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SECTION V - REACTIVITY DATA

Unstable  Conditions to Avoid: N/A  
Stable

Incompatibility (Materials to Avoid): N/A

Hazardous Combustion or Decomposition Products: Thermal-oxidative decomposition gives toxic fumes of carbon dioxide, carbon monoxide, hydrogen fluoride, hydrogen chloride and carbonyl halides.

Hazardous Polymerization  May Occur  Will Not Occur  
Conditions To Avoid: N/A

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## SECTION VI - HEALTH HAZARD DATA

RTECS# KH800850

This material is an anesthetic and inhalation of high concentrations can produce asphyxiation. Persons overcome should be removed to fresh air and artificial respiration started. Contact physician.

Animal studies implicate R133a as a reproductive and developmental toxin. Studies in cats report increased incidents of malignant uterine adenocarcinomas (in females), benign testicular tumors and atrophy of the testes (in males). Male mice exhibit reduced fertility and decrease in testis and epididymis weights after exposure to 10,000 ppm for 5 days at 6 hours/day. These exposed mice also produced fewer offspring. Pregnant rats suffered significant fetus loss and reduced litter size on exposure in latter pregnancy to as little as 2034 ppm for 6 hours/day.

Rats dosed for one year by gavage, 5 days a week, with 300 mg/kg in corn oil showed a high incidence of reproductive tract tumors (Toxicol. Appl. Pharmacol. Vol 72, page 15, 1984). In vitro tests gave negative results.

Rat: Oral LD<sub>50</sub> 78g/kg/1 year (TXAPA9 72, 15, 84)  
Mice: Inhalation LC<sub>50</sub> 150,000 ppm/1 hr (BJANAD 37, 716, 65)  
LC<sub>50</sub> 150,000 ppm/30 minutes  
LC<sub>50</sub> 250,000 ppm/10 minutes  
Rat: Inhalation LC<sub>50</sub> 140,000 ppm/20 minutes

R-133a may typically contain small amounts of the following impurities: R-113/113a, R-124, R-123, R-132b, R-134a, R-1122, R-1112a. These are considered to have low acute toxicity. The toxic effect of any unidentified impurity is obviously unknown.

Primary routes of entry:  Inhalation  Skin  Eyes  Oral

Acute Effects of Overexposure: Anesthesia and asphyxiation.

Chronic Effects of Overexposure: Possible reproductive tract tumors.

Carcinogenicity listing:  [No] NTP  [No] IARC  [No] OSHA  
 [Yes] Other: Experimental animal carcinogen.

## First Aid

Inhalation: Remove to fresh air. Apply artificial respiration if needed.  
Contact physician.  
Skin: Wash with soap and water.  
Eye: Wash with copious amounts of water. Contact physician.  
Oral: N/A

Medical Conditions Generally Aggravated by Exposure: None known

Other Health Hazards: None known



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SECTION VII - PROTECTION INFORMATION

Respiratory: Self-contained breathing apparatus for emergency use.

Ventilation: Adequate general and local ventilation. Vapor will collect in low areas.

Eye and Face: Safety glasses or goggles.

Gloves: Impervious gloves.

Other equipment: Safety shoes are recommended for those handling cylinders.

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SECTION VIII - SPILL, LEAK AND DISPOSAL PROCEDURES

Spill, Leak, or Release: For large spills evacuate area, provide ventilation and allow vapor to dissipate. Wear self-contained breathing apparatus if entering area.

Waste Disposal: Observe all federal, state and local regulations.

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SECTION IX - OTHER INFORMATION

1. Hazardous Materials/Dangerous Goods Shipping Regulations

U.S. (49 CFR): Proper Shipping Name: 1-Chloro-2,2,2-trifluoroethane  
Hazard Class: 2.2; UN/NA Number: 1983  
Packaging Group: N/A

IATA: Proper Shipping Name: 1-Chloro-2,2,2-trifluoroethane  
Hazard Class: 2.2; UN/NA Number: 1983  
Packaging Group: N/A

IMDG: Proper Shipping Name: 1-Chloro-2,2,2-trifluoroethane  
Hazard Class: 2.2; UN/NA Number: 1983  
Packaging Group: N/A

2. Other Information: HMIS Labeling: H 1; F 0; R 0; P A

R133a is an ODPS Class II controlled substance.

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REVISED: SEPTEMBER 12, 2005