



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** Aviation T-Force® Degreaser - 1 lb 2 oz

**Other means of identification**

**Product Code** No. 10321 (Item# 1004732)

**Recommended use** General purpose degreaser for aviation applications

**Recommended restrictions** None known.

### Manufacturer/Importer/Supplier/Distributor information

#### Manufactured or sold by:

**Company name** CRC Industries, Inc.

**Address** 885 Louis Dr.  
Warminster, PA 18974 US

**Telephone** 800-556-5074

**24-Hour Emergency (CHEMTREC)** 800-424-9300 (US)

**Website** crcindustries.com

## 2. Hazard(s) identification

**Physical hazards** Gases under pressure Compressed gas  
Gases under pressure Liquefied gas

**Health hazards** Acute toxicity, oral Category 4  
Skin corrosion/irritation Category 2  
Serious eye damage/eye irritation Category 2  
Specific target organ toxicity, single exposure Category 3 narcotic effects  
Aspiration hazard Category 1

**Environmental hazards** Hazardous to the aquatic environment, long-term hazard Category 3

**OSHA defined hazards** Not classified.

**Label elements**



**Signal word** Danger

**Hazard statement** Contains gas under pressure; may explode if heated. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness.

### Precautionary statement

**Prevention** Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49 °C/120 °F. Use only outdoors or in a well-ventilated area. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Avoid breathing mist/vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye protection/face protection. Wear protective gloves.

**Response** If swallowed: Immediately call a poison center/doctor. Rinse mouth. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor 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. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

**Storage** Protect from sunlight. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Exposure to high temperature may cause can to burst.

<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	When exposed to extreme heat or hot surfaces, vapors may decompose to toxic gases such as hydrogen fluoride, hydrogen chloride, and possibly phosgene.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
1,1,1,2-tetrafluoroethane	HFC-134A	811-97-2	40 - 50
trans-1,2-dichloroethylene		156-60-5	40 - 50
1,1,2,2-tetrafluoro-1-(2,2,2-trifluoroethoxy) ethane	HFE-347PCF2	406-78-0	5 - 10
carbon dioxide		124-38-9	1 - 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
<b>Skin contact</b>	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	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.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Pressurized container may rupture when exposed to heat or flame. During fire, gases hazardous to health may be formed. When exposed to extreme heat or hot surfaces, vapors may decompose to toxic gases such as hydrogen fluoride, hydrogen chloride, and possibly phosgene.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire-fighting equipment/instructions</b>	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.
<b>General fire hazards</b>	Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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**Methods and materials for containment and cleaning up**

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains. Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage****Precautions for safe handling**

Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Use only outdoors or in a well-ventilated area. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Do not taste or swallow. Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. For product usage instructions, see the product label.

**Conditions for safe storage, including any incompatibilities**

Level 1 Aerosol.

Contents under pressure. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in tightly closed container. Store in a well-ventilated place. Stored containers should be periodically checked for general condition and leakage. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection****Occupational exposure limits**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

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

Components	Type	Value
carbon dioxide (CAS 124-38-9)	PEL	9000 mg/m <sup>3</sup>
		5000 ppm
trans-1,2-dichloroethylene (CAS 156-60-5)	PEL	790 mg/m <sup>3</sup>
		200 ppm

**US. ACGIH Threshold Limit Values**

Components	Type	Value
carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
trans-1,2-dichloroethylene (CAS 156-60-5)	TWA	200 ppm

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m <sup>3</sup>
		30000 ppm
	TWA	9000 mg/m <sup>3</sup>
trans-1,2-dichloroethylene (CAS 156-60-5)		5000 ppm
	TWA	790 mg/m <sup>3</sup>
		200 ppm

## US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
1,1,1,2-tetrafluoroethane (CAS 811-97-2)	TWA	4240 mg/m <sup>3</sup>
		1000 ppm

## U.S. - EPA

Components	Type	Value
1,1,1,2-tetrafluoro-1-(2,2,2-trifluoroethoxy) ethane (CAS 406-78-0)	Ceiling Limit Value	150 ppm

## Manufacturer OEL

Components	Type	Value
1,1,1,2-tetrafluoro-1-(2,2,2-trifluoroethoxy) ethane (CAS 406-78-0)	TWA	50 ppm

### Biological limit values

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

### Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Wear safety glasses with side shields (or goggles).

