



ACTI-Brite Biodegradable

AB-1, AB-5

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SECTION 1. IDENTIFICATION

Product identifier used on the label

: **ACTI-Brite Biodegradable**

Product Code(s) : AB-1 (P/N 475210), AB-5 (P/N 475209)

Recommended use of the chemical and restrictions on use

: Refrigeration and air conditioning
Use pattern: Professional Use Only
Restriction on use: None known

Chemical family : Mixture

Name, address, and telephone number
of the supplier:

Parker Hannifin Corporation - Sporlan Division

206 Lange Drive
Washington, MO, U.S.A.
63090

Supplier's Telephone # : (636) 239-1111

24 Hr. Emergency Tel # : Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887
(Outside U.S.).

Name, address, and telephone number
of the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear pink. Bland odor.

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).
Hazard classification:

Skin Corrosion/Irritation - Category 1

Eye Damage/Irritation - Category 1

Specific target organ toxicity, single exposure - Category 3 respiratory tract irritation

Label elements

Hazard pictogram(s)



Signal Word

DANGER!

Hazard statement(s)

Causes severe skin burns and eye damage.
May cause respiratory irritation.



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Precautionary statement(s)

Wash thoroughly after handling.
Do not breathe dust or mist.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/clothing and eye/face protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash contaminated clothing before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor/physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.

Store locked up.
Store in a well-ventilated place. Keep container tightly closed.

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

Other hazards

Other hazards which do not result in classification:

Chronic skin contact with low concentrations may cause dermatitis. Prolonged exposure may cause skeletal fluorosis (weakened bone structure). Symptoms of Fluorosis include fragile bones, stiffness of the joints, osteosclerosis, loss of appetite, nausea, vomiting, dyspnea, salivation, abdominal pain, fever, paresthesias, nystagmus, optic neuritis, polyuria, stomatitis, albuminuria, nettle rash, skin, tooth and kidney damage and cardiac arrhythmias.

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>
Urea hydrochloride	Urea, monohydrochloride	506-89-8	5.0 - 10.0
Ammonium fluoride	Acid ammonium fluoride	1341-49-7	5.0 - 10.0
Diethylene glycol butyl ether	Glycol DB Ether	112-34-5	1.0 - 5.0
Alcohols, C9-11, ethoxylated	Alkyl(C9-C11) alcohol, ethoxylated	68439-46-3	1.0 - 5.0

The exact concentrations of the above listed chemicals are being withheld as a trade secret as allowed by 29CFR1910.1200.

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : Do not induce vomiting. Have victim rinse mouth with water, then give one to two glasses of water to drink. Seek immediate medical attention/advice. Never give anything by mouth to an unconscious person.
- Inhalation* : Immediately remove person to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Seek immediate medical attention/advice.
- Skin contact* : Remove contaminated clothing. Flush affected skin with gently flowing lukewarm water for at least 20 minutes. Cover wound with sterile dressing. Do not rub area of contact. Wash contaminated clothing before re-use. Seek immediate medical attention/advice.
- Eye contact* : Immediately flush eyes thoroughly with running water for at least 20 to 30 minutes. Protect unharmed eye. Seek immediate medical attention/advice.



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Most important symptoms and effects, both acute and delayed

- : If mists are formed, may cause severe irritation to the nose, throat and respiratory tract. Symptoms may include coughing, choking and wheezing. Overexposure to sprays or mists may cause chemical pneumonitis (inflammation of lung tissue). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Causes severe skin irritation. Symptoms may include redness, blistering, pain and swelling. Causes serious eye damage. Symptoms may include severe pain, blurred vision, redness and corrosive damage. Could cause blindness. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Prolonged exposure may cause skeletal fluorosis (weakened bone structure). Symptoms of Fluorosis include fragile bones, stiffness of the joints, osteosclerosis, loss of appetite, nausea, vomiting, dyspnea, salivation, abdominal pain, fever, paresthesias, nystagmus, optic neuritis, polyuria, stomatitis, albuminuria, nettle rash, skin, tooth and kidney damage and cardiac arrhythmias.

Indication of any immediate medical attention and special treatment needed

- : Immediate medical attention is required. Treat symptomatically. Causes chemical burns.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

- : Use water fog or fine spray, foams, carbon dioxide or dry chemical. Some chemical extinguishing agents may react with this material.

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

- : Not considered flammable. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Vapours are heavier than air and collect in confined and low-lying areas.

Flammability classification (OSHA 29 CFR 1910.106)

- : Not flammable.

Hazardous combustion products

- : Carbon oxides; Hydrogen chloride ;Ammonia.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

- : Firefighters should wear an approved full-face, self-contained breathing apparatus (SCBA) and impervious clothing.

Special fire-fighting procedures

- : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. Individuals involved in the cleanup must wear appropriate personal protective equipment. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Methods and material for containment and cleaning up



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- : Remove all sources of ignition. Ventilate area of release. Stop the spill at source if it is safe to do so. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Do not flush into surface water or sanitary sewer system. Notify the appropriate authorities as required.

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): Ammonium bifluoride (100 lbs / 45.4 kg)

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Use only in well-ventilated areas. Wear protective gloves/clothing and eye/face protection. Do not breathe fumes or vapours. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Keep away from bases, metals and other incompatibles. Keep away from heat and flame. Keep containers tightly closed when not in use.

Conditions for safe storage

- : Store in a cool, dry, well-ventilated area. 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 in the area. Store in corrosion-resistant containers. Store locked up.

Incompatible materials

- : Oxidizing agents; Metals; Alkalies Reducing agents.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
	Urea hydrochloride	N/Av	N/Av	N/Av
Ammonium fluoride	N/Av	N/Av	N/Av	N/Av
Diethylene glycol butyl ether	10 ppm (inhalable) (vapor)	N/Av	N/Av	N/Av
Alcohols, C9-11, ethoxylated	N/Av	N/Av	N/Av	N/Av

Exposure Limits:

Exposure controls

Ventilation and engineering measures

- : Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits. Ensure adequate ventilation, especially in confined areas.

Respiratory protection

- : Respiratory protection is required if the concentrations exceed the TLV. NIOSH-approved respirators are recommended. A self contained breathing apparatus should be used in emergency situations or instances where exposure levels are not known. 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

- : Wear protective gloves/clothing. Advice should be sought from glove suppliers.

Eye / face protection

- : Wear eye/face protection. Chemical splash goggles must be worn when handling this material. A full face shield may also be necessary.



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Other protective equipment : Wear chemically protective gloves (impervious), boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. An eyewash station and safety shower should be made available in the immediate working area.

General hygiene considerations

: Do not breathe mist or vapor. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse. Contaminated work clothing should not be allowed out of the workplace.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Pink liquid.

Odour : Bland odor.

Odour threshold : N/Av

pH : < 2.0

Melting/Freezing point : 0°C (32°F)

Initial boiling point and boiling range

: 100°C (212°F)

Flash point : N/Av

Flashpoint (Method) : N/Av

Evaporation rate (BuAe = 1) : > 1

Flammability (solid, gas) : Not applicable.

Lower flammable limit (% by vol.)

: N/Av

Upper flammable limit (% by vol.)

: N/Av

Oxidizing properties : None.

Explosive properties : Not explosive

Vapour pressure : 23.8 mmHg

Vapour density : > 1

Relative density / Specific gravity

: 1.0

Solubility in water : Complete

Other solubility(ies) : None known.

Partition coefficient: n-octanol/water or Coefficient of water/oil distribution

: N/Av

Auto-ignition temperature : N/Av

Decomposition temperature : Not available.

Viscosity : <20 cps

Volatiles (% by weight) : 89%

Volatile organic Compounds (VOC's)

: 20 g/L

Absolute pressure of container

: N/Av

Flame projection length : N/Av

Other physical/chemical comments

: None known or reported by the manufacturer.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not normally reactive.



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- Chemical stability** : Stable under the recommended storage and handling conditions prescribed.
- Possibility of hazardous reactions** : No dangerous reaction known under conditions of normal use.
- Conditions to avoid** : Avoid heat and open flame. Avoid contact with incompatible materials.
- Incompatible materials** : See Section 7 (Handling and Storage) for further details.
- Hazardous decomposition products** : None known, refer to hazardous combustion products in Section 5.

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

- : If mists are formed, may cause severe irritation to the nose, throat and respiratory tract. Symptoms may include coughing, choking and wheezing. Extremely high exposures may lead to inflammation of lung tissue (chemical pneumonitis), chemical bronchitis and accumulation of fluid in the lungs (pulmonary edema). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.

