Rx11-Flush Aerosol

Safety Data Sheet

According to SOR/2015-17, Hazardous Products Regulations (HPR) (amended 2022) & According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS) (amended 2024)
Issue date: 05/28/2025 Version: 1.0

SECTION 1 Identification

1.1. GHS Product identifier

Product form	: Mixture
Product name	: Rx11-Flush Aerosol
Product code	: 4300-08, 4300-09, 4300-10, 4300-11
Vaporizer	: Aerosol

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : For flushing AC and refrigeration systems

1.4. Supplier's details

Manufacturer
Nu-Calgon
2611 Schuetz Road
St. Louis, MO
63043
US
T 314-469-7000 / 800-554-5499
www.nucalgon.com

1.5. Emergency phone number

Emergency number : 1-800-424-9300 (CHEMTREC)

SECTION 2 Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA/US)

Aerosol, Category 3	Pressurized container; may burst if heated
Serious eye damage/eye irritation, Category 2A	Causes serious eye irritation
Specific target organ toxicity – Single exposure, Category 3, Narcosis	May cause drowsiness or dizziness

2.2. GHS label elements, including precautionary statements

GHS CA/US labeling

Hazard pictograms (GHS CA/US) :

Signal word (GHS CA/US) : Warning

Hazard statements (GHS CA/US) : Pressurized container; may burst if heated
Causes serious eye irritation
May cause drowsiness or dizziness

Precautionary statements (GHS CA/US) : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not pierce or burn, even after use.
Avoid breathing dust, mist.

Wash hands, forearms and face thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or a 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 or 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 and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%
Ethene, 1,2-dichloro-, (1E)-	trans-dichloroethylene 1,2-trans-Dichloroethylene / 1,2-Dichloroethene, trans- / trans-1,2-Dichloroethylene / Ethene, 1,2-dichloro-, (E)- / Ethylene, 1,2-dichloro-, (E)- / trans-1,2-Dichloroethene / Dichloroethylene, trans-1,2- / Ethylene, 1,2-dichloro-, (1E)- / (E)-1,2-Dichloroethylene / Dichloroethylene, 1,2-trans- / Ethene, trans-1,2-dichloro- / trans-Dichloroethylene / Dichloroethylene, trans- / 1,2-Dichloroethylene, (1E)- / 1,2-Dichloroethene	CAS-No.: 156-60-5	45 - 70
1,1,1,2-Tetrafluoroethane	Ethane, 1,1,1,2-tetrafluoro- / HFC 134a / Norflurane / HFC-134a / Tetrafluoroethane, 1,1,1,2- / Refrigerant gas R134a / Freon 134a / HYDROFLUOROCARBON 134A	CAS-No.: 811-97-2	10 – 30

Comments : CANADA GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with the amended HPR as of December 2022.
US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4 First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures after inhalation : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

First-aid measures after skin contact : Wash skin with plenty of water. Obtain medical attention if irritation persists.

First-aid measures after eye contact : 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 and attention.

First-aid measures after ingestion : Do not induce vomiting. If vomiting occurs have person lean forward. Never give anything by mouth to an unconscious person. Call a poison center or a doctor if you feel unwell.

First-aid measures general : Call a poison center or a doctor if you feel unwell. If you feel unwell, seek medical advice (show the label where possible). Medical personnel should be made aware of substance(s) involved and take measures for self protection. Show this safety data sheet to the doctor in attendance. Avoid contact with skin and eyes. Keep out of the reach of children.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : May cause drowsiness or dizziness.

Symptoms/effects after skin contact : Prolonged or repeated contact may dry skin and cause irritation.

Symptoms/effects after eye contact : Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Symptoms/effects after ingestion : May cause stomach distress, nausea or vomiting.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Symptoms may be delayed. Treat symptomatically.

SECTION 5 Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Alcohol-resistant foam. Carbon dioxide. Dry chemical. Water fog.

Unsuitable extinguishing media : Do not use a water jet since it may cause the fire to spread.

5.2. Specific hazards arising from the chemical

Fire hazard : During fire, gases hazardous to health may be formed. In case of fire or explosion do not breathe fumes.

Explosion hazard : Pressurized container: may burst if heated. No direct explosion hazard.

Hazardous decomposition products in case of fire : May include and are not limited to: oxides of carbon.

5.3. Special protective actions for fire-fighters

Firefighting instructions : In case of fire: Stop leak if safe to do so. Do not enter fire area without proper protective equipment, including respiratory protection. Move containers from fire area if it can be done without personal risk.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : In the event of a significant spillage : Notify authorities if product enters sewers or public waters. Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Stop leaks if it can be done without personal risk. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Pick up spilled material and collect it in a suitable container for disposal. . Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Clean contaminated surfaces with an excess of water.

Other information : This material and its container must be disposed of in a safe way, and as per local legislation.

