

AVALANCHE BLACK DIAMOND R134A WITH TRIPLE SEAL

Safety Data Sheet

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

Revision date: 11/11/2015

Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Trade name : AVALANCHE BLACK DIAMOND R134A WITH TRIPLE SEAL
Product code : BD-151

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

Use of the substance/mixture : Aerosol

1.3. Details of the supplier of the safety data sheet

TSI Products Incorporated
3600 E. Randol Mill Road
Arlington, TX 76011
T 817-649-2626

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

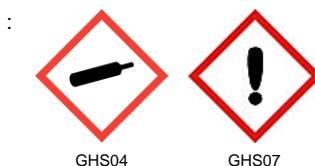
GHS-US classification

Gases Under Pressure Liquefied Gas
Skin irritation (Category 2),
Acute toxicity, Category 4, Inhalation

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Warning

Hazard statements (GHS-US)

: H280 - Contains gas under pressure; may explode if heated
H332 - Harmful if inhaled
H315 - Causes skin irritation

Precautionary statements (GHS-US)

: P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash skin thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
P302 + P352 IF ON SKIN - Wash with plenty of soap and water.
P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P332 + P313 - If skin irritation occurs: Get medical advice/ attention.
P362 - Take off contaminated clothing and wash before reuse.
P403 + P410 - Protect from sunlight. Store in a well ventilated place.
P501 - Dispose of contents/ container to an approved waste disposal plant.

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 |
|---------------------------|----------------------|--------|-----------------------|
| Proprietary Additive | (CAS No) Proprietary | 25-45% | |
| Polyalkylene glycol | (CAS No) 903885-3 | 20-25% | |
| 1,1,1,2-Tetrafluoroethane | (CAS No) 811-97-2 | 45-50% | |

The exact percentage is a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). Seek medical attention immediately.
- First-aid measures after skin contact : Remove contaminated shoes and clothing. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention.
Do not use ointments. If skin surface is not damaged, clean affected area thoroughly with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists.
- First-aid measures after eye contact : Check for and remove contact lenses. If irritation or redness develops, flush eyes with cool, clean, low-pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. Do not use eye ointment. Seek medical attention immediately.
- First-aid measures after ingestion : Do not induce vomiting. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Never give anything by mouth to a person who is not fully conscious. Do not leave victim unattended. Seek medical attention immediately.

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 : Alcohol-resistant foam. Carbon dioxide (CO₂). Dry chemical.
- Unsuitable extinguishing media : High volume water jet.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Firefighting instructions : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers. Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : NFPA Aerosol Level 1.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Contain spill with dikes of soil or nonflammable absorbent to minimize contaminated area. Avoid run-off into storm sewers and ditches leading to waterways. If required, notify state and local authorities. Place leaking containers in well-ventilated area.

6.1.1. For non-emergency personnel

- Protective equipment : Gloves. Safety glasses.
- Emergency procedures : Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. Assess the spill situation, as the spill may not evolve large amounts of hazardous airborne contaminants in many outdoor spill situations. It may be advisable in some cases to simply monitor the situation until spilled product is removed.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

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6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

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| For containment | : Clean up small spills by using a nonflammable absorbent or flushing sparingly with water. Contain larger spills with nonflammable diking or absorbent. Clean up by vacuuming or sweeping. |
| Methods for cleaning up | : Store away from other materials. |

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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| 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. |

7.2. Conditions for safe storage, including any incompatibilities

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| Technical measures | : Use in accordance with good work place practices. Use with adequate ventilation. Keep containers closed when not in use. |
| Storage conditions | : Store below 120°F in cool, dry area, out of direct sunlight and away from strong oxidizers. Do not puncture or burst. |
| Incompatible materials | : Sources of ignition. Direct sunlight. |
| Storage area | : Store in a cool, dry area, away from heat or direct sunlight. Keep containers closed when not in use. Do not store with incompatible materials |

7.3. Specific end use(s)

Follow Label Directions.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

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| Appropriate engineering controls | : Local exhaust ventilation, vent hoods . Ensure good ventilation of the work station. |
| Personal protective equipment | : Gloves. Safety glasses. Avoid all unnecessary exposure. |



