

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Trade name : JOHNSEN'S FREEZE R134A PLUS 14 OZ. 2 PACK WITH 6 CLAMSHELLS

Product code : 6402

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

Use of the substance/mixture : Oil Charge

1.3. Details of the supplier of the safety data sheet

Technical Chemical Company P.O. BOX 139 Cleburne, Texas 76033 T 817-645-6088

1.4. Emergency telephone number

Emergency number : CHEMTREC 24 Hour 1-800-424-9300, 1-703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Liquefied gas H280 Repr. 1B H360

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)





GHS04

GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H280 - Contains gas under pressure; may explode if heated

H360 - May damage fertility or the unborn child

Precautionary statements (GHS-US) : P201 - Obtain special instructions

P202 - Do not handle until all safety precautions have been read and understood P280 - Wear protective gloves, protective clothing, eye protection, face protection

P308+P313 - If exposed or concerned: Get medical advice/attention

P405 - Store locked up

P410+P403 - Protect from sunlight. Store in a well-ventilated place

P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance with

local, regional, national, international regulations.

P251 - Pressurized container: Do not pierce or burn, even after use

P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F

2.3. Other hazards

Other hazards not contributing to the classification

: Contains gas under pressure; may explode if heated. Intentional misuse and inhalation abuse may cause cardiac or central nervous systems effects. Warning. May Cause frostbite in contact with skin. May Cause frostbite in contact with skin. (Liquid form can be ejected if the aerosol can is not held upright during use.) Warning. Asphyxiant in high concentrations. . This product dispenses liquid. Liquid may drip onto skin causing frostbite, blistering, red skin. WARNING. . None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

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Name	Product identifier	%	GHS-US classification
1,1,1,2-Tetrafluoroethane	(CAS No) 811-97-2	85 - 95	Liquefied gas, H280
Polyol Ester	(CAS No) Proprietary	10 - 30	Not classified
Ester	(CAS No) Proprietary	1 - 5	Not classified
Proprietary Inhibitor Package	(CAS No) Proprietary	< 1	Not classified
Benzyl Butyl Phthalate	(CAS No) 85-68-7	<1	Repr. 1B, H360 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

The exact percentage is a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation

: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact

: Rinse with water. Take victim to a doctor if irritation persists. In case of frostbites: Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.

First-aid measures after eye contact

Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist. Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion

: Not applicable. Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries

: May damage fertility or the unborn child.

Symptoms/injuries after inhalation

 Coughing. Irritation of the respiratory tract. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Rapid respiration. Slight irritation.

Symptoms/injuries after skin contact

: Causes skin irritation. Blisters. May cause moderate irritation. Red skin.

Symptoms/injuries after eye contact

: Causes eye irritation. Irritation of the eye tissue. Inflammation/damage of the eye tissue. Redness of the eye tissue.

Symptoms/injuries after ingestion

: May be harmful if swallowed and enters airways. May be fatal if swallowed and enters airways.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions

Other information

: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting

: Do not enter fire area without proper protective equipment, including respiratory protection.

: NFPA Aerosol Level 1.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources.

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety glasses.

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Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Methods and material for containment and cleaning up

For containment : Dam up the liquid spill. Contain released substance, pump into suitable containers. Plug the

leak, cut off the supply.

Methods for cleaning up : Store away from other materials.

Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

Precautions for safe handling

Additional hazards when processed

: Pressurized container: Do not pierce or burn, even after use.

Precautions for safe handling

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not handle until all safety precautions have been read and understood. Obtain special instructions.

Hygiene measures

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Wash affected areas thoroughly after handling. Wash contaminated clothing before reuse. Always wash hands after handling the product. Remove contaminated clothes. Separate working clothes from town clothes. Launder separately.

Conditions for safe storage, including any incompatibilities

Technical measures

: Proper grounding procedures to avoid static electricity should be followed. Comply with applicable regulations.

Storage conditions

Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Strong bases. Strong acids. Sources of ignition. Direct sunlight.

Incompatible materials Storage area

Incompatible products

: Store in a well-ventilated place.

Specific end use(s)

Follow Label Directions.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure controls

Appropriate engineering controls

: Local exhaust venilation, vent hoods . Ensure good ventilation of the work station.

Personal protective equipment : Gloves. Safety glasses. Avoid all unnecessary exposure.





Materials for protective clothing

neoprene. Hand protection : Wear protective gloves.

Eye protection Chemical goggles or safety glasses. Skin and body protection Wear suitable protective clothing.

Wear appropriate mask. Respiratory protection

Consumer exposure controls Avoid contact during pregnancy/while nursing.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state : Gas Appearance : Liquid.

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No data available

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Color : Red.

