

Aalseal 320

1	PRODUCT AND COMPANY IDENTIFICATION
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Product Identifier: Aalseal 320
Common Name: Waterbased Polyurethane/PTFE
SDS Number: A42
Revision Date: 5/21/2015
Version: 1
Product Use: 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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Email: cs@cficoatings.com
Web: www.cficoatings.com

2	HAZARDS IDENTIFICATION
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Classification of the substance or mixture**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):**

Environmental, Hazards to the aquatic environment - Chronic, 3
 Environmental, Hazards to the aquatic environment - Acute, 3
 Health, Reproductive toxicity, 1 B
 Health, Acute toxicity, 4 Oral
 Health, Acute toxicity, 4 Dermal
 Health, Acute toxicity, 4 Inhalation
 Health, Serious Eye Damage/Eye Irritation, 2 B

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

H412 - Harmful to aquatic life with long lasting effects
 H402 - Harmful to aquatic life
 H360 - May damage fertility or the unborn child
 H302 - Harmful if swallowed
 H312 - Harmful in contact with skin
 H332 - Harmful if inhaled
 H320 - Causes eye irritation

GHS Precautionary Statements:

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.
 P264 - Wash hands thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P271 - Use only outdoors or in a well-ventilated area.

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P273 - Avoid release to the environment.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P302+352 - IF ON SKIN: Wash with soap and water.
 P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 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.
 P501 - Dispose of contents/container to licensed hazardous waste disposal service.

3	COMPOSITION/INFORMATION OF INGREDIENTS
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Ingredients:

Cas#	%	Chemical Name
7732-18-5	39-65%	Water
872-50-4	0-5%	n-Methyl-2-pyrrolidone
121-44-8	0-1%	Triethylamine
9002-84-0	30-40%	Polytetrafluoroethylene
0	5-15%	Polyurethane polymer

4	FIRST AID MEASURES
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Inhalation: If inhaled, remove to fresh air. Give oxygen or artificial respiration if needed. Get immediate medical attention.

Skin Contact: Promptly flush skin with water until all chemical is removed. Remove contaminated clothing and footwear immediately, and wash before reuse. Discard clothing and footwear which cannot be decontaminated.

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 removable, and continue irrigation for not less than 15 minutes. Get immediate medical attention.

Ingestion: Rinse mouth with water. If ingested, do not induce vomiting unless directed to do so by medical personnel. Get medical attention.

5	FIRE FIGHTING MEASURES
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Flash Point: Greater than 200 F
 UL-94 Flammability Rating: V-0

Difficult to ignite, and flame goes out when initiating source is removed (UL-94). Limited flame spread and low smoke generation (NFPA 262-1990, UL-910). Complies with NFPA definition of "limited combustible" material. High self-ignition and auto-ignition temperatures (ASTM D1929).

Hazardous gases/vapors produced in fire are hydrogen fluoride (HF), carbon monoxide, potentially toxic fluorinated compounds(dense) black smoke, aldehydes, organic acids, nitrogen oxides (NO, NO₂ etc.), ammonia (NH₃), amines.

Extinguishing Media: Water, foam, dry chemical, CO₂.

Fire Fighting Instructions: Wear self-contained breathing apparatus. Wear full protective equipment. Hydrogen fluoride fumes emitted during a fire can react with water to form hydrofluoric acid. Wear neoprene gloves when handling refuse from fire.

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6	ACCIDENTAL RELEASE MEASURES
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NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate personal protective equipment during clean-up. Spilled material is a slipping hazard.

Spill Clean Up

Soak up with sawdust, sand, oil dry or other absorbent material. Shovel or sweep up.

Disposal Considerations:

Preferred options for disposal are: (1) Separate solids from liquid by precipitation and decanting or filtering. Dispose of dry solids in a landfill that is permitted, licensed or registered by a state to manage industrial solid waste. Discharge liquid filtrate to a wastewater treatment system. (2) Incinerate only if incinerator is capable of scrubbing out hydrogen fluoride and other acidic combustion products. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

7	HANDLING AND STORAGE
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Handling Precautions: Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Consider normal working hygiene. Launder contaminated clothing. Wash thoroughly after handling.

