

SAFETY DATA SHEET

RENLEASE® 76 US

1. Product and company identification

Product name : RENLEASE® 76 US
Material uses : Mold release agent
MSDS # : 00066908
Validation date : 6/17/2013.

Supplier/Manufacturer : Huntsman Advanced Materials Americas LLC
P.O. Box 4980
The Woodlands, TX 77387
Non-Emergency phone: (800) 257-5547

e-mail address of person responsible for this SDS : MSDS@huntsman.com

In case of emergency (24h/7day) : Chemtrec: (800) 424-9300 or (703) 527-3887

Section 2. Hazards identification

Physical state : Gas. [Aerosol.]
Color : Clear.
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : GASES UNDER PRESSURE - Compressed gas
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
AQUATIC TOXICITY (ACUTE) - Category 3
AQUATIC TOXICITY (CHRONIC) - Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger
Hazard statements : Contains gas under pressure; may explode if heated.
Causes serious eye damage.
Harmful to aquatic life with long lasting effects.

Precautionary statements : Wear eye or face protection. Avoid release to the environment. Wash hands thoroughly after handling. 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 physician. Protect from sunlight. Store in a well-ventilated place. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
1,1-dichloro-1-fluoroethane (HCFC 141b)	30 - 60	1717-00-6
SILICIC ACID, SODIUM SALT, REACTION PRODUCTS WITH CHLOROTRIMETHYLSILANE AND ISO-PR ALC.	7 - 13	68988-56-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Notes to physician** : Adrenalin and similar sympathomimetic drugs should be avoided following exposure as cardiac arrhythmia may result with possible subsequent cardiac arrest. Symptomatic treatment and supportive therapy as indicated. Following severe exposure the patient should be kept under medical review for at least 48 hours as delayed pulmonary oedema may develop.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

- Flash point** : Not available.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds
metal oxide/oxides
- Extinguishing media**
- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.
- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. Bursting aerosol containers may be propelled from a fire at high speed. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
- Methods and materials for containment and cleaning up** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 6. Accidental release measures

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid breathing gas. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Empty containers retain product residue and can be hazardous.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

- Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Gas. [Aerosol.]
- Color** : Clear.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/Freezing point** : Not available.
- Boiling/condensation point** : Not available.
- Flash point** : Not available.
- Evaporation rate** : >1 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : 4 [Air = 1]
- Specific gravity** : Not available.
- Water Solubility** : Not available.
- Water Solubility** : negligible
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Evaporation rate (butyl acetate = 1)** : >1 (butyl acetate = 1)
- Viscosity** : Not available.
- Type of aerosol** : Spray

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.

Section 10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Endpoint	Species	Result
1,1-dichloro-1-fluoroethane (HCFC 141b)	-	LC50 Inhalation Dusts and mists	Rat	56700 to 62000 ppm
	-	LD50 Dermal	Rabbit	>2000 mg/kg
	-	LD50 Oral	Rat	>5000 mg/kg
	-	LD50 Dermal	Rabbit	>4640 mg/kg
SILICIC ACID, SODIUM SALT, REACTION PRODUCTS WITH CHLOROTRIMETHYLSILANE AND ISO-PR ALC.				

Conclusion/Summary :

1,1-dichloro-1-fluoroethane (HCFC 141b) Exposures to high vapor concentrations of this component induces toxicity progressing from giddiness, weakness, dizziness, nausea, to unconsciousness. In susceptible individuals, cardiac sensitization to circulating epinephrine-like compounds can result in fatal cardiac arrhythmias.

Irritation/Corrosion

Conclusion/Summary

- Skin** :
- 1,1-dichloro-1-fluoroethane (HCFC 141b) No known significant effects or critical hazards.
 - SILICIC ACID, SODIUM SALT, REACTION PRODUCTS WITH CHLOROTRIMETHYLSILANE AND ISO-PR ALC. No known significant effects or critical hazards.
- Eyes** :
- 1,1-dichloro-1-fluoroethane (HCFC 141b) No known significant effects or critical hazards.
 - SILICIC ACID, SODIUM SALT, REACTION PRODUCTS WITH CHLOROTRIMETHYLSILANE AND ISO-PR ALC. No known significant effects or critical hazards.
- Respiratory** :
- 1,1-dichloro-1-fluoroethane (HCFC 141b) No known significant effects or critical hazards.
 - SILICIC ACID, SODIUM SALT, REACTION PRODUCTS WITH CHLOROTRIMETHYLSILANE AND ISO-PR ALC. No known significant effects or critical hazards.