#### Skin protection

##### Hand protection

Wear protective gloves such as: Fluoroelastomer. Nitrile. Polyvinyl alcohol (PVA).

##### Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

#### Respiratory protection

If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

#### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

### General hygiene considerations

When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

#### Physical state

Liquid.

#### Form

Aerosol.

#### Color

Colorless.

#### Odor

Ethereal.

#### Odor threshold

Not available.

#### pH

Not available.

#### Melting point/freezing point

-137.2 °F (-94 °C) estimated

#### Initial boiling point and boiling range

118.4 °F (48 °C) estimated

#### Flash point

None (Setaflash)

#### Evaporation rate

Fast.

#### Flammability (solid, gas)

Not available.

### Upper/lower flammability or explosive limits

#### Explosive limit - lower (%)

6.7 % estimated

#### Explosive limit - upper (%)

18 % estimated

#### Vapor pressure

4289.5 hPa estimated

#### Vapor density

Not available.

Relative density	1.24 estimated
Solubility(ies)	
Solubility (water)	Slight.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	860 °F (460 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Percent volatile	97.8 % estimated

## 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat. Contact with incompatible materials. When exposed to extreme heat or hot surfaces, vapors may decompose to toxic gases such as hydrogen fluoride, hydrogen chloride, and possibly phosgene.
Incompatible materials	Strong oxidizing agents. Strong acids. Strong bases.
Hazardous decomposition products	Halogenated materials. Hydrogen chloride. Carbon oxides. Hydrogen fluoride. Phosgene. Sulfur oxides.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
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### Information on toxicological effects

Acute toxicity	May be fatal if swallowed and enters airways. In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and central nervous system effects.
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Product	Species	Test Results
Aviation T-Force® Degreaser - 1 lb 2 oz		
<u>Acute</u>		
Oral		
ATEmix		1079 mg/kg bw
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Not classifiable as to carcinogenicity to humans.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Not listed.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Not listed.		

## US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	May cause drowsiness or dizziness.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

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### 12. Ecological information

<b>Ecotoxicity</b>	Harmful to aquatic life with long lasting effects.
<b>Persistence and degradability</b>	No data is available on the degradability of any ingredients in the mixture.
<b>Bioaccumulative potential</b>	No data available.
<b>Partition coefficient n-octanol / water (log Kow)</b>	
1,1,1,2-tetrafluoroethane	1.68
1,1,2,2-tetrafluoro-1-(2,2,2-trifluoroethoxy) ethane	2.18
trans-1,2-dichloroethylene	2.06
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	Not established.

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### 13. Disposal considerations

<b>Disposal instructions</b>	The dispensed liquid product is not a RCRA hazardous waste (See 40 CFR Part 261.20 - 261.33). Full or partially-full aerosol cans can be treated as universal waste. Empty container can be recycled. Contents under pressure. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	Not regulated.  However, it is the generator's responsibility to determine the proper classification and disposal method at the time of disposal.
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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### 14. Transport information

#### DOT

<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	Aerosols, non-flammable, Limited Quantity
<b>Transport hazard class(es)</b>	
<b>Class</b>	2.2
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	2.2
<b>Packing group</b>	Not assigned.
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Packaging exceptions</b>	306
<b>Packaging non bulk</b>	None
<b>Packaging bulk</b>	None
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed with restrictions.
<b>Cargo aircraft only</b>	Allowed with restrictions.