For further information refer to section 13

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use. Use only outdoors or in a well-ventilated area. Avoid breathing dust, mist. Avoid contact with skin and eyes. Do not taste or swallow. Wear personal protective equipment. Handle and open container with care.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of reach of children. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Store locked up.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Ethene, 1,2-dichloro-, (1E)- (156-60-5)	
Canada (Alberta) - Occupational Exposure Limits	
OEL TWA	793 mg/m³
	200 ppm
Regulatory reference	Alberta Regulation 191/2021
Canada (British Columbia) - Occupational Exposure Limits	
OEL TWA	200 ppm
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
OEL TWA	793 mg/m³
	200 ppm
Notations and remarks	TLV® Basis: CNS impair; eye irr
Regulatory reference	ACGIH 2025
Canada (New Brunswick) - Occupational Exposure Limits	
OEL TWA	200 ppm

Ethene, 1,2-dichloro-, (1E)- (156-60-5)	
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
OEL TWA	793 mg/m³
	200 ppm
Notations and remarks	TLV® Basis: CNS impair; eye irr
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
OEL TWA	793 mg/m³
	200 ppm
Notations and remarks	TLV® Basis: CNS impair; eye irr
Regulatory reference	ACGIH 2025
Canada (Nunavut) - Occupational Exposure Limits	
OEL TWA	200 ppm
OEL STEL	250 ppm
Regulatory reference	Occupational Health and Safety Regulations, Nu Reg 003-2016 (Amendment R-044-2021)
Canada (Northwest Territories) - Occupational Exposure Limits	
OEL TWA	200 ppm
OEL STEL	250 ppm
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-090-2024)
Canada (Ontario) - Occupational Exposure Limits	
OEL TWAEV	200 ppm
Regulatory reference	Ontario Occuational Exposure Limits under Regulation 833
Canada (Prince Edward Island) - Occupational Exposure Limits	
OEL TWA	793 mg/m³
	200 ppm
Notations and remarks	TLV® Basis: CNS impair; eye irr
Regulatory reference	ACGIH 2025
Canada (Saskatchewan) - Occupational Exposure Limits	
OEL TWA	200 ppm
OEL STEL	250 ppm
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	793 mg/m³
	200 ppm
Remark (ACGIH)	TLV® Basis: CNS impair; eye irr
Regulatory reference	ACGIH 2025

8.2. Appropriate engineering controls

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.
Environmental exposure controls	:	Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection:
Wear protective gloves. Confirm with a reputable supplier first.

Eye protection:
Wear safety glasses with side shields (or goggles).

Skin and body protection:
Wear suitable protective clothing. As required by employer code.

Respiratory protection:
Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Gas
Appearance	:	Aerosol.
Color	:	Colourless
Odor	:	Slight , Ether
Odor threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butyl acetate=1)	:	No data available
Relative evaporation rate (ether=1)	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	51 °C (123.8 °F)
Flash point	:	Does not flash. (ASTM-D 56)
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	284 mm Hg
Relative vapor density at 20°C	:	No data available
Relative density	:	1.3
Solubility	:	Water: 0.4 g/100g
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	Pressurized container: may burst if heated. Not explosive.
Oxidizing properties	:	Not oxidising.
Explosion limits	:	No data available
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

VOC content : 100 % (697 g/L)

SECTION 10 Stability and reactivity

Reactivity : Pressurized container: may burst if heated.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : No dangerous reactions known under normal conditions of use.
Conditions to avoid : Heat. No flames, no sparks. Eliminate all sources of ignition.
Incompatible materials : Strong oxidizing agents.
Hazardous decomposition products : May include and are not limited to: oxides of carbon.

SECTION 11 Toxicological information

11.1. Likely routes of exposure

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Ethene, 1,2-dichloro-, (1E)- (156-60-5)	
LD50 oral rat	1235 mg/kg (Source: JAPAN_GHS)
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)
LC50 Inhalation - Rat [ppm]	24100 ppm/4h
ATE CA (oral)	1235 mg/kg body weight
ATE CA (Gases)	24100 ppmV/4h
ATE CA (vapors)	11 mg/l/4h

1,1,1,2-Tetrafluoroethane (811-97-2)	
LC50 Inhalation - Rat	1500 g/m³ (Exposure time: 4 h Source: NLM_CIP)
ATE CA (vapors)	1500 mg/l/4h
ATE CA (dust,mist)	1500 mg/l/4h

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : May cause drowsiness or dizziness.
STOT-repeated exposure : Not classified

1,1,1,2-Tetrafluoroethane (811-97-2)	
NOAEC (inhalation,rat,gas,90 days)	50000 ppm Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Aspiration hazard : Not applicable
Likely routes of exposure : Skin and eye contact. Ingestion. Inhalation.
Symptoms/effects after inhalation : May cause drowsiness or dizziness.
Symptoms/effects after skin contact : Prolonged or repeated contact may dry skin and cause irritation.
Symptoms/effects after eye contact : Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Symptoms/effects after ingestion : May cause stomach distress, nausea or vomiting.

SECTION 12 Ecological information

12.1. Toxicity

Ecology - general : See below for route-specific details.