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
- Skin contact** : No known significant effects or critical hazards.

Section 11. Toxicological information

Ingestion : May cause burns to mouth, throat and stomach.

Potential chronic health effects

General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Section 12. Ecological information

Aquatic ecotoxicity

Product/ingredient name	Test	Endpoint	Exposure	Species	Result
1,1-dichloro-1-fluoroethane (HCFC 141b) SILICIC ACID, SODIUM SALT, REACTION PRODUCTS WITH CHLOROTRIMETHYLSILANE AND ISO-PR ALC.	-	Acute EC50	48 hours	Daphnia	31.2 mg/l
	-	Acute IC50	72 hours	Algae	>44 mg/l
	-	Acute LC50	96 hours	Fish	126 mg/l
	-	Acute LC50	96 hours	Fish	3185 mg/l
	-	Acute LC50	96 hours	Fish	301 to 478 mg/l

Persistence and degradability

Product/ingredient name	Test	Period	Result
1,1-dichloro-1-fluoroethane (HCFC 141b)	-	28 days	<60 %

Conclusion/Summary : Dimethyl ether Not readily biodegradable.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
1,1-dichloro-1-fluoroethane (HCFC 141b)	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
1,1-dichloro-1-fluoroethane (HCFC 141b)	2.3	2	low

Other adverse effects : No known significant effects or critical hazards.

Other ecological information

BOD5 : Not determined.
COD : Not determined.
TOC : Not determined.

Section 13. Disposal considerations




Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

Proper shipping name

DOT :
TDG : AEROSOLS, non-flammable
IMDG : AEROSOLS, non-flammable
IATA : AEROSOLS, non-flammable

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	Not available.	ORM-D	-		-
TDG Classification	UN1950	2.2	-		-
IMDG Classification	UN1950	2.2	-		Emergency schedules (EmS) F-D, S-U
IATA Classification	UN1950	2.2	-		Passenger and Cargo Aircraft Quantity limitation: 75 kg Packaging instructions: 203 Cargo Aircraft Only Quantity limitation: 150 kg Packaging instructions: 203

PG* : Packing group

Section 15. Regulatory information

United States

U.S. Federal regulations

- TSCA 8(b) inventory** : All components are listed or exempted.
- TSCA 5(a)2 final significant new use rule (SNUR)** : No ingredients listed.
- TSCA 5(e) substance consent order** : 1,1-dichloro-1-fluoroethane (HCFC 141b)
- TSCA 12(b) export notification** : No ingredients listed.
- SARA 311/312** : Sudden release of pressure
Immediate (acute) health hazard
- Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)** : No ingredients listed.
- Clean Air Act - Ozone Depleting Substances (ODS)** : This product does not contain nor is it manufactured with ozone depleting substances.

	<u>Product name</u>	<u>Concentration %</u>
SARA 313 Form R - Reporting requirements	: 1,1-dichloro-1-fluoroethane (HCFC 141b)	36.364

- CERCLA Hazardous substances** : No ingredients listed.

State regulations

- PENNSYLVANIA - RTK** : Dimethyl ether
- California Prop 65** : This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

International regulations

Canada

- CEPA DSL** : All components are listed or exempted.
- WHMIS Classes** : Class A: Compressed gas.
Class D-2B: Material causing other toxic effects (Toxic).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Brazil

- Regulation** : Decreto Federal n.º 2657 de 3 de novembro de 1998

Section 15. Regulatory information

<u>International lists</u>	: Australia inventory (AICS): All components are listed or exempted. China inventory (IECSC): All components are listed or exempted. Japan inventory: All components are listed or exempted. Korea inventory: All components are listed or exempted. Malaysia Inventory (EHS Register): Not determined. New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted. Philippines inventory (PICCS): All components are listed or exempted. Taiwan inventory (CSNN): Not determined.
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Section 16. Other information

Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	2
Physical hazards	0
Personal protection	

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :



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▀ Indicates information that has changed from previously issued version.

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Notice to reader

Section 16. Other information

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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