Odor : Characteristic. Petroleum-like odour.

Odor threshold No data available pΗ : No data available Relative evaporation rate (butyl acetate=1) : No data available Melting point : No data available Freezing point No data available Boiling point : No data available Flash point : No data available Auto-ignition temperature No data available Decomposition temperature : No data available Flammability (solid, gas) : No data available Vapor pressure : No data available

Relative density : 0.965 @ 20 deg F (Liquid)

Solubility : Insoluble in water. Log Pow : No data available Log Kow No data available Viscosity, kinematic : No data available Viscosity, dynamic : No data available : No data available Explosive properties Oxidizing properties No data available **Explosion limits** : No data available

9.2. Other information

Relative vapor density at 20 °C

VOC content : > 95 % VOC Exempt
Gas group : Liquefied gas

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Toxic fume. . Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

1,1,1,2-Tetrafluoroethane (811-97-2)				
LC50 inhalation rat (mg/l)	> 2000 mg/l/4h (Rat; Literature study)			
LC50 inhalation rat (ppm)	> 359300 ppm/4h (Rat; Literature study)			
Benzyl Butyl Phthalate (85-68-7)				
LD50 oral rat	2330 mg/kg (Rat)			
LD50 dermal rat	6700 mg/kg (Rat)			
LD50 dermal rabbit	> 10000 mg/kg (Rabbit)			
LC50 inhalation rat (mg/l)	> 6.7 mg/l/4h (Rat)			
Skin corrosion/irritation	: Not classified			

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Serious eye damage/irritation : Not classified Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Benzyl Butyl Phthalate (85-68-7)

IARC group 3

Reproductive toxicity : May damage fertility or the unborn child.

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated : Not classified

exposure)

exposure)

: Not classified

Aspiration hazard :

Potential Adverse human health effects and symptoms

: Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation

: Coughing. Irritation of the respiratory tract. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Rapid respiration. Slight

irritation.

Symptoms/injuries after skin contact : Causes skin irritation. Blisters. May cause moderate irritation. Red skin.

Symptoms/injuries after eye contact : Causes eye irritation. Irritation of the eye tissue. Inflammation/damage of the eye tissue.

Redness of the eye tissue.

0.97 mg/l (EC50; 48 h)

Symptoms/injuries after ingestion : May be harmful if swallowed and enters airways. May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1. Toxicity

EC50 Daphnia 2

1,1,1,2-Tetrafluoroethane (811-97-			
LC50 fish 1 450 mg/l (LC50; 96 h)			
EC50 Daphnia 1 980 mg/l (EC50; 48 h)			
Benzyl Butyl Phthalate (85-68-7)			
LC50 fish 2	0.82 mg/l (LC50; 96 h)		

12.2. Persistence and degradability

JOHNSEN'S ERFEZE R134A PLUS 14 OZ. 2 PACK WITH 6 CLAMSHELLS.

Persistence and degradability Not established.

1,1,1,2-Tetrafluoroethane (811-97-2)

Persistence and degradability

Not readily biodegradable in water.

Polyol Ester (Proprietary)

Persistence and degradability Not established.

Ester (Proprietary)

Persistence and degradability Not established.

Proprietary Inhibitor Package (Proprietary)

Persistence and degradability Not established.

Benzyl Butyl Phthalate (85-68-7)

Persistence and degradability Readily biodegradable in water. Forming sediments in water. Biodegradability in soil: no data available. Adsorbs into the soil.

12.3. Bioaccumulative potential

JOHNSEN'S FREEZE R134A PLUS 14 OZ. 2	PACK WITH 6 CLAMSHELLS
Bioaccumulative potential	Not established.

1,1,1,2-Tetrafluoroethane (811-97-2)

BCF other aquatic organisms 1 5 - 58 (BCF)

Log Pow 1.06 (OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)

Bioaccumulative potential Low potential for bioaccumulation (BCF < 500).

Polyol Ester (Proprietary)

Bioaccumulative potential Not established.

Ester (Proprietary)

Bioaccumulative potential Not established.

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Proprietary Inhibitor Package (Proprietary)					
Bioaccumulative potential Not established.					
Benzyl Butyl Phthalate (85-68-7)	Benzyl Butyl Phthalate (85-68-7)				
BCF fish 1	188 (BCF; 408 h)				
BCF fish 2	663 (BCF; 504 h)				
BCF other aquatic organisms 1	26 - 270 (BCF)				
Log Pow	3.57 - 5.8				
Bioaccumulative potential	Not established.				

