50 - *Pimephales promelas* (fathead minnow) - > 10,000 mg/l - 96 h.

Toxicity to daphnia EC50 - *Daphnia magna* (Water flea) - 1,919 mg/l - 48 h.

and other aquatic invertebrates

Persistence and degradability: Biodegradability

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

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DISPOSAL CONSIDERATIONS

Product: Offer surplus solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Comply with all local, state, and federal waste disposal regulations.

Contaminated packaging: Dispose of as unused product.

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TRANSPORT INFORMATION

Not regulated for transportation.

15	REGULATORY INFORMATION
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Component (CAS#) [%] - CODES

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- Triethylamine (121-44-8) [0.5-1.5%] CERCLA, CSWHS, HAP, MASS, OSHAWAC, PA, SARA313, TSCA, TXAIR
 - 1-Methyl-2-pyrrolidone (872-50-4) [6.0-8.0%] MASS, NJHS, PA, SARA313, TSCA
 - Dipropylene glycol methyl ether (34590-94-8) [3.5-4.5%] MASS, OSHAWAC, PA, TSCA, TXAIR
 - Water (7732-18-5) [25-35%] TSCA
 - Talc (containing no asbestos fibers) (14807-96-6) [10-15%] MASS, OSHAWAC, PA, TSCA, TXAIR
 - Phosphoric acid, zinc salt (2:3) (7779-90-0) [1-5%] TSCA
 - Molybdenum sulfide (MoS₂) (1317-33-5) [5-10%] TSCA
 - Polyurethane polymer (0) [10-15%]
 - Carbon black (1333-86-4) [0-5%] MASS, OSHAWAC, PA, TSCA, TXAIR
 - Propylene glycol (57-55-6) [0-2%] HAP, PA, TSCA
 - Diethylene glycol monobutyl ether (112-34-5) [1-5%] HAP, TSCA

Regulatory CODE Descriptions

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- CERCLA = Superfund clean up substance
 - CSWHS = Clean water Act Hazardous substances
 - HAP = Hazardous Air Pollutants
 - MASS = MA Massachusetts Hazardous Substances List
 - OSHA = OSHA Workplace Air Contaminants
 - PA = PA Right-To-Know List of Hazardous Substances
 - SARA313 = SARA 313 Title III Toxic Chemicals
 - TSCA = Toxic Substances Control Act
 - TXAIR = TX Air Contaminants with Health Effects Screening Level
 - NJHS = NJ Right-to-Know Hazardous Substances

16	OTHER INFORMATION
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NOTICE : This information is presented in good faith and believed to be accurate as of the effective date below. However, no warranty is express or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Coatings For Industry, Inc. assumes no responsibility for personal injury or property damage to vendees, users, or third parties caused by the material, such vendees or users assume all risks associated with the use of the material. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The preceding specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.