#### IATA

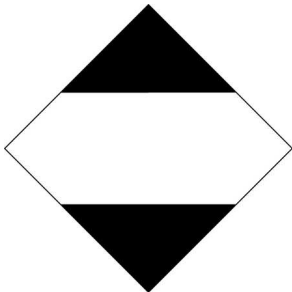
<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	Aerosols, non-flammable, Limited Quantity
<b>Transport hazard class(es)</b>	
<b>Class</b>	2.2

<b>Subsidiary risk</b>	-
<b>Packing group</b>	Not assigned.
<b>ERG Code</b>	2L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed with restrictions.
<b>Cargo aircraft only</b>	Allowed with restrictions.

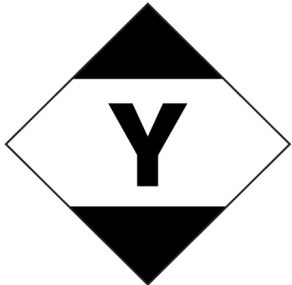
#### IMDG

<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	AEROSOLS, Limited Quantity
<b>Transport hazard class(es)</b>	
<b>Class</b>	2.2
<b>Subsidiary risk</b>	-
<b>Packing group</b>	Not assigned.
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>EmS</b>	F-D, S-U
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

#### DOT; IMDG



#### IATA



## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### **SARA 304 Emergency release notification**

Not regulated.

#### **OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

#### **CERCLA Hazardous Substance List (40 CFR 302.4)**

trans-1,2-dichloroethylene (CAS 156-60-5)

#### **CERCLA Hazardous Substances: Reportable quantity**

trans-1,2-dichloroethylene (CAS 156-60-5) 1000 LBS

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

#### **Toxic Substances Control Act (TSCA)**

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

1,1,2,2-tetrafluoro-1-(2,2,2-trifluoroethoxy) ethane 1.0 % One-Time Export Notification only.  
(CAS 406-78-0)

**TSCA Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721)**

1,1,2,2-tetrafluoro-1-(2,2,2-trifluoroethoxy) ethane      Listed.  
(CAS 406-78-0)

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

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

Not regulated.

**Safe Drinking Water Act (SDWA)**      Not regulated.

**Food and Drug Administration (FDA)**      Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Classified hazard categories**      Gas under pressure  
Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Specific target organ toxicity (single or repeated exposure)  
Aspiration hazard

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical**      Yes

**SARA 313 (TRI reporting)**  
Not regulated.

**US state regulations****US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

trans-1,2-dichloroethylene (CAS 156-60-5)

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

carbon dioxide (CAS 124-38-9)  
trans-1,2-dichloroethylene (CAS 156-60-5)

**US. Massachusetts RTK - Substance List**

carbon dioxide (CAS 124-38-9)  
trans-1,2-dichloroethylene (CAS 156-60-5)

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

carbon dioxide (CAS 124-38-9)  
trans-1,2-dichloroethylene (CAS 156-60-5)

**US. Rhode Island RTK**

carbon dioxide (CAS 124-38-9)  
trans-1,2-dichloroethylene (CAS 156-60-5)

**California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**Volatile organic compounds (VOC) regulations****EPA**

**VOC content (40 CFR 51.100(s))**      42.2 %

**Consumer products (40 CFR 59, Subpt. C)**      Not regulated

**State**

**Consumer products**      This product is regulated as a General Purpose Degreaser (aerosol). This product is not compliant to be sold for use in California, Colorado, Connecticut, Delaware, Maryland, Michigan, New Hampshire, New York, Ohio, Rhode Island, and the following counties in Utah: Box Elder, Cache, Davis, Salt Lake, Tooele, Utah, and Weber. This product is compliant in all other states.

**VOC content (CA)**      49.6 %

**VOC content (OTC)**      42.2 %

## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

**Issue date** 09-29-2022

**Revision date** 06-16-2023

**Prepared by** Allison Yoon

**Version #** 03

**Further information** CRC # 1753498

**Disclaimer** The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC's knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries, Inc..

**Revision information** Product and Company Identification: Product and Company Identification  
Regulatory information: Consumer products