

PRO-SHIELD® 7103

90-10-7103-0000

SDS Preparation Date (mm/dd/yyyy): 06/19/2018

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SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label

: **PRO-SHIELD® 7103**

Product Code(s) : 90-10-7103-0000

Recommended use of the chemical and restrictions on use

: Electrically conductive, acrylic aerosol spray coating. Provides high levels of EMI shielding.
Ready to use.
No restrictions on use known.

Chemical family : Mixture of: Propellant; Ketones; Metal compounds; Glycol ethers; Acrylic polymer; Esters

SDS number : PHC-394

Name, address, and telephone number of the supplier:

Parker Hannifin Corp.

Chomerics Division
77 Dragon Court
Woburn, MA, USA
01888

Supplier's Telephone # : (781) 935-4850

24 Hr. Emergency Tel # : INFOTRAC: (800) 535-5053 (Within Continental US and Canada); (352)323-3500 (International)

Name, address, and telephone number of the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Red colored liquid, contained in pressurized aerosol can. Solvent odor.

Most important hazards:

Extremely flammable aerosol. May be ignited by open flames and sparks. Contents under pressure. Container may explode if heated.

Irritating to eyes. Irritating to respiratory system. Inhalation may cause central nervous system depression. Occupational exposure to the substance or mixture may cause adverse effects. For further information, please refer to section 11 of the SDS. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Avoid release to the environment. See Section 12 for more environmental information.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:

Flammable aerosol - Category 1

Gases under pressure

Eye damage/irritation - Category 2A

Specific target organ toxicity, single exposure - Category 3 (Narcotic effects; Respiratory irritation)

Label elements

Hazard pictogram(s)



Signal Word
DANGER!

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Hazard statement(s)

Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary statement(s)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing mist or vapor. Wash exposed skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear eye/face protection.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

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.

Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Dispose of contents/container in accordance with local regulation.

Other hazards

Other hazards which do not result in classification:

Toxic fumes may be released during a fire. May form peroxides when in contact with air and light. Rate of peroxide formation is not known. Inhalation of fumes may result in metal fume fever, a flu-like illness. Prolonged or repeated contact may cause drying, cracking and defatting of the skin. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache). Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights. Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
Dimethyl ether	Dimethyl oxide Methoxymethane DME	115-10-6	30.0 - 60.0
Methyl ethyl ketone	Butanone Methyl acetone MEK	78-93-3	15.0 - 40.0
Propylene glycol methyl ether	1-Methoxy-2-Propanol alpha-PGME	107-98-2	7.0 - 13.0
Copper	Not available.	7440-50-8	5.0 - 10.0
n-Propyl acetate	1-Acetoxypropane Acetic acid propyl ester Propyl ethanoate	109-60-4	1.0 - 5.0
Propylene glycol monomethyl ether acetate	2-Methoxy-1-methylethyl acetate PGMEA	108-65-6	1.0 - 5.0
silver	Silver metal Argentum	7440-22-4	1.0 - 5.0
Acetone	2-Propanone Methyl ketone	67-64-1	1.0 - 5.0

The exact concentrations of the above listed chemicals are being withheld as a trade secret.

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SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : If ingested, do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
- Inhalation* : IF INHALED: Remove person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing stops, provide artificial respiration. Call a POISON CENTER or doctor/physician if you feel unwell.
- Skin contact* : For skin contact, wash with soap and water while removing contaminated clothing. If irritation or symptoms develop, seek medical attention. Launder clothing before reuse.
- Eye contact* : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Flush eyes with water for at least 15 minutes. If eye irritation persists: get medical advice/attention.

Most important symptoms and effects, both acute and delayed

- : May cause respiratory irritation. Symptoms may include upper respiratory irritation, coughing and breathing difficulties. Inhalation may cause headache, nausea and central nervous effects such as dizziness, coordination difficulties and unconsciousness. Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
- : Inhalation of fumes may result in metal fume fever, a flu-like illness. Symptoms of metal fume fever may include fever, fatigue, vomiting, muscle aches and shortness of breath.
- : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).
- : Prolonged or repeated contact may cause drying, cracking and defatting of the skin.
- : Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights.
- : Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.

