



## SAFETY DATA SHEET

### Section I: Chemical Product & Company Identification

**Product names (as used on labels and list):** Air Duster, #410632  
**Product description:** A CFC-free aerosol cleaner for removing dust and debris from sensitive electronic components  
**Manufacturer:** IC Intracom Asia  
4-F, No. 77, Sec. 1, Xintai 5th Rd., Xizhi Dist.  
New Taipei City 221, Taiwan  
**Contact:** Dave Sousa  
+1-813-855-0550, ext. 230  
dsousa@icintracom.com

### Section II: Composition / Information on Ingredients

**Use:** Electronics/Microelectronics application  
**Ingredients:** Ethane, 1,1-Difluoro- (HFC 152a) 75-37-6 100  
CAS no.: %

### Section III: Hazards Identification

**Potential health effects:** Inhalation of HFC-152a may cause nonspecific discomfort such as nausea, headache or weakness, or temporary nervous system depression with dizziness, confusion, poor coordination, drowsiness or unconsciousness.  
Higher exposures may lead to irritation of nose, throat and lungs with cough, difficulty breathing or shortness of breath, temporary alteration of the heart's electrical activity with irregular pulse, palpitations or inadequate circulation, or abnormal kidney function as detected by laboratory tests. Gross overexposure may be fatal.  
Individuals with preexisting diseases of the central nervous system, cardiovascular system, lungs or kidney may have increased susceptibility to the toxicity of excessive exposures.

**Carcinogenicity Information:** None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

## Section IV: First Aid Measures

Inhalation:	If high concentrations are inhaled, immediately remove to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
Skin contact:	In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Treat for frostbite, if necessary, by gently warming affected area.
Eye contact:	In case of contact, immediately flush eyes with plenty of water
Ingestion:	Ingestion is not considered a potential route of exposure.
Note to physicians:	Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution only in situations of emergency life support.

## Section V: Firefighting Measures

Flash point:	< -50°C (< -58°F)
Flammable limits in air, % by volume:	LEL: 3.9; UEL: 16.9
Auto-ignition:	454°C (849°F)
Fire and explosion hazards:	Flammable. Cylinders are equipped with temperature and pressure relief devices but may still rupture under fire conditions. Use water spray to cool cylinders and tanks. HFC-152a fire decomposition by-products will include hydrofluoric acid and possibly carbonyl fluoride. Avoid contact with these materials, which are toxic and irritating. Evacuate personnel immediately in the event of a fire involving HFC-152a.
Extinguishing media:	Water spray, water fog, dry chemical. Carbon dioxide. "Alcohol" foam.
Fire fighting instructions:	Keep container cool with water spray. If gas exiting container ignites, stop flow of gas. Do not put out the fire unless leak can be stopped immediately. Self-contained breathing apparatus (SCBA) is required if containers rupture and contents are released under fire conditions.

## Section VI: Accidental Release Measures

**NOTE:** Review Section V: Fire Fighting Measures and Section VII: Handling (Personnel) before proceeding with cleanup. Use appropriate personal protective equipment during cleanup. If a spill can cause a concentration in excess of 1,000 ppm, turn off valves and ignition sources. Evacuate area. Ventilate area, especially low places where heavy vapors might collect. Wear self-contained breathing apparatus (SCBA).

If this product is spilled and not recovered, or is recovered as a waste for treatment or disposal, the CERCLA Reportable Quantity is 100 lbs. (Release of an unlisted Hazardous Waste characteristic of ignitability).



## Section VII: Handling & Storage

Handling (personnel):	Avoid breathing high concentrations of vapors and avoid liquid contact with skin or eyes. Use with sufficient ventilation to keep employee exposure below recommended limits. Lines and equipment which will contain Dymel 152a Aerosol Propellant should be pre-tested with nitrogen using soapy water to detect leaks.
Storage	Clean, dry area. Do not heat above 52°C (125°F).

## Section VIII: Exposure Controls & Personal Protection

Engineering controls:	Normal ventilation for standard manufacturing procedures is generally adequate. Local exhaust should be used when large amounts are released. Mechanical exhaust should be used in low or enclosed places. Ground all equipment and cylinders before use. Use explosion-proof electrical equipment rated Class I, Group D in Division 1 locations. In Division 2 locations, all spark-producing electrical equipment must be explosion-proof and rated Class I, Group D. Non-sparking motors need not be explosion-proof.
Personal protective equipment:	Impervious gloves and chemical splash goggles should be worn when handling the liquid. Fire protective clothing (NOMEX) with antistatic control should be worn when handling this product. Under normal manufacturing conditions, no respiratory protection is required when using this product. Self-contained breathing apparatus (SCBA) is required if a large release occurs.
Exposure limits: Dymel 152a aerosol propellant:	PEL (OSHA): None established TLV (ACGIH): None established AEL* (DuPont): 1000 ppm, 8 Hr. TWA WEEL (AIHA): 1000 ppm, 8 Hr. TWA * AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

## Section IX: Physical & Chemical Properties

Boiling point:	-25°C (-13°F)
Vapor Pressure:	87 psia at 25°C (77°F)
Vapor Density:	2.4 (Air = 1.0) at 25°C (77°F)
% Volatiles:	100 WT%
Solubility in water:	0.28 WT% @ 25°C (77°F) (87 psia)
Odor:	Slight ethereal
Form:	Gas
Color:	Clear, colorless
Density:	0.90 g/cc at 25°C (77°F): liquid

## Section X: Stability & Reactivity

Chemical stability:	Material is stable. However, avoid open flames and high temperatures.
Incompatibility with other materials:	Incompatible with alkali or alkaline earth metals: powdered Al, Zn, Be, etc.
Polymerization:	Polymerization will not occur.
Other hazards:	Decomposition products are hazardous. This material can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrofluoric acid and possibly carbonyl fluoride.

## Section XI: Toxicological Information

Oral ALD:	>1500 mg/kg in rats
Inhalation ALC, 4 hr:	383,000 ppm in rats

**NOTE:** HFC-152a has not been tested for skin and eye irritancy, nor for animal sensitization. Ingestion of single high doses of HFC-152a caused weight loss and lethargy. Inhalation of high levels of HFC-152a caused labored breathing, lung irritation, lethargy, poor coordination and loss of consciousness. Cardiac sensitization occurred in dogs exposed to a concentration of 150,000 ppm in air and given an intravenous epinephrine challenge. Repeated inhalation exposures caused increased urinary fluoride, reduced kidney weight and reversible kidney changes. Based on an independent peer review, the reversible kidney changes are considered artifacts of the tissue and slide processing and not a compound-related effect. Animal testing demonstrate no carcinogenic activity nor developmental effects. No animal data are available to define reproductive effects of HFC-152a. HFC-152a has not produced genetic damage in bacterial cultures. There are reports indicating that HFC-152a produced genetic damage in some mammalian cell culture tests. A weak genotoxic effect in germ cells of *Drosophila melanogaster* has been reported. It has not been tested in animals.

## Section XII: Ecological Information

No information available.

## Section XIII: Disposal Considerations

Waste disposal:	Reclaim by distillation, incinerate or remove to a permitted waste facility. Comply with federal, state and local regulations.
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**NOTE:** This material may be RCRA Hazardous waste upon disposal due to the ignitability characteristic.

## Section XