

SAFETY DATA SHEETS

This SDS packet was issued with item:

076784102

N/A

MSDS: INSTA COOL Chilling Spray

Manufacturer's Rep: KEYSTONE INDUSTRIES

52 W King St
Myerstown, PA 17067

For Emergencies: 800-535-5053

For Information: 856-663-4700

Composition/Information on Ingredients	CAS No.	Weight%
Chemical: 1,1,1,2-Tetrafluoroethane	811-97-2	100

OSHA Hazardous Components (29 CFR
1910.1200): Exposure Limits 8 hours TWA
(PPM)

	OSHA PEL/ACGIH	
	TLV/Supplier	
	NIF	1000

Hazard Identification

Emergency Overview

Potential Health Effects:

- **Inhalation:** Major potential route of exposure. Minimal effects observed below 1000 ppm. Dizziness, drowsiness, and throat irritation possible at levels above 1,000 ppm. Unconsciousness and death at levels above 10000 ppm. Blood pressure depression, cardiac sensitization, and ventricular arrhythmia can result from exposure to near-anesthetic levels.
- **Eyes:** Liquid can cause slight, temporary irritation with slight temporary corneal injury. Vapors can irritate eyes.
- **Skin:** Prolonged or repeated contact with liquid can cause freezing of skin tissues, defatting, and dermatitis.
- **Ingestion:** Single dose toxicity is low to moderate. If vomiting occurs the liquid can be aspirate into lungs, which can cause chemical pneumonia and systemic effects. Human psychotropic, gastrointestinal, and central nervous system effects possible.

First Aid Measures

- **Inhalation:** Move to fresh air in case of accidental inhalation of vapors. If victim has stopped breathing, give artificial respiration. Call for prompt medical attention.
- **Eye Contact:** Flush eyes with large amounts of water for 15 minutes or until irritation subside. If irritations persist, get medical attention.
- **Skin Contact:** Remove contaminated clothing (including shoes) and wash before reuse. Flush with large amounts of water. Use soap if available. If irritation persists, seek medical attention.
- **Ingestion:** Do not induce vomiting unless directed by physician. If conscious and alert, give two glasses of water. Seek medical attention immediately.

Fire Fighting Measures

- **Flashpoint & Method:** None TCC Method
 - **Flammable Limits:** LEL: N/AUEL: N/A
 - **General Hazard:** Aerosol cans may erupt with force at temperatures about 120 degrees F.
 - **Fire Fighting Instructions:** Fire fighters should wear self-contained, positive-pressure breathing apparatus and avoid skin contact.
 - **Fire Fighting Equipment:** Water, foam, dry chemical, and carbon dioxide.
 - **Hazardous Combustion Products:** Smoke, fumes and oxides of carbon.
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Accidental Release Measures

- **Land Spill:** Evacuate area. Ventilate area well and avoid breathing vapors. Vapor concentration will be highest along floor and in low-lying areas. Pick up liquid on suitable absorbent and store in sealed containers.
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Handling and Storage

- **Storage Temperature:** Ambient
 - **Storage Pressure:** Atmospheric
 - **General:** Keep container closed when not in use. Store in cool, well-ventilated place out of direct sunlight and away from incompatible materials. (See stability and reactivity data) Follow all MSDS and Label warnings even after container is emptied.
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Exposure Control/Personal Protection

- **Engineering controls:** Local Exhaust ventilation acceptable.
 - **Personal Protection:**
 - **Respirator:** If concentrations are over the exposure limit and are known, air-purifying respirator with Organic Vapor Cartridges may be acceptable. Refer to cartridges for acceptable levels. If concentrations are over exposure limit and are unknown, use a supplied air respirator.
 - **Hand Protection:** Gloves recommended - Solvex, Butyl, Natural Latex, Neoprene, Buna, Cotton Jersey
 - **Eye Protection:** Safety Glasses
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Physical and Chemical Properties

- **Density:** 1.202
- **pH:** 7-8
- **Boiling Point:** -16C/-27F
- **% Volatile:** 100