Indication of any immediate medical attention and special treatment needed

- : Provide general supportive measures and treat symptomatically. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

- Suitable extinguishing media* : Carbon dioxide (CO₂); Dry chemical; Alcohol resistant foam; Water fog.
- Unsuitable extinguishing media* : Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture / Conditions of flammability

- : Extremely flammable aerosol. Contains gas under pressure; may explode if heated. This product is contained under pressure, and could explode when exposed to heat and flame. May release peroxides on exposure to light and air, or on contact with incompatibles. Rate of peroxide formation is not known. Vapors may be heavier than air and may collect in confined and low-lying areas. Toxic fumes, gases or vapors may evolve on burning.

Flammability classification (OSHA 29 CFR 1910.106)

- : Flammable aerosol - Category 1

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Hazardous combustion products

- : Carbon oxides; Formaldehyde; Metal oxides; acetic acid; Other unidentified organic compounds.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

- : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Special fire-fighting procedures

- : Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Shield personnel to protect from venting or rupturing containers. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Wear appropriate protective equipment. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Prevent product from entering drains, sewers, waterways and soil.

Methods and material for containment and cleaning up

- : Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Use only non-sparking tools. For spilled liquids: absorb spill with inert, non-combustible material such as sand, then place into suitable containers. Do not use combustible absorbents, such as sawdust. Pick up and transfer to properly labeled containers. Contaminated absorbent material may pose the same hazards as the spilled product. Contact the proper local authorities. Refer to Section 13 for disposal of contaminated material.

Special spill response procedures

- : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).
US CERCLA Reportable quantity (RQ): Methyl ethyl ketone (5000 lbs / 2270 kg); Copper (5000 lbs / 2270 kg); silver (1000 lbs / 454 kg); Acetone (5000 lbs / 2270 kg).

In Canada: Contact appropriate local and provincial environmental authorities for assistance and/or reporting requirements.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Use only outdoors or in a well-ventilated area. Wear suitable protective equipment during handling. Wear eye/face protection. Avoid breathing mist or vapor. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Keep away from incompatibles. Always replace cap after use. Wash thoroughly after handling.

Conditions for safe storage

- : Store in cool/well-ventilated place. Store locked up. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking. Have appropriate fire extinguishers and spill clean-up equipment in or near storage area. Protect from sunlight and do not expose to temperatures exceeding 50 °C/122 °F. Keep away from incompatibles.

Incompatible materials

- : Strong oxidizing agents; Strong acids; Strong bases; Halogenated compounds; Reactive metals

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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:				
<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Dimethyl ether	1000 ppm (AIHA WEEL)	N/Av	N/Av	N/Av
Methyl ethyl ketone	200 ppm	300 ppm	200 ppm (590 mg/m ³)	N/Av
Propylene glycol methyl ether	50 ppm	100 ppm	N/Av	N/Av
Copper	0.2 mg/m ³ (fume); 1 mg/m ³ (Dust and mist)	N/Av	0.1 mg/m ³ (fume); 1 mg/m ³ (Dust and mist)	N/Av
n-Propyl acetate	200 ppm	250 ppm	200 ppm (840 mg/m ³)	N/Av
Propylene glycol monomethyl ether acetate	50 ppm (AIHA WEEL)	N/Av	N/Av	N/Av
silver	0.1 mg/m ³ (dust and fume)	N/Av	0.01 mg/m ³	N/Av
Acetone	250 ppm	500 ppm	1000 ppm (2400 mg/m ³)	N/Av

Exposure controls

Ventilation and engineering measures

- : Use only outdoors or in a well-ventilated area. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection

- : If airborne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02. Advice should be sought from respiratory protection specialists.