Sign and symptoms ingestion

- : May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death.

Sign and symptoms skin

- : Causes severe skin irritation. Symptoms may include redness, blistering, pain and swelling.

Sign and symptoms eyes

- : Causes serious eye damage. Symptoms may include severe pain, tearing, redness, swelling and blurred vision. Permanent eye damage including blindness could result.

Potential Chronic Health Effects

- : Chronic skin contact with low concentrations may cause dermatitis. Prolonged exposure may cause skeletal fluorosis (weakened bone structure). Repeated or prolonged exposure may result in kidney effects.

Mutagenicity : Not expected to be mutagenic in humans.

Carcinogenicity : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

- : Not expected to have other reproductive effects.

Sensitization to material : Not expected to be a skin or respiratory sensitizer.

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 (STOT), Single Exposure: Category 3 May cause respiratory irritation.

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.



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Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Synergistic materials

: Not available.

Toxicological data

: There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data. The calculated ATE values for this mixture are:
ATE oral = 4301.66 mg/kg

Chemical name	LC ₅₀ (4hr)	LD ₅₀	
	inh, rat	(Oral, rat)	(Rabbit, dermal)
Urea hydrochloride	N/Av	N/Av	N/Av
Ammonium fluoride	N/Av	130 mg/kg	N/Av
Diethylene glycol butyl ether	N/Av	6560 mg/kg	2764 mg/kg
Alcohols, C9-11, ethoxylated	N/Av	1378 mg/kg	>2000 mg/kg

Other important toxicological hazards

: None known.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

: No data is available on the product itself. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

Ingredients	CAS No	Toxicity to Fish		
		LC ₅₀ / 96h	NOEC / 21 day	M Factor
Urea hydrochloride	506-89-8	N/Av	N/Av	None.
Ammonium fluoride	1341-49-7	N/Av	N/Av	None.
Diethylene glycol butyl ether	112-34-5	1300 mg/L (Bluegill sunfish)	N/Av	None.
Alcohols, C9-11, ethoxylated	68439-46-3	8.5 mg/L (Fathead minnow)	N/Av	N/Av

Ingredients	CAS No	Toxicity to Daphnia		
		EC ₅₀ / 48h	NOEC / 21 day	M Factor
Urea hydrochloride	506-89-8	N/Av	N/Av	None.
Ammonium fluoride	1341-49-7	N/Av	N/Av	None.
Diethylene glycol butyl ether	112-34-5	> 100 mg/L (Daphnia magna)	N/Av	None.
Alcohols, C9-11, ethoxylated	68439-46-3	5.3 mg/L Water flea	N/Av	N/Av



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<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Algae</u>		
		<u>EC50 / 96h or 72h</u>	<u>NOEC / 96h or 72h</u>	<u>M Factor</u>
Urea hydrochloride	506-89-8	N/Av	N/Av	None.
Ammonium fluoride	1341-49-7	N/Av	N/Av	None.
Diethylene glycol butyl ether	112-34-5	> 100 mg/L/96hr (Green algae)	N/Av	None.
Alcohols, C9-11, ethoxylated	68439-46-3	N/Av	N/Av	N/Av

Persistence and degradability

: No data is available on the product itself.

Bioaccumulation potential

: No data is available on the product itself.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Urea hydrochloride (CAS 506-89-8)	N/Av	N/Av
Ammonium fluoride (CAS 1341-49-7)	-4.37	completely dissociated in water
Diethylene glycol butyl ether (CAS 112-34-5)	1.0	no bioconcentration expected
Alcohols, C9-11, ethoxylated (CAS 68439-46-3)	3.77-4.72	N/Av

Mobility in soil

: No data is available on the product itself.

Other Adverse Environmental effects

: No data is available on the product itself.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal

: See Section 7 (Handling and Storage) for further details. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

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.



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SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
TDG	UN1760	CORROSIVE LIQUID, N.O.S. (urea hydrochloride)	8	III	
TDG Additional information	May be shipped as LIMITED QUANTITY when transported in quantities no greater than 5 litres, in packages not exceeding 30 kg gross mass. ERG#154.				
49CFR/DOT	NA1760	Compounds, Cleaning Liquid	8	III	
49CFR/DOT Additional information	This material may be shipped as a limited quantity according to 49CFR section 173.154.				
ICAO/IATA	UN1760	Corrosive liquid, n.o.s. (urea hydrochloride)	8	III	
ICAO/IATA Additional information	Refer to ICAO/IATA Packing Instruction				

Special precautions for user : None known or reported by the manufacturer.