- **Freezing Point:** NIF
 - **% Solids:** 0
 - **Vapor Density (Air=1):** 3.0
 - **Evaporation Rate (h20=1):** >1
 - **Solubility in Water:** 0
 - **Viscosity:** N/A
 - **Molecular Weight:** N/A
 - **Physical State:** liquid
 - **Non-Exempt VOC (g/l):** 0
 - **Odor:** NIF
 - **Appearance:** Clear water-white liquid with low odor
-

Stability and Reactivity

- **General:** Stable
 - **Incompatible Materials and conditions to avoid:** Contact with open flame, heat. Reactive alkali metals, strong acids & bases.
 - **Hazardous Decomposition:** Hydrogen fluoride, carbon dioxide, and carbon monoxide.
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Toxicological Information

- **Results of Component Toxicity Test Performed:** Information not available
- **Human Experience:** Information not available

This product does not contain any compounds listed by NTC or IARC or regulated by OSHA as a carcinogen.

Ecological Information

- **Further Information:** Information not available.
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Disposal Considerations

- **RCRA 40 CFR 261 Classification:** Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.
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Transportation Information

U.S. DOT Information:

- **Proper Shipping Name:** Consumer Commodity ORM-D
- **Hazard Class:** N/A
- **Packaging Group:** N/A
- **UN Number:** N/A
- **Limitations:** must place consumer commodity ORM-D on box

IATA

- **Proper Shipping Name:** Consumer Commodity ID8000
- **Hazard Class:** N/A
- **UN Number:** ID8000
- **Limitations:** A copy of the DOT-E 10232 must be attached to the shipment CARGO AIRCRAFT ONLY.
- **Domestic Shipments only.** When shipping International contact Tech Spray shipping dept.

IMO

- **Proper shipping name:** Aerosols Class: 2.2
- **UN Number:** UN1950
- **Packaging Group:** N/A
- **EMS:** 2-13
- **MFAG:** 350
- **Marine Pollutant:** N/A
- **Canadian TDG:** N/A
- **IMDG Page:** 2102
- **Limitations:** Must have NON-FLAMMABLE LABEL

Regulatory Information

- **United States Federal Regulations:** MSDS complies with OSHA Hazard Communication Rule, 29 CFR 1910.1200.
- **CERCLA/SUPERFUND,** 40 CFR 117, 302: None of the chemicals are Super fund hazards
- **SARA Superfund and Reauthorization Act of 1986 Title II Sections 302, 311, 312 and 313:**

Section 302 - Extremely hazardous substances (40 CFR 355): None of the chemicals are Section 302 hazards.

- **Section 311/312 - Material Safety Data Sheet Requirements (40 CFR 370):** By our evaluation this product is hazardous. It should be reported under the following EPA hazard: Immediate (acute) health hazard
- **Section 313 - List of Toxic Chemicals (40 CFR 372):** This product contains the following chemicals (at levels of 1% or greater) which are found on the 313 list of Toxic Chemicals.

Chemical C.A.S. No. Weight%

None of the chemicals are 313 Toxic chemicals

- **Toxic Substance Control Act (TCSA):** All substances are TSCA listed.

- Resource Conservation and Recovery Act (RCRA 40 CFR 261): Subpart C & D: Refer to Section 11 for RCRA classification.
- Federal Water Pollution Control Act, Clean Water Act, 40 CFR 401.15 (Formerly section 307), 40 CFR 116 (Formerly section 311): This product contains the following chemicals which are listed

Chemical C.A.S. No. Weight%

- Clean Air Act: No information
- State Regulations: California Proposition 65: This product contains the following ingredients which appear on the California proposition 65 list:

Chemical C.A.S. No. Weight%

None of the chemicals are on the Proposition 65 list

- International Regulations:
Canada WHMIS: NIF
- Europe EINECS numbers: Tetrafluoroethane; 811-97-2

Other Information

- **Label Information:**
 - European risk and safety phrases: s2, s23, s24/25, s51
 - European Symbols needed: none
 - Canadian WHMIS Symbols: NIF
- **NFPA Hazard Rating:** 0-Fire; 1-Health; 1-Reactivity
- **Revision Dates, Sections**
27-Jul-94, Converted to ANSI Standard, 01-Aug-96, Updated Shipping information, 07-Oct-96, Updated section 11, 14-Jan-97, Updated Shipping Information
- **Abbreviations used in this document:** Ne: Not established, Na - Not applicable, NIF - No information found.
- **References:**
 - Code of Federal Regulations - CFR
 - The Sigma-Aldrich Library of Regulatory and Safety Data
 - Chemical Guide and OSHA Hazard Communication Standard
 - Various Federal, State & Local Regulations

The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.