Skin protection

- : Gloves impervious to the material are recommended. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Depending on conditions of use, an impervious apron should be worn.

Eye / face protection

- : Wear eye/face protection. Wear as appropriate: Tightly fitting safety goggles; Safety glasses with side shields. A full face shield may also be necessary.

Other protective equipment

- : Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.

General hygiene considerations

- : Avoid breathing mist or vapor. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance** : Red colored liquid, contained in pressurized aerosol can.
- Odor** : Solvent odor.
- Odor threshold** : N/Av
- pH** : N/Av

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Melting/Freezing point : N/Av
Initial boiling point and boiling range : N/Av
Flash point : - 5°C (23°F) (concentrate) (based on ingredients)
Flashpoint (Method) : closed cup
Evaporation rate (BuAe = 1) : N/Av
Flammability (solid, gas) : Not applicable.
Lower flammable limit (% by vol.) : N/Av
Upper flammable limit (% by vol.) : N/Av
Oxidizing properties : None known.
Explosive properties : Aerosols are sensitive to mechanical impact. Closed containers are contained under pressure and may explode if exposed to excess heat for a prolonged period of time.
Vapor pressure : N/Av
Vapor density : > 1 (Air = 1.0)
Relative density / Specific gravity : 1.1
Solubility in water : N/Av
Other solubility(ies) : N/Av
Partition coefficient: n-octanol/water or Coefficient of water/oil distribution : N/Av
Auto-ignition temperature : N/Av
Decomposition temperature : N/Av
Viscosity : N/Av
Volatiles (% by weight) : N/Av
Volatile organic Compounds (VOC's) : 721 g/L
Absolute pressure of container : N/Av
Flame projection length : N/Av
Other physical/chemical comments : Chemical heat of combustion: N/Av

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not normally reactive.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : Hazardous polymerization does not occur.
Conditions to avoid : Direct sources of heat. Do not use in areas without adequate ventilation. Avoid contact with incompatible materials. Protect from sunlight and do not expose to temperatures exceeding 50 °C/122 °F.
Incompatible materials : Strong oxidizing agents; Strong acids; Strong bases; Halogenated compounds; Reactive metals
Hazardous decomposition products : None known, refer to hazardous combustion products in Section 5.

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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES

Routes of entry skin & eye : YES

Routes of entry Ingestion : YES

Routes of exposure skin absorption
: YES

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

- : May cause respiratory irritation. Symptoms may include upper respiratory irritation, coughing and breathing difficulties. May cause nausea, vomiting, headache and other central nervous system effects. Inhalation of fumes may result in metal fume fever, a flu-like illness. Symptoms of metal fume fever may include fever, fatigue, vomiting, muscle aches and shortness of breath. In extremely high concentrations, product may act as an asphyxiant and cause increased breathing and pulse rates, fatigue and unconsciousness.

Sign and symptoms ingestion

- : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).

Sign and symptoms skin

- : May cause mild skin irritation. May be absorbed through the skin. If product is sprayed directly on skin, symptoms of frostbite may be experienced including numbness, prickling and itching.

Sign and symptoms eyes

- : Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling and blurred vision. If product is sprayed directly into the eyes, could cause freezing of the eye.

Potential Chronic Health Effects

- : Prolonged or repeated skin exposure may cause redness, a burning sensation, drying and cracking of the skin (dermatitis). Prolonged overexposure may cause slight kidney effects, such as increased organ weight.

Mutagenicity

- : No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

- : Not classifiable as a human carcinogen.
No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

- : This product is not expected to cause reproductive or developmental effects.

Sensitization to material

- : No data available to indicate product or components may be skin sensitizers.
No data available to indicate product or components may be respiratory sensitizers.

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Specific target organ effects : This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:
Specific target organ toxicity, single exposure - Category 3. May cause respiratory irritation.
May cause drowsiness or dizziness.