Environmental hazards : The product is not classified as environmentally hazardous. See ECOLOGICAL INFORMATION, Section 12.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not available.

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
Urea hydrochloride	506-89-8	Yes	N/Ap	N/Av	No	N/Ap
Ammonium fluoride	1341-49-7	Yes	100 lb/ 45.4 kg	N/Av	No	N/Ap
Diethylene glycol butyl ether	112-34-5	Yes	None.	None.	No	N/Ap
Alcohols, C9-11, ethoxylated	68439-46-3	Yes	N/Ap	N/Ap	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute) health hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.



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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
Urea hydrochloride	506-89-8	No	N/Ap	No	No	No	No	No	No
Ammonium fluoride	1341-49-7	No	N/Ap	Yes	Yes	No	Yes	Yes	No
Diethylene glycol butyl ether	112-34-5	No	N/Ap	No	No	No	No	No	No
Alcohols, C9-11, ethoxylated	68439-46-3	No	N/Ap	No	No	No	No	No	No

Canadian Information:

Refer to Section 2 for a WHMIS Classification for this product. All ingredients are present on the DSL.

International Information:

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

<u>Ingredients</u>	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Urea hydrochloride	506-89-8	208-059-6	Present	Present	(2)-1732	KE-35150	Present	No information available.
Ammonium fluoride	1341-49-7	215-676-4	Present	Present	(1)-311; (1)-306	KE-01679	Present	HSR003970
Diethylene glycol butyl ether	112-34-5	203-961-6	Present	Present	(7)-97; (2)-422	KE-10466	Present	HSR001075
Alcohols, C9-11, ethoxylated	68439-46-3	N/Av	Present	Present	(7)-97	KE-13383	Present	HSR003338; HSNO Approval: HSR006495 (dilution)

SECTION 16. OTHER INFORMATION

Legend

- : ACGIH: American Conference of Governmental Industrial Hygienists
- CA: California
- CAS: Chemical Abstract Services
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- CFR: Code of Federal Regulations
- CSA: Canadian Standards Association
- DOT: Department of Transportation
- EPA: Environmental Protection Agency
- HMIS: Hazardous Materials Identification System
- HSDB: Hazardous Substances Data Bank
- IARC: International Agency for Research on Cancer
- Inh: Inhalation
- MA: Massachusetts
- MN: Minnesota
- MSHA: Mine Safety and Health Administration
- N/Ap: Not Applicable



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N/Av: Not Available
 NFPA: National Fire Protection Association
 NIOSH: National Institute of Occupational Safety and Health
 NJ: New Jersey
 NTP: National Toxicology Program
 OSHA: Occupational Safety and Health Administration
 PA: Pennsylvania
 PEL: Permissible exposure limit
 RCRA: Resource Conservation and Recovery Act
 RI: Rhode Island
 RTECS: Registry of Toxic Effects of Chemical Substances
 SARA: Superfund Amendments and Reauthorization Act
 STEL: Short Term Exposure Limit
 TDG: Canadian Transportation of Dangerous Goods Act & Regulations
 TLV: Threshold Limit Values
 TWA: Time Weighted Average
 WHMIS: Workplace Hazardous Materials Identification System

- References** :
1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2016
 2. International Agency for Research on Cancer Monographs, searched 2016
 3. Canadian Centre for Occupational Health and Safety, CChemoWeb databases, 2016(Chempendium, HSDB and RTECs).
 4. Material Safety Data Sheets from manufacturer.
 5. US EPA Title III List of Lists - 2016 version.
 6. California Proposition 65 List - 2016 version.
 7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal,2016.

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Other special considerations for handling

: Provide adequate information, instruction and training for operators.

<p><u>Prepared for:</u> Parker Hannifin Corporation - Sporlan Division 206 Lange Drive Washington, MO 63090 USA (636) 239-1111 Direct all enquiries to: Parker Hannifin Corp. - Sporlan Division.</p>	
<p><u>Prepared by:</u> ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.); (888) 977-4834 (Canada) http://www.thecompliancecenter.com</p>	

DISCLAIMER

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