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| Hand protection | : Wear protective gloves. |
| Eye protection | : Chemical goggles or safety glasses. |
| Skin and body protection | : Wear suitable protective clothing. |
| Respiratory protection | : Wear appropriate mask. |
| Other information | : Do not eat, drink or smoke during use. |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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| Physical state | : Gas |
| Appearance | : Liquid. |
| Color | : Colorless |
| Odor | : Chloroform-like, irritating. |
| Odor threshold | : No data available |
| pH | : 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 |

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|---------------------------------|-----------------------|
| 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 vapor density at 20 °C | : No data available |
| Relative density | : 1.21 |
| Solubility | : Insoluble in water. |
| Log Pow | : No data available |
| Log Kow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| Explosion limits | : No data available |

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable at room temperature in closed containers under normal storage and handling conditions. May form explosive mixtures in atmospheres having high oxygen content.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Excess heat, attacks some plastics, rubber, and coatings, confined spaces, when no water is present, dichloromethane is not corrosive to metals. At high temperatures and in the presence of water (causing slow decomposition forming HCl), corrosion of iron, some stainless steels, copper and aluminum can occur.

10.5. Incompatible materials

Strong oxidizing agents, strong bases, chemically active metals.

10.6. Hazardous decomposition products

Hydrogen chloride, phosgene, carbon monoxide, carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

1,1,1,2-Tetrafluoroethane:

Acute inhalation toxicity

1,1,1,2-Tetrafluoroethane (134a) LC50 Rat > 500000 ppm 4 h

Sensitization: Cardiac sensitization, species: dogs, Note: No observed effect level 50,000 ppm. Lowest observable effect level 75,000 ppm

SECTION 12: Ecological information

12.5. Other adverse effects

Other information : Ingredients toxic to aquatic life.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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| Waste disposal recommendations | : Dispose of spilled material in accordance with state and local regulations for waste that is non-hazardous by Federal definition. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete. Note: that this handling and disposal information may also apply to empty containers, liners and rinsate. State or local regulations or restrictions are complex and may differ from federal regulations. This information is intended as an aid to proper handling and disposal; the final responsibility for handling and disposal is with the owner of the waste. |
| Ecology - waste materials | : Avoid release to the environment. |

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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. DOT-SP 10232: In accordance with this special permit, the product container is marked with DOT-SP10232 instead of 2Q. This packaging is approved for shipping as a Consumer Commodity. |

14.2. UN proper shipping name

| | |
|----------------------------------|-----------------------------------------------------------------|
| Proper Shipping Name (DOT) | : Refrigerant gases, n.o.s. |
| Transport hazard class(es) (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-SP 10232: In accordance with this special permit, the product container is marked with DOT-SP10232 instead of 2Q. This packaging is approved for shipping as a Limited Quantity. |
| 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

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|-----------------------------|---------------------------------------------------------------------------------------------------------|
| 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

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|------------------------------------------------------------------|----------|
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : 75 kg |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) | : 150 kg |

SECTION 15: Regulatory information

15.1. US Federal regulations

| AVALANCHE R134A WITH Triple Seal | |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| SARA Section 311/312 Hazard Classes | Delayed (chronic) health hazard Immediate (acute) health hazard Sudden release of pressure hazard Fire Hazard |

SARA 313: Title III of the 1986 Super fund Amendments and Reauthorization Act (SARA) and 40 CFR PART 372.

None

All the chemicals used in this product are TSCA listed.

SECTION 16: Other information

| | |
|-------------------|---------|
| Other information | : None. |
|-------------------|---------|

Full text of H-phrases:

| | |
|---------------------|------------------------------------------------------------------|
| Acute Tox. 4 (Oral) | Acute toxicity (oral) Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment - Acute Hazard Category 1 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment - Chronic Hazard Category 1 |

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|---------------|------------------------------------------------------|
| Liquefied gas | Gases under pressure Liquefied gas |
| Repr. 1B | Reproductive toxicity Category 1B |
| H280 | Contains gas under pressure; may explode if heated |
| H302 | Harmful if swallowed |
| H360 | May damage fertility or the unborn child |
| H400 | Very toxic to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |

Hazard ratings This information is intended solely for the use of individuals trained in the NFPA and/or HMIS systems.

NFPA: Health: 2 Flammability: 1 Reactivity: 0

HMIS: Health: 2*Flammability: 1 Reactivity: 0

RATING: 4-EXTREME 3-HIGH 2-MODERATE 1-SLIGHT 0-INSIGNIFICANT

Note:

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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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