According to the classification criteria of U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015), this product is not expected to cause target organ toxicity through repeated exposures.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye, respiratory and central nervous system disorders.

Synergistic materials

: None known or reported by the manufacturer.

Toxicological data

: Not classified for acute toxicity based on available data. No data is available on the product itself. The calculated ATE values for this mixture are:
ATE oral = 6173 mg/kg
ATE inhalation (vapors) = 68 mg/L/4H

See below for individual ingredient acute toxicity data.

<u>Chemical name</u>	<u>LC₅₀ (4hr)</u>	<u>LD₅₀</u>	
	<u>inh, rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Dimethyl ether	164,000 ppm	N/Ap (gas)	N/Ap (gas)
Methyl ethyl ketone	11 300 ppm (33.3 mg/L (vapor))	2740 mg/kg	6480 mg/kg
Propylene glycol methyl ether	15 000 ppm (55.3 mg/L) (vapor)	4016 mg/kg	> 2000 mg/kg (No mortality)
Copper	> 5.11 mg/L (dust) (No mortality)	> 2500 mg/kg	> 2000 mg/kg
n-Propyl acetate	32 mg/L (vapor)	8700 mg/kg	> 17 800 mg/kg
Propylene glycol monomethyl ether acetate	> 5320 ppm (28.7 mg/L) (vapor)	8532 mg/kg	> 19 200 mg/kg
silver	> 5.16 mg/L (dust) (No mortality)	> 2000 mg/kg (No mortality)	> 2000 mg/kg (No mortality)
Acetone	30 000 ppm (71 mg/L) (vapor)	5800 mg/kg	> 15 800 mg/kg

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

: The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. This product contains the following substance which may also be hazardous for the environment: Propyl acetate.

This product also contains: Copper. The acute toxicity of copper to aquatic species varies drastically by the chemical form and correlates with the availability of free ionic copper. Aquatic toxicity is highly variable not only by organism but with physical and chemical characteristics of the water itself.

See the following tables for individual ingredient ecotoxicity data.

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Ecotoxicity data:

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Dimethyl ether	115-10-6	> 4100 mg/L (Guppy)	N/Av	None.
Methyl ethyl ketone	78-93-3	2993 mg/L (Fathead minnow)	N/Av	None.
Propylene glycol methyl ether	107-98-2	20 800 mg/L (Fathead minnow)	> 1000 mg/L (estimated)	None.
Copper	7440-50-8	N/Av	N/Av	None.
n-Propyl acetate	109-60-4	60 mg/L (Fathead minnow)	N/Av	None.
Propylene glycol monomethyl ether acetate	108-65-6	161 mg/L (Fathead minnow)	N/Av	None.
silver	7440-22-4	N/Av	N/Av	None.
Acetone	67-64-1	6210 mg/L (Fathead minnow)	N/Av	None.

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Dimethyl ether	115-10-6	> 4400 mg/L	N/Av	None.
Methyl ethyl ketone	78-93-3	308 mg/L (Daphnia magna)	N/Av	None.
Propylene glycol methyl ether	107-98-2	23 300 mg/L (Daphnia magna)	210 mg/L (estimated)	None.
Copper	7440-50-8	N/Av	N/Av	None.
n-Propyl acetate	109-60-4	91.5 mg/L (Daphnia magna)	N/Av	None.
Propylene glycol monomethyl ether acetate	108-65-6	408 mg/L (Daphnia magna)	≥ 100 mg/L	None.
silver	7440-22-4	N/Av	N/Av	None.
Acetone	67-64-1	15 800 mg/L (Daphnia magna)	1660 mg/L	None.