Reviewed 01/01/2013

Section 1. Identification

GHS product identifier : Insta Cool Chilling Spray

Other means of identification : Not available.

Product code : 7000333

Product type : Aerosol.

Product use : Dental Products: Chilling Spray

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Supplier's details : Keystone Industries
52 West King Street
Myerstown, PA 17067
(856) 663-4700

Emergency telephone number (with hours of operation) : (800) 535-5053

Section 2. Hazards identification

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

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : Contains gas under pressure; may explode if heated.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Protect from sunlight. Store in a well-ventilated place.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not available.

Section 3. Composition/information on ingredients

May contain one or more of the following components in quantities considered hazardous:

Ingredient name	CAS number	EC number	%
norflurane	811-97-2	212-377-0	100.00

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

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : 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. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Get medical attention if adverse health effects persist or are severe. 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** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : 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. Get medical attention if adverse health effects persist or are severe. 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
irritation
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** : No specific data.
- Ingestion** : No specific data.

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

Section 4. First aid measures

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

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.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds

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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized 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).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

- Large spill** : 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 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 ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. 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. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
norflurane	AIHA WEEL (United States, 10/2011). TWA: 1000 ppm 8 hours.

- 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.

Section 8. Exposure controls/personal protection

- 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: safety glasses with side-shields.
- Skin protection**
- 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.
- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Gas. [Compressed gas.]
- Color** : Colorless.
- Odor** : Characteristic.
- pH** : Not available.
- Melting point** : -108°C (-162.4°F)
- Boiling point** : -26°C (-14.8°F)
- Flash point** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : 574 kPa (4305.37 mm Hg) [room temperature]
- Vapor density** : 3.5 [Air = 1]
- Relative density** : Not available.
- Solubility** : Not available.
- Solubility in water** : 1 g/l
- Partition coefficient: n-octanol/water** : 1.06
- Auto-ignition temperature** : >743°C (>1369.4°F)
- Viscosity** : Not available.

Aerosol product

- 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** : Hazardous reactions or instability may occur under certain conditions of storage or use.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.
- 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	Result	Species	Dose	Exposure
norflurane	LC50 Inhalation Vapor	Rat	1500 g/m ³	4 hours

- Information on the likely routes of exposure** : Not available.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
irritation
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Section 11. Toxicological information

Not available.

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.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Insta Cool Chilling Spray	1.06	-	low
norflurane	1.06	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc})	: Not available.
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Other adverse effects	: No known significant effects or critical hazards.
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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.
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Section 14. Transport information

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	UN3159	UN3159	UN3159	UN3159	UN3159	UN3159
UN proper shipping name	1,1,1, 2-Tetrafluoroethane	1,1,1, 2-Tetrafluoroethane	1,1,1, 2-Tetrafluoroethane	1,1,1, 2-Tetrafluoroethane	1,1,1, 2-Tetrafluoroethane	1,1,1, 2-Tetrafluoroethane
Transport hazard class(es)	2.2 	2.2 	2.2 	2 	2.2 	2.2 
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	-	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 13-2.17 (Class 2).	-	-	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Section 15. Regulatory information

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Sudden release of pressure

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
norflurane	100.00	No.	Yes.	No.	No.	No.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

Canada inventory : All components are listed or exempted.

International regulations

International lists :

- Australia inventory (AICS)**: All components are listed or exempted.
- China inventory (IECSC)**: All components are listed or exempted.
- Japan inventory (ENCS)**: All components are listed or exempted.
- Japan inventory (ISHL)**: 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 Chemical Substances Inventory (TCSI)**: All components are listed or exempted.
- Turkey inventory**: All components are listed or exempted.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Section 16. Other information

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

Health	1
Flammability	0
Physical hazards	1
Personal protection	

Section 16. Other information

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.

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

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



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of printing	: 6/29/2016
Date of issue/Date of revision	: 6/28/2016
Date of previous issue	: No previous validation
Version	: 1
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations
References	: Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Information contained within this SDS is only to be distributed as required by law.