SAFETY DATA SHEET

1. Identification

Product identifier **Aviation Degreaser - 1 lb 2 oz**

Other means of identification

Product Code No. 10900 (Item# 1004744)

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

General Information 215-674-4300

Technical Assistance 800-521-3168

Customer Service 800-272-4620

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

Website www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Gases under pressure	Compressed gas
	Gases under pressure	Liquefied gas
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Carcinogenicity	Category 2
	Reproductive toxicity	Category 1B
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2 (kidney, liver, nervous system)
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Contains gas under pressure; may explode if heated. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer. May damage fertility or the unborn child. May cause damage to organs (kidney, liver, nervous system) through prolonged or repeated exposure. Harmful to aquatic life.

Precautionary statement

Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49 °C/120 °F. Do not breathe mist or vapor. Use with adequate ventilation. 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. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.
Response	If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. 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 exposed or concerned: Get medical advice/attention.
Storage	Store locked up. Protect from sunlight. Store in a well-ventilated place. Exposure to high temperature may cause can to burst.
Disposal	Dispose of contents/container in accordance with local/regional/national regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen bromide.

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
n-propyl bromide	1-bromopropane	106-94-5	40 - 50
carbon dioxide		124-38-9	1 - 5
butylene oxide		106-88-7	≤ 1

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

4. First-aid measures

Inhalation	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.
Skin contact	Remove contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	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.
Ingestion	In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth.
Most important symptoms/effects, acute and delayed	May cause drowsiness and dizziness. Narcosis. Headache. Nausea, vomiting. Behavioral changes. Decrease in motor functions. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Edema. Jaundice. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. 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

Suitable extinguishing media	Water spray. Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	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 harmful or fatal corrosive gases such as hydrogen bromide.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions	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.
General fire hazards	Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	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. Do not breathe mist or vapor. 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.
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. Put material in suitable, covered, labeled containers.
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	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. 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 a well-ventilated place.

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/m3
		5000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
n-propyl bromide (CAS 106-94-5)	TWA	0.1 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m3
		30000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
	TWA	9000 mg/m3
		5000 ppm

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
1,1,1,2-tetrafluoroethane (CAS 811-97-2)	TWA	4240 mg/m3
		1000 ppm
butylene oxide (CAS 106-88-7)	TWA	5.9 mg/m3
		2 ppm

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

Exposure guidelines

US - California OELs: Skin designation

n-propyl bromide (CAS 106-94-5) Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) 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. Eye wash facilities and emergency shower should be available when handling this product.

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: Viton/butyl. Silver Shield®.

Other Wear appropriate chemical resistant clothing.

Respiratory protection Use a NIOSH-approved cartridge respirator with an organic vapor cartridge unless exposure is below the TLV. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is required to determine actual employee exposure levels.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Observe any medical surveillance requirements. When using, do not eat, drink or smoke. 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 Solvent.

Odor threshold Not available.

pH Not available.

Melting point/freezing point -266.8 °F (-166 °C) estimated

Initial boiling point and boiling range 159.8 °F (71 °C) estimated

Flash point None (Tag Closed Cup)

Evaporation rate Fast

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 3.8 % estimated

Flammability limit - upper (%) 9.5 % estimated

Vapor pressure	4645.1 hPa estimated
Vapor density	4.3 (air = 1)
Relative density	1.29 estimated
Solubility(ies)	
Solubility (water)	0.003 g/ml
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	914 °F (490 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Percent volatile	97.9 % 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, flames and sparks. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen bromide. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Strong acids. Strong bases.
Hazardous decomposition products	Hydrogen bromide. Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting. May cause irritation to the respiratory system.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Health injuries are not known or expected under normal use.
Symptoms related to the physical, chemical and toxicological characteristics	May cause drowsiness and dizziness. Narcosis. Headache. Nausea, vomiting. Behavioral changes. Decrease in motor functions. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Edema. Jaundice.

Information on toxicological effects

Acute toxicity Not known.

Components	Species	Test Results
butylene oxide (CAS 106-88-7)		
Acute		
Dermal		
LD50	Rabbit	1760 mg/kg
Oral		
LD50	Rat	1180 mg/kg
n-propyl bromide (CAS 106-94-5)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	14374 ppm, 4 hours
Oral		
LD50	Rat	4260 mg/kg

* Estimates for product may be based on additional component data not shown.