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<u>Ingredients</u>	CAS No	<u>Toxicity to Algae</u>		
		<u>EC50 / 96h or 72h</u>	<u>NOEC / 96h or 72h</u>	<u>M Factor</u>
Dimethyl ether	115-10-6	154.917 mg/L/96hr (Green algae) (QSAR)	N/Av	None.
Methyl ethyl ketone	78-93-3	1972 mg/L/72hr (Green algae)	1240 mg/L/96hr	None.
Propylene glycol methyl ether	107-98-2	> 1000 mg/L/96hr (Green algae)	160 mg/L/96hr (estimated)	None.
Copper	7440-50-8	N/Av	N/Av	None.
n-Propyl acetate	109-60-4	672 mg/L/72hr (Green algae)	83.2 mg/L/72hr	None.
Propylene glycol monomethyl ether acetate	108-65-6	> 1000 mg/L/72hr (Green algae)	≥ 1000 mg/L/72hr	None.
silver	7440-22-4	N/Av	N/Av	None.
Acetone	67-64-1	7000 mg/L/96hr (Green algae)	N/Av	None.

Persistence and degradability

- : The product itself has not been tested.
- Contains the following chemicals which are not readily biodegradable: Dimethyl ether; Copper; silver.

Bioaccumulation potential

- : The product itself has not been tested. See the following data for ingredient information.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Dimethyl ether (CAS 115-10-6)	0.07 (QSAR)	N/Av
Methyl ethyl ketone (CAS 78-93-3)	0.29	3.0
Propylene glycol methyl ether (CAS 107-98-2)	- 0.49 (estimated)	3.2 (calculated)
n-Propyl acetate (CAS 109-60-4)	1.4	3.0 (estimated)
Propylene glycol monomethyl ether acetate (CAS 108-65-6)	0.36	N/Av
Acetone (CAS 67-64-1)	0.24	0.65 (Fish)

Mobility in soil : The product itself has not been tested.

Other Adverse Environmental effects

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

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal

- : This material and its container must be disposed of as hazardous waste. Dispose of in accordance with local regulations. This material and its container must be disposed of in a safe way.

Methods of Disposal

- : Dispose in accordance with all applicable federal, state, provincial and local regulations.

RCRA

- : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

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SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	UN1950	Aerosols	2.1	none	
49CFR/DOT Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. For limited quantity shipping information, refer to 49 CFR Section 173.306.				
TDG	UN1950	AEROSOLS	2.1	none	
TDG Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. Under the TDG, refer to Section 1.17 for additional exemption requirements, if shipping under this exemption.				
ICAO/IATA	UN1950	Aerosols, flammable	2.1	none	
ICAO/IATA Additional information	Refer to the appropriate Packing Instruction, prior to shipping this material. Review all State and Operator Variations, prior to shipping this material.				
IMDG	UN1950	AEROSOLS	2.1	none	
IMDG Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass.				

Special precautions for user : Appropriate advice on safety must accompany the package. Keep away from heat, sparks and open flame. - No smoking.

Environmental hazards : This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See Section 12 for more environmental information.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
: Not applicable.

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SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Dimethyl ether	115-10-6	Yes	None.	None.	No	N/Ap
Methyl ethyl ketone	78-93-3	Yes	5000 lb/ 2270 kg	None.	No	N/Ap
Propylene glycol methyl ether	107-98-2	Yes	None.	None.	No	N/Ap
Copper	7440-50-8	Yes	5000 lbs / 2270 kg	None.	Yes	1%
n-Propyl acetate	109-60-4	Yes	None.	None.	No	N/Ap
Propylene glycol monomethyl ether acetate	108-65-6	Yes	None.	None.	No	N/Ap
silver	7440-22-4	Yes	1000 lb/454 kg	None.	Yes	1%
Acetone	67-64-1	Yes	5000 lb/ 2270 kg	None.	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes:

Physical hazards (Flammable aerosol; Gas Under Pressure)

Health hazards (Eye irritation; Specific target organ toxicity, single exposure)

Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Dimethyl ether	115-10-6	No	N/Ap	No	Yes	Yes	Yes	Yes	Yes
Methyl ethyl ketone	78-93-3	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Propylene glycol methyl ether	107-98-2	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Copper	7440-50-8	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
n-Propyl acetate	109-60-4	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Propylene glycol monomethyl ether acetate	108-65-6	No	N/Ap	No	No	No	No	No	No
silver	7440-22-4	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes

California Proposition 65: This product can expose you to chemicals which are known to the State of California to cause birth defects or other reproductive harm. This product contains trace amounts of: Toluene (< 0.1%)

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Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

Canadian National Pollutant Release Inventory (NPRI): This product contains the following substances listed on the NPRI:

Dimethyl ether (Part 5: Individual Substances)
Methyl ethyl ketone (Part 1, Group A Substance; Part 5: Individual Substances)
Copper (Part 1, Group A Substance)
Propylene glycol monomethyl ether acetate (Part 5: Other groups and mixtures)
silver (Part 1, Group A Substance)

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

International Information:

Components listed below are present on the following International Inventory list:

Ingredients	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	New Zealand IOC
Dimethyl ether	115-10-6	204-065-8	Present	Present	(2)-360	KE-27704	Present	HSR000995
Methyl ethyl ketone	78-93-3	201-159-0	Present	Present	(2)-542	KE-24094	Present	HSR001190
Propylene glycol methyl ether	107-98-2	203-539-1	Present	Present	(7)-97; (2)-404	KE-23379	Present	HSR001187
Copper	7440-50-8	231-159-6	Present	Present	Not listed	KE-08896	Present	HSR002948
n-Propyl acetate	109-60-4	203-686-1	Present	Present	(2)-727	KE-29778	Present	HSR001217
Propylene glycol monomethyl ether acetate	108-65-6	203-603-9	Present	Present	(2)-3144	KE-23315	Present	HSR001219
silver	7440-22-4	231-131-3	Present	Present	Not listed	KE-31261	Present	HSR003077
Acetone	67-64-1	200-662-2	Present	Present	(2)-542	KE-29367	Present	HSR001070

SECTION 16. OTHER INFORMATION

Legend

: ACGIH: American Conference of Governmental Industrial Hygienists
AIHA: American Industrial Hygiene Association
AICS: Australian Inventory of Chemical Substances
CAS: Chemical Abstract Services
CSA: Canadian Standards Association
EC50: Effective Concentration 50%
EINECS: European Inventory of Existing Commercial chemical Substances
ENCS: Existing and New Chemical Substances
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IBC: Intermediate Bulk Container
IECSC: Inventory of Existing Chemical Substances
IMDG: International Maritime Dangerous Goods
IOC: Inventory of Chemicals
KECI: Korean Existing Chemicals Inventory
KECL: Korean Existing Chemicals List
LC: Lethal Concentration
LD: Lethal Dose
N/Ap: Not Applicable
N/Av: Not Available
NIOSH: National Institute of Occupational Safety and Health
NOEC: No observable effect concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Co-operation and Development

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OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
PICCS: Philippine Inventory of Chemicals and Chemical Substances
RTECS: Registry of Toxic Effects of Chemical Substances
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WEEL: Workplace Environmental Exposure Level
WHMIS: Workplace Hazardous Materials Identification System

References

- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2017.
- 2. International Agency for Research on Cancer Monographs, searched 2018.
- 3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2018 (Chempendium, HSDB and RTECs).
- 4. Material Safety Data Sheets from manufacturer.
- 5. US EPA Title III List of Lists - March 2015 version.
- 6. California Proposition 65 List - May 25, 2018 version.
- 7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2018.

Preparation Date (mm/dd/yyyy)

: 06/19/2018

Other special considerations for handling

: Provide adequate information, instruction and training for operators.

Prepared for: Parker Hannifin Corp. 77 Dragon Court Woburn, MA, USA 01888 Telephone: 781-935-4850 Direct all enquiries to: Parker Hannifin Corp.	
Prepared by: ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.): (888) 977-4834 (Canada) http://www.thecompliancecenter.com	

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