

## Enviro-Safe Arctic Air

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### PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** Enviro-Safe Arctic Air  
**SDS Number:** 2090  
**Revision Date:** 1/9/2020  
**Version:** 2.0  
**Product Description:** Boost A/C Cooling Performance  
  
**Supplier Details:** Enviro-Safe Refrigerants  
400 Hanna Dr.  
Pekin, IL 61554  
  
**Contact:** Randy Price  
**Phone:** 309-346-1110  
**Fax:** 309-346-1237  
**Email:** info@es-refrigerants.com  
**Web:** http://www.es-refrigerants.com/  
**Emergency:** CHEMTREC 1-800-424-9300

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### HAZARDS IDENTIFICATION

#### Classification of the Substance or Mixture

##### GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Physical, Flammable Gases, 1  
Physical, Gases Under Pressure, Liquefied Gas  
Health, Skin sensitization, 1

#### GHS Label Elements, Including Precautionary Statements

**GHS Signal Word:** **DANGER**

**GHS Hazard Pictograms:**



**GHS Hazard Statements:**

H220 - Extremely flammable gas  
H280 - Contains gas under pressure; may explode if heated  
H317 - May cause an allergic skin reaction  
CGA-GH01 - MAY CAUSE FROSTBITE.  
OSHA - H01 - MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.

**GHS Precautionary Statements:**

P210 - Keep away from heat/sparks/open flames/hot surfaces.  
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
P381 - Eliminate all ignition sources if safe to do so.  
P410 + P403 - Protect from sunlight. Store in a well-ventilated place.  
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.  
P272 - Contaminated work clothing should not be allowed out of the workplace.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.  
P362 - Take off contaminated clothing.  
P381 - In case of leakage, eliminate all ignition sources.  
P410 + P403 - Protect from sunlight. Store in a well-ventilated place.  
P501 - Dispose of contents/container to local, regional, national, and international regulations.  
CGA-PG21 - Open valve slowly.

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### COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Ingredients:		
CAS#	%	Chemical Name:
74-98-6	48.5%	Propane see also Petroleum gases, liquefied
106-97-8	48.5%	Butane
64742-54-7	1%	Distillates, petroleum, hydrotreated heavy paraffinic

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### FIRST AID MEASURES

- Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Immediately call a POISON CENTER or doctor/physician.
- Skin Contact:** If frostbite or freezing occurs, immediately flush with plenty of lukewarm water to GENTLY warm the affected area. Do not use hot water. Do not rub affected area. Get immediate medical attention.
- Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
- Ingestion:** Do not induce vomiting. Immediately call a POISON CENTER or doctor/physician.

#### 4.1. Description of First Aid Measures

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.

#### 4.2. Most Important Symptoms and Effects, Both Acute and Delayed

**Symptoms/Injuries:** Gas can be toxic as simple asphyxiant by displacing oxygen from the air. Refrigerated liquefied gas. Contact with product may cause cold burns or frostbite.

**Symptoms/Injuries After Inhalation:** Asphyxiate gas.

**Symptoms/Injuries After Skin Contact:** May cause frostbite. May cause an allergic skin reaction.

**Symptoms/Injuries After Eye Contact:** Contact with the liquefied gas causes frostbite.

**Symptoms/Injuries After Ingestion:** Ingestion is an unlikely route of exposure for a gas.

#### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention.

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### FIRE FIGHTING MEASURES

#### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Dry chemical powder, alcohol-resistant foam, carbon dioxide.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy water stream may spread fire.

#### 5.2. Special Hazards Arising from the Substance or Mixture

**Fire Hazard:** Flammable gas.

**Explosion Hazard:** Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

**Reactivity:** Contains gas under pressure; may explode if heated. Reacts with strong oxidants causing fire and explosion hazard.

#### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

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### ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Use special care to avoid static electric charges. Keep away from open flames, hot surfaces and sources of ignition. No smoking. Do not get in eyes, on skin, or on clothing.