Storage Requirements: Storage Temperature (min/max) : 50° F/80° F.
Protect from freezing.

8	EXPOSURE CONTROLS/PERSONAL PROTECTION
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Personal Protective Equipment:

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

Eye/face protection: Safety glasses with side-shields conforming to EN166 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: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min
Material tested: Butoject (KCL 897 / Aldrich Z677647, Size M)

Splash contact: Material: Nature latex/chloroprene Minimum layer thickness: 0.6 mm Break through time: 30 min
Material tested: Lapren (KCL 706 / Aldrich Z677558, 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: impervious clothing, 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.

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Triethylamine (121-44-8)

Eye/face protection: Tightly fitting safety goggles. 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, Flame retardant antistatic protective clothing, 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.

Components with workplace control parameters

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

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

Triethylamine (121-44-8)

TWA 1 ppm USA. ACGIH Threshold Limit Values (TLV)
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

The value in mg/m³ is approximate.
See Appendix D - Substances with No Established RELs

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9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Translucent White	Odor:	Slight Ammonia
Physical State:	Liquid	Percent Volatile:	60-66
Spec Grav./Density:	1.1-1.2	Flash Point:	Greater than 200 F
pH:	10		

10 STABILITY AND REACTIVITY

Stability:	Product is stable under normal conditions.
Materials to Avoid:	Incompatible or can react with finely divided metal powders (e.g., aluminum and magnesium) and potent oxidizers like fluorine (F ₂) and related compounds (e.g., chlorine trifluoride, ClF ₃). Contact with incompatibles can cause fire, an explosion
Hazardous Decomposition:	The fluoropolymer resins used in this coating begin to decompose, very slowly, at temperatures above 625°F (330°C). Thermal decomposition is more rapid at temperatures above 750°F (400°C). Above 800°F (425°C) fluoropolymer resins give off small amounts of tetrafluoroethylene / hexafluoropropylene / perisofluorobutylene / carbonyl fluoride / hydrogen fluoride. These are toxic and if inhaled, in sufficient quantities, may be harmful. The actual decomposition products depend on temperature and the amount of oxygen. Hazardous gases/vapors produced in fire are hydrogen fluoride (HF), carbon monoxide, potentially toxic fluorinated compounds(dense) black smoke, aldehydes, organic acids, nitrogen oxides (NO, NO ₂ etc.), ammonia (NH ₃), amines.
Hazardous Polymerization:	Will not occur.

11 TOXICOLOGICAL INFORMATION**n-Methyl-2-pyrrolidone (872-50-4)**

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: May cause mild skin irritation

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

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

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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

Triethylamine (121-44-8)

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

Polytetrafluoroethylene (9002-84-0)

Information on toxicological effects

Acute toxicity:

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Oral LD50, Inhalation LC50 Dermal, LD50: no data available

Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: Eyes: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Ethene, 1,1,2,2-tetrafluoro-, homopolymer)

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

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: Not available

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ECOLOGICAL INFORMATION**n-Methyl-2-pyrrolidone (872-50-4)**

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.

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

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Triethylamine (121-44-8)

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.

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

Persistence and degradability: no data available

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.

Polytetrafluoroethylene (9002-84-0)

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

13	DISPOSAL CONSIDERATIONS
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Preferred options for disposal are: (1) Separate solids from liquid by precipitation and decanting or filtering. Dispose of dry solids in a landfill that is permitted, licensed or registered by a state to manage industrial solid waste. Discharge liquid filtrate to a wastewater treatment system. (2) Incinerate only if incinerator is capable of scrubbing out hydrogen fluoride and other acidic combustion products. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

14	TRANSPORT INFORMATION
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Non-hazardous for air, sea and road freight.

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

 Water (7732-18-5) [39-65%] TSCA

n-Methyl-2-pyrrolidone (872-50-4) [0-5%] MASS, NJHS, PA, SARA313, TSCA

Triethylamine (121-44-8) [0-1%] CERCLA, CSWHS, HAP, MASS, OSHAWAC, PA, SARA313, TSCA, TXAIR

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Polytetrafluoroethylene (9002-84-0) [30-40%] PA, TSCA

Polyurethane polymer (0) [5-15%]

Regulatory CODE Descriptions

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

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 expressed 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.