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 Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

butylene oxide (CAS 106-88-7)	2B Possibly carcinogenic to humans.
n-propyl bromide (CAS 106-94-5)	2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

n-propyl bromide (CAS 106-94-5)	Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity May damage fertility or the unborn child.

Specific target organ toxicity - single exposure May cause respiratory irritation. May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure May cause damage to organs (kidney, liver, nervous system) through prolonged or repeated exposure.

Aspiration hazard Not an aspiration hazard.

Chronic effects May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity Harmful to aquatic life.

Components		Species	Test Results
n-propyl bromide (CAS 106-94-5)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	67.3 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

Hydrolysis

Half-life (Hydrolysis)

n-propyl bromide	26 days

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

1,1,1,2-tetrafluoroethane	1.274
n-propyl bromide	2.1

Bioconcentration factor (BCF)

n-propyl bromide	23

Mobility in soil No data available.

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

13. Disposal considerations

Disposal instructions The dispensed liquid product is not a RCRA hazardous waste (See 40 CFR Part 261.20 - 261.33). Empty container can be recycled. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. 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.

Hazardous waste code Not regulated.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Label(s)	2.2
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

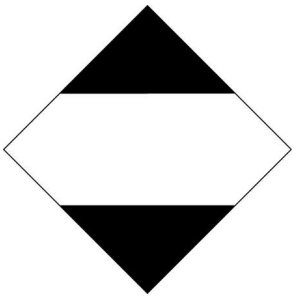
IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	Not applicable.
ERG Code	2L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	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.
All components are on the U.S. EPA TSCA Inventory List.

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

Not regulated.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

butylene oxide (CAS 106-88-7)
n-propyl bromide (CAS 106-94-5)

CERCLA Hazardous Substance List (40 CFR 302.4)

butylene oxide (CAS 106-88-7)

CERCLA Hazardous Substances: Reportable quantity

butylene oxide (CAS 106-88-7) 100 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.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

butylene oxide (CAS 106-88-7)

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
Skin corrosion or irritation
Serious eye damage or eye irritation
Carcinogenicity
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
butylene oxide	106-88-7	≤ 1
n-propyl bromide	106-94-5	40 - 50

US state regulations

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

butylene oxide (CAS 106-88-7)
carbon dioxide (CAS 124-38-9)
n-propyl bromide (CAS 106-94-5)

US. Massachusetts RTK - Substance List

butylene oxide (CAS 106-88-7)
carbon dioxide (CAS 124-38-9)
n-propyl bromide (CAS 106-94-5)

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

butylene oxide (CAS 106-88-7)
carbon dioxide (CAS 124-38-9)
n-propyl bromide (CAS 106-94-5)

US. Rhode Island RTK

butylene oxide (CAS 106-88-7)

carbon dioxide (CAS 124-38-9)

California Proposition 65

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

California Proposition 65 - CRT: Listed date/Carcinogenic substance

nitromethane (CAS 75-52-5) Listed: May 1, 1997
n-propyl bromide (CAS 106-94-5) Listed: August 5, 2016

California Proposition 65 - CRT: Listed date/Developmental toxin

n-propyl bromide (CAS 106-94-5) Listed: December 7, 2004

California Proposition 65 - CRT: Listed date/Female reproductive toxin

isopropyl bromide (CAS 75-26-3) Listed: May 31, 2005
n-propyl bromide (CAS 106-94-5) Listed: December 7, 2004

California Proposition 65 - CRT: Listed date/Male reproductive toxin

isopropyl bromide (CAS 75-26-3) Listed: May 31, 2005
n-propyl bromide (CAS 106-94-5) Listed: December 7, 2004

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

butylene oxide (CAS 106-88-7)
n-propyl bromide (CAS 106-94-5)

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s))	49.9 %
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, Connecticut, Delaware, Maryland, New Hampshire, 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)	49.9 %
VOC content (OTC)	49.9 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
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)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
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).

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

Issue date	12-20-2019
Prepared by	Allison Yoon
Version #	01

Further information	CRC # 435/1002418
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	Hazard(s) identification: Hazard statement Hazard(s) identification: Supplemental information Composition / Information on Ingredients: Ingredients Fire-fighting measures: Specific hazards arising from the chemical Handling and storage: Precautions for safe handling Exposure controls/personal protection: Hand protection Physical & Chemical Properties: Multiple Properties Stability and reactivity: Conditions to avoid Stability and reactivity: Hazardous decomposition products Transport Information: Material Transportation Information Regulatory information: Consumer products Other information, including date of preparation or last revision: Further information GHS: Qualifiers