

SAFETY DATA SHEET

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NGHS / English



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1. IDENTIFICATION

Product identifier

Product Name Danby Refrigeration Products - R600a

Other means of identification

Product Code(s) 1475851

Recommended use of the chemical and restrictions on use

Recommended Use Appliance containing Compressed Gas (not Freon)

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Identification Danby Products Ltd.

Address 1800 Production Dr
5070 Whitelaw Rd
Findlay
Ohio
45840
US

Telephone Phone:1-800-263-2629
Fax:519-837-0449

E-mail ddaugherty@danby.com

Emergency telephone number

Company Emergency Phone Number 1-800-263-2629 ext 261

2. HAZARDS IDENTIFICATION

Classification



Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Flammable gases	Category 1

Appearance Black**Physical state** Compressed gas Gas**Odor** No data available**GHS Label elements, including precautionary statements****Danger****Hazard statements**

May cause genetic defects

May cause cancer

Extremely flammable gas

**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/protective clothing/eye protection/face protection

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Skin

Eliminate all ignition sources if safe to do so

Fire

Leaking gas fire: Do not extinguish, unless leak can be stopped safely

Precautionary Statements - Storage

Store locked up

Store in well-ventilated place

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information**Unknown acute toxicity** 100 % of the mixture consists of ingredient(s) of unknown toxicity

100 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Isobutane	75-28-5	100	-	-

4. FIRST AID MEASURES

First aid measures

General advice In case of rupture: Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

Inhalation Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen.

Eye contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Seek immediate medical attention/advice.

Skin contact In case of contact with liquefied gas, thaw frosted parts with lukewarm water.

Ingestion Not an expected route of exposure. Call a physician immediately.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians A patient adversely affected by exposure to this product should not be given adrenaline (epinephrine) or similar heart stimulant since these would increase the risk of cardiac arrhythmias.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

Specific hazards arising from the chemical Ruptured cylinders may rocket. Some may burn but none ignite readily.

Hazardous Combustion Products Carbon oxides.

Explosion Data
Sensitivity to Mechanical Impact Yes.
Sensitivity to Static Discharge None.



Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Stop leak if you can do it without risk.

Other Information Ventilate the area.

Methods and material for containment and cleaning up

Methods for containment If possible, turn leaking containers so that gas escapes rather than liquid. Allow substance to evaporate.

Methods for cleaning up Do not direct water at spill or source of leak.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Do not breathe vapor or mist. Do not smoke. Use with local exhaust ventilation. Do not puncture or incinerate cans. Do not stick pin or any other sharp object into opening on top of can. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH	
Isobutane 75-28-5	STEL: 1000 ppm explosion hazard	N/A	N/A	
Chemical name	Alberta	British Columbia	Ontario TWAEV	Quebec
Isobutane 75-28-5		TWA: 1000 ppm	STEL: 1000 ppm	

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering controls Showers
Eyewash stations



Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	No special protective equipment required.
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state	Compressed gas; Gas
Appearance	Black
Odor	No data available
Color	No information available
Odor Threshold	Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH	No data available	None known	
Melting / freezing point	No data available	None known	
Boiling point / boiling range	No data available	None known	
Flash Point	No data available	None known	
Evaporation Rate	No data available	None known	
Flammability (solid, gas)	No data available	None known	
Flammability Limit in Air		None known	
Upper flammability limit	No data available		
Lower flammability limit	No data available		
Vapor pressure	No data available	None known	
Vapor density	No data available	None known	
Relative density	No data available	None known	
Water Solubility	Insoluble		
Solubility(ies)	No data available	None known	
Partition coefficient: n-octanol/water	2.8		
Autoignition temperature	No data available	None known	
Decomposition temperature	No data available	None known	
Kinematic viscosity	No data available	None known	
Dynamic viscosity	No data available	None known	

Other Information

Explosive properties	No information available
Oxidizing properties	No information available
Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk Density	No information available
Particle Size	No information available
Particle Size Distribution	No information available



10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous Polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	None known based on information supplied.
Hazardous Decomposition Products	Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Product does not present an acute toxicity hazard based on known or supplied information In case of rupture:
Inhalation	In high concentration the gas may cause a suffocation. Victim may not be aware of asphyxiation. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. May cause drowsiness or dizziness.
Eye contact	Specific test data for the substance or mixture is not available. Contact with product may cause frostbite.
Skin contact	Specific test data for the substance or mixture is not available. Contact with product may cause frostbite.
Ingestion	Specific test data for the substance or mixture is not available. Not an expected route of exposure.

Information on toxicological effects

Symptoms No information available.

Numerical measures of toxicity

Acute Toxicity

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity
 100 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
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Component Information



Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Isobutane	-	-	= 658 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	Classification based on individual ingredients of the mixture. Contains a known or suspected mutagen.
Carcinogenicity	Classification based on data available for ingredients. Contains a known or suspected carcinogen.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity	The environmental impact of this product has not been fully investigated.
Persistence and Degradability	No information available.
Bioaccumulation	.

Chemical name	Log Pow
Isobutane	2.88

Mobility	No information available.
Other adverse effects	No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.
US EPA Waste Number	D001

California Waste Codes 331

14. TRANSPORT INFORMATION

<u>DOT</u>	NOT REGULATED
Proper Shipping Name	NON-REGULATED
Hazard Class	N/A
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO</u>	Not regulated
<u>IATA</u>	Not regulated
Proper Shipping Name	NON REGULATED
Hazard Class	N/A
<u>IMDG/IMO</u>	Not regulated
Hazard Class	N/A
<u>RID</u>	Not regulated
<u>ADR</u>	Not regulated
<u>ADN</u>	Not regulated

15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture****International Regulations**

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

Legend

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Isobutane 75-28-5	X	X	X		

16. OTHER INFORMATION

<u>NFPA</u>	Health hazards 1	Flammability 3	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 1*	Flammability 3	Physical hazards 0	Personal Protection X
<i>Chronic Hazard Star Legend</i>	* = Chronic Health Hazard			

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Disclaimer

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End of Safety Data Sheet