##### 6.1.1. For Non-emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel. Eliminate ignition sources.

##### 6.1.2. For Emergency Responders

**Protective Equipment:** Equip clean up crew with proper protection.

**Emergency Procedures:** Stop Leak if safe to do so. Ventilate area.

#### 6.2. Environmental Precautions

Avoid release to the environment.

#### 6.3. Methods and Material for Containment and Cleaning Up

**For Containment:** Stop leak without risks if possible. Do not take up in combustible material such as: saw dust or cellulose material.

**Methods for Cleaning Up:** Contact competent authorities after a spill.

#### 6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

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### HANDLING AND STORAGE

#### Handling Precautions:

##### 7.1. Precautions for Safe Handling

**Precautions for Safe Handling:** Personnel should be trained to regularly inspect equipment such as pumps, hoses, and valves. Do not breathe gas. Ensure there is adequate ventilation. Close valve after each use and when empty! Open valve slowly to avoid pressure shock.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

#### Storage Requirements:

##### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations. Keep at temperatures below 52C/125F.

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep in fireproof place. Store locked up.

##### 7.3. Specific End Use(s):

Boost A/C Cooling Performance.

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### EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Engineering Controls:

Alarm detectors should be used when toxic gases may be released. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

#### Personal Protective Equipment:

HMIS PP, J I Splash Goggles, Gloves, Apron, Dust and Vapor Resp  
Propane see also Petroleum gases, liquefied cas#:(74-98-6) [48.5%]

#### PPE



#### Personal Protective Equipment

**Eye/Face Protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin Protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Full Contact:** Material: Fluorinated rubber Minimum layer thickness: 0.7 mm Break through time: 480 min Material tested: Vitoject (KCL 890 / Aldrich 2677698, Size **M**)

**Splash Contact:** Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 60 min Material tested: Camatril (KCL 730 / Aldrich 2677442, Size **M**) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific

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use scenario.

**Body Protection:** Impervious clothing, Flame retardant anti-static protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of Environmental Exposure:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Butane cas#:(106-97-8) (48.5%)

Personal Protective Equipment

**Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand Protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Immersion protection Material: Fluorinated rubber Minimum layer thickness: 0.7 mm Break through time:> 480 min Material tested:Vitoject (Aldrich 2677698, Size M)

**Splash Protection:** Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time:> 30 min Material tested:Camatril (Aldrich 2677442, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**Eye Protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and Body Protection:** Impervious clothing, Flame retardant anti-static protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Propane see also Petroleum gases liquefied cas#:(74-98-6) [48.5%]

Components with workplace control parameters

TWA	1,000 ppm	USA. ACGIH Threshold Limit Values (TLV)
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Central Nervous System impairment Cardia Sensitization

TWA	1,000 ppm	USA.Occupational Exposure Limits (OSHA)- Table Z-1 Limits for Air Contaminants
	1,800 mg/m3	

The value in mg/m3 is approximate.

TWA	1,000 ppm	USA. OSHA -TABLE Z-1 Limits for Air Contaminants- 1910.1000
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1,800 mg/m<sup>3</sup>

TWA 1,000 ppm USA. NIOSH Recommended Exposure Limits  
1,800 mg/m<sup>3</sup>

Butane cas#:(106-97-8) [48.5%] Components with workplace control parameters

TWA 800 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000  
1,900 mg/m<sup>3</sup>

TWA 1,000 ppm USA. ACGIH Threshold Limit Values (TLV)

TWA 1,000 ppm USA. ACGIH Threshold Limit Values (TLV)

Central Nervous System impairment Cardiac sensitization

TWA 800 ppm USA. NIOSH Recommended Exposure Limits  
1,900 mg/m<sup>3</sup>

Also see specific listing for Isobutane.