Hazardous to the aquatic environment, short–term (acute) : Not classified.

Hazardous to the aquatic environment, long–term (chronic) : Not classified.

Ethene, 1,2-dichloro-, (1E)- (156-60-5)	
LC50 - Fish [1]	135 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 - Crustacea [1]	220 mg/l Test organisms (species): Daphnia magna

1,1,1,2-Tetrafluoroethane (811-97-2)	
LC50 - Fish [1]	450 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static] Source: ECHA)
EC50 72h - Algae [1]	> 118 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	> 114 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

Rx11-Flush Aerosol	
Persistence and degradability	Not rapidly degradable

Ethene, 1,2-dichloro-, (1E)- (156-60-5)	
Persistence and degradability	Rapidly degradable

1,1,1,2-Tetrafluoroethane (811-97-2)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

Ethene, 1,2-dichloro-, (1E)- (156-60-5)	
Partition coefficient n-octanol/water (Log Pow)	2.06

1,1,1,2-Tetrafluoroethane (811-97-2)	
Partition coefficient n-octanol/water (Log Pow)	1.06 (at 25 °C (at pH 6)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified

Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

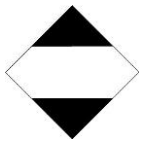
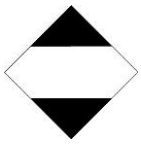
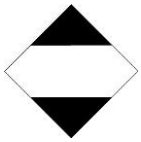
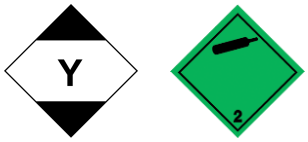
Waste treatment methods : Dispose of the material collected according to regulations.

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : 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, disposal or collection.

SECTION 14 Transport information

In accordance with TDG / DOT / IMDG / IATA

TDG	DOT	IMDG	IATA
14.1. UN Number			
UN1950	UN1950	1950	1950
14.2. UN Proper Shipping Name			
AEROSOLS	Aerosols	AEROSOLS	Aerosols, non-flammable
Transport document description			
UN1950 AEROSOLS, 2.2	UN1950 Aerosols, 2.2	UN 1950 AEROSOLS, 2.2	UN 1950 Aerosols, non-flammable, 2.2
14.3. Transport hazard class(es)			
LTD QTY	LTD QTY	LTD QTY	LTD QTY Y
			
14.4. Packing group, if applicable			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

TDG

UN-No. (TDG) : UN1950

Excepted quantities (TDG) : E0

Emergency Response Guide (ERG) Number : 126

DOT

UN-No. (DOT) : UN1950

DOT Packaging Exceptions (49 CFR 173.xxx) : 306

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 75 kg

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 150 kg

DOT Vessel Stowage Location : A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.

DOT Vessel Stowage Other : 25 - Shade from radiant heat,87 - Stow ‘‘separated from’’ Class 1 (explosives) except Division 14,126 - Segregation same as for Class 9, miscellaneous hazardous materials

IMDG

Special provision (IMDG)	:	63, 190, 277, 327, 344, 381, 959
Limited quantities (IMDG)	:	SP277
Excepted quantities (IMDG)	:	E0
Packing instructions (IMDG)	:	P207, LP200
Packing provisions (IMDG)	:	PP87, L2
EmS-No. (Fire)	:	F-D - FIRE SCHEDULE Delta - FLAMMABLE GASES
EmS-No. (Spillage)	:	S-U - SPILLAGE SCHEDULE Uniform - GASES (FLAMMABLE, TOXIC OR CORROSIVE)
Stowage category (IMDG)	:	None
Stowage and handling (IMDG)	:	SW1, SW22
Segregation (IMDG)	:	SG69

IATA

PCA Excepted quantities (IATA)	:	E0
PCA Limited quantities (IATA)	:	Y203
PCA limited quantity max net quantity (IATA)	:	30kgG
PCA packing instructions (IATA)	:	203
PCA max net quantity (IATA)	:	75kg
CAO packing instructions (IATA)	:	203
CAO max net quantity (IATA)	:	150kg
Special provision (IATA)	:	A98, A145, A167, A802
ERG code (IATA)	:	2L

14.7. Transport in bulk according to Annex II of MARPOL 73/789(^9) and the IBC Code(^10)

Not applicable

SECTION 15 Regulatory information

All components of this product are present on DSL

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Ethene, 1,2-dichloro-, (1E)- (156-60-5)	
CERCLA RQ	1000 lb listed under 1,2-Dichloroethylene

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other Information

Issue date	:	05/28/2025
Other information	:	For an updated SDS, please contact the supplier or manufacturer listed on the first page of the document. Prepared by: Nu-Calgon Technical Service Phone: (314) 469-7000.

Rx11-Flush Aerosol

Safety Data Sheet

According to SOR/2015-17, Hazardous Products Regulations (HPR) (amended 2022) & According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS) (amended 2024)

The information in the safety data sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.