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of

contents/container to appropriate waste disposal facility, in accordance with local, regional,

national, international regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

US DOT (ground): UN1078, Refrigerant gases, n.o.s., 2.2, Limited Quantity ICAO/IATA (air): UN1078, Refrigerant gases, n.o.s., 2.2, Limited Quantity

IMO/IMDG (water): UN1078, Refrigerant gases, n.o.s. (1,1,1,2-Tetrafluoroethane), 2.2

Special Provisions: T50 - When portable tank instruction T50 is referenced in Column (7) of the 172.101 Table, the applicable liquefied

compressed gases are authorized to be transported in portable tanks in accordance with the requirements of 173.313 of

this subchapter

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Refrigerant gases, n.o.s.

Class (DOT) : 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115

Hazard labels (DOT) : 2.2 - Non-flammable gas



DOT Symbols : G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102) : T50 - When portable tank instruction T50 is referenced in Column (7) of the 172.101 Table, the

applicable liquefied compressed gases are authorized to be transported in portable tanks in

accordance with the requirements of 173.313 of this subchapter

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

DOT Packaging Non Bulk (49 CFR 173.xxx) : 304

DOT Packaging Bulk (49 CFR 173.xxx) : 314;315

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

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

passenger vessel

Air transport

DOT Quantity Limitations Passenger aircraft/rail : 75 kg

(49 CFR 173.27)

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

SECTION 15: Regulatory information

15.1. US Federal regulations

JOHNSEN'S FREEZE R134A PLUS 14 OZ. 2 PA	ACK WITH 6 CLAMSHELLS
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

Delayed (chronic) health hazard Sudden release of pressure hazard

1,1,1,2-Tetrafluoroethane (811-97-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes

Sudden release of pressure hazard Immediate (acute) health hazard

Polyol Ester (Proprietary)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

JOHNSEN'S FREEZE R134A PLUS 14 OZ. 2 PACK WITH 6 CLAMSHELLS				
WHMIS Classification Class A - Compressed Gas				
1,1,1,2-Tetrafluoroethane (811-97-2)				
WHMIS Classification Class A - Compressed Gas				
Polyol Ester (Proprietary)				
WHMIS Classification Uncontrolled product according to WHMIS classification criteria				

EU-Regulations

Polyol Ester (Proprietary)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

15.2.2. National regulations

Polyol Ester (Proprietary)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

15.3. US State regulations

JOHNSEN'S FREEZE R134A PLUS 14 OZ. 2 PACK WITH 6 CLAMSHELLS						
U.S California - Proposition	n 65 - Carcinogens List	N	0			
U.S California - Proposition Toxicity	n 65 - Developmental	N	0			
U.S California - Proposition Toxicity - Female	n 65 - Reproductive	No				
U.S California - Proposition Toxicity - Male	n 65 - Reproductive	No				
State or local regulations		U.S California - Proposition 65 - Maximum Allowable Dose Levels (MADL)				
1,1,1,2-Tetrafluoroethane (811-97-2)						
U.S California - Proposition 65 -	U.S California - Proposition 65 -		U.S California - Proposition 65 -	U.S California - Proposition 65 -	Non-significant risk level (NSRL)	

Proposition 65 - Carcinogens List	Proposition 65 - Developmental Toxicity	Proposition 65 - Reproductive Toxicity - Female	Proposition 65 - Reproductive Toxicity - Male	(NSRL)
No	No	No	No	
Polyol Ester (Proprietary)				
U.S California -	U.S California -	U.S California -	U.S California -	Non-significant risk level

o.o. odiliottila	o.o. Gainornia	O.O. Gainornia	O.O. Galilottila	1 ton organioant not level
Proposition 65 -	Proposition 65 -	Proposition 65 -	Proposition 65 -	(NSRL)
Carcinogens List	Developmental Toxicity	Reproductive Toxicity -	Reproductive Toxicity -	

Male

Female

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Polyol Ester (Proprieta	ary)			
No	No	No	No	
Ester (Proprietary)				
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	
Proprietary Inhibitor P	Package (Proprietary)			
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	
Benzyl Butyl Phthalate	e (85-68-7)			
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	Yes	Yes	Yes	
Benzyl Butyl Phthalate	e (85-68-7)			
State or local regulation	ons			
U.S California - Propo	osition 65 - Maximum Allowable D	ose Levels (MADL)		

SECTION 16: Other information

Indication of changes : Revision - See : *.

Other information : None.

Full text of H-phrases:

H280	Contains gas under pressure; may explode if heated
H360	May damage fertility or the unborn child
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt

incapacitation or possible residual injury unless prompt medical attention is given.

medical attention is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with

some release of energy, but not violently.



HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 0 Minimal Hazard
Physical : 1 Slight Hazard

Personal Protection : B

SDS US (GHS HazCom 2012) - TCC

The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product

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