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### PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Clear, colorless gas	<b>Odor:</b>	N/A
<b>Physical State:</b>	Gas	<b>Solubility:</b>	N/A
<b>Odor Threshold:</b>	N/A	<b>Freezing/Melting Pt.:</b>	-166 °C (-267.1 °F)
<b>Spec Grav./Density:</b>	.540	<b>Flash Point:</b>	-104 °C (-155 °F)
<b>Viscosity:</b>	N/A	<b>Vapor Density:</b>	1.76
<b>Boiling Point:</b>	-34.7 °C	<b>Auto-Ignition Temp:</b>	862.8 °C (1585 °F)
<b>Partition Coefficient:</b>	<1	<b>UFL/LFL:</b>	8.5 % / 1.9 %
<b>Vapor Pressure:</b>	10@ 21.1 °C		
<b>pH:</b>	N/A		
<b>Evap. Rate:</b>	Rapid		
<b>Decomp Temp:</b>	N/A		

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### STABILITY AND REACTIVITY

<b>Reactivity:</b>	Contains gas under pressure; may explode if heated. Reacts with oxidants causing fire and explosion hazard.
<b>Chemical Stability:</b>	Stable under recommended handling and storage conditions.
<b>Conditions to Avoid:</b>	Direct sunlight. Extremely high or low temperatures. Open flame. Heat. Sparks.
<b>Materials to Avoid:</b>	Strong oxidizing agents.
<b>Hazardous Decomposition:</b>	Carbon oxides (CO, CO <sub>2</sub> ).
<b>Hazardous Polymerization:</b>	Will not occur.

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### TOXICOLOGICAL INFORMATION

Propane see also Petroleum gases, liquefied cas#:(74-98-6) [48.5%]

#### Information on Toxicological Effects

**Acute Toxicity:** No data available

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**Inhalation:** No data available

**Dermal:** No data available

**Skin Corrosion/Irritation:** No data available

**Serious Eye Damage/Eye Irritation:** No data available

**Respiratory or Skin Sensitization:** No data available

**Germ Cell Mutagenicity:** No data available

**Carcinogenicity:** No data available

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. NTP:

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive Toxicity:** No data available

**Specific Target Organ Toxicity- Single Exposure:** No data available

**Specific Target Organ Toxicity - Repeated Exposure:** No data available

**Aspiration Hazard:** No data available

**Additional Information:**

RTECS:TX2275000

Dizziness, Drowsiness, Unconsciousness

Butane cas#:(106-97-8) [48.5%]

### Information on Toxicological Effects

**Acute Toxicity:** No data available

Oral LD50 No data available

Inhalation LC50 LC50 Inhalation - rat - 4 h - 658,000 mg/m3

Dermal LD50

### Other Information on Acute Toxicity -

**Skin Corrosion/Irritation:** No data available

**Serious Eye Damage/Eye Irritation:** No data available

**Respiratory or Skin Sensitization:** No data available

**Germ Cell Mutagenicity:** No data available

**Carcinogenicity:** No data available

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. NTP:

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive Toxicity:** No data available

**Teratogenicity:** No data available

**Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System):** No data available

**Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System):** No data available

**Aspiration Hazard:** No data available

**Potential Health Effects:** Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. May cause skin irritation.

**Eyes:** May cause eye irritation.

**Signs and Symptoms of Exposure:** Central nervous system depression, giddiness, Shortness of breath, narcosis, Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite., Exposure can cause numbness, tingling, and weakness in extremities., Cyanosis, Pulmonary edema. Effects may be delayed., Abdominal pain, Nausea, vomiting.

**Synergistic Effects:** No data available

**Additional Information:**

RTECS:EJ4200000

Distillates, petroleum, hydrotreated heavy paraffinic cas#:(64742-54-7) [1%]

## Enviro-Safe Arctic Air

**Acute Toxicity:** Not classified  
**Skin Corrosion/Irritation:** Not classified  
**Serious Eye Damage/Irritation:** Not classified  
**Respiratory or Skin Sensitization:** Not classified  
**Germ Cell Mutagenicity:** Not classified  
**Carcinogenicity:** The hazard evaluation is based on data for coomponents or a similar material.  
**Reproductive Toxicity:** Not classified  
**Specific Target Organ Toxicity (Single Exposure):** Not classified  
**Specific Target Organ Toxicity (Repeated Exposure):** Not classified  
**Aspiration Hazard:** May be fatal if swallowed and enters airways.  
**Symptoms/Injuries After Inhalation:** May cause respiratory irritation.  
**Symptoms/Injuries After Skin Contact:** May cause skin irritation.  
**Symptoms/Injuries After Eye Contact:** May cause eye irritation.  
**Symptoms/Injuries After Ingestion:** May be fatal if swallowed and enters airways.

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### ECOLOGICAL INFORMATION

Propane see also Petroleum gases, liquefied cas#:(74-98-6) [48.5%]

#### Information on Ecological Effects

**Toxicity:** No data available  
**Persistence and Degradability:** No data available  
**Bioaccumulative Potential:** No data available  
**Mobility in Soil:** No data available  
 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted  
**Other Adverse Effects:** No data available

Butane cas#:(106-97-8) [48.5%]

#### Information on Ecological Effects

**Toxicity:** No data available  
**Persistence and Degradability:** No data available  
**Bioaccumulative Potential:** No data available  
**Mobility in Soil:** No data available  
**PBT and vPvB Assessment:** No data available  
**Other Adverse Effects:** No data available

Distillates, petroleum, hydrotreated heavy paraffinic cas#:64742-54-7 [1%]

#### Information on Ecological Effects

**Toxicity -**  
 Distillates, petroleum, hydro-treated heavy paraffinic (64742-54-7)  
 LC50 Fish 1: > 5000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)  
 EC50 Daphnia 1: > 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)  
**Persistence and Degradability:** No information available  
**Bioaccumulative Potential:** No additional information available  
**Mobility in Soil:** No additional information available  
**Other Information:** Avoid release to the environment.

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### DISPOSAL CONSIDERATIONS

Propane see also Petroleum gases, liquefied cas#:(74-98-6) [48.5%]

#### Waste Treatment Methods

## Enviro-Safe Arctic Air

**Product:** Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated Packaging:** Dispose of as unused product.

Butane cas#:(106-97-8) [48.5%]

### Waste Treatment Methods

**Product:** Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated Packaging:** Dispose of as unused product.

Distillates, petroleum, hydrotreated heavy paraffinic cas#:(64742-54-7) [1%]

### Waste Treatment Methods

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, and international regulations. **Ecology - Waste Materials:** Avoid release to the environment.

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### TRANSPORT INFORMATION

#### 14.1. In Accordance with DOT

**Proper Shipping Name:** Consumer Commodity, ORM-D

#### 14.2. In Accordance with IMDG

**Proper Shipping Name:** PETROLEUM GASES, LIQUEFIED

**Hazard Class:** 2

**Identification Number:** UN1075

**Label Codes:** 2.1

**EmS-No. (Fire):** F-D

**EmS-No. (Spillage):** S-U

**Marine Pollutant:** No

#### 14.3. In Accordance with IATA

**Proper Shipping Name:** PETROLEUM GASES, LIQUEFIED

**Identification Number:** UN1075

**Hazard Class:** 2

**Label Codes:** 2.1

**ERG Code (IATA):** 10L

**Marine Pollutant:** No



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### REGULATORY INFORMATION

[%] RQ (CAS#) Substance - Reg Codes

[48.5%] Propane see also Petroleum gases, liquefied (74-98-6) MASS, NJHS, OSHAWAC, PA, TSCA, TXAIR

[48.5%] Butane (106-97-8) MASS, NJHS, OSHAWAC, PA, TSCA, TXAIR

[1%] Distillates, petroleum, hydrotreated heavy paraffinic (64742-54-7) NJHS, TSCA

This product does not contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

### Regulatory Code Legend

MASS = MA Massachusetts Hazardous Substances List

NJHS = NJ Right-to-Know Hazardous Substances

OSHA = OSHA Workplace Air Contaminants



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## Enviro-Safe Arctic Air

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PA= PA Right-To-Know List of Hazardous Substances

TSCA= Toxic Substances Control Act

TXAIR= TX Air Contaminants with Health Effects Screening Level

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**16****OTHER INFORMATION**

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**Revision Date:** 01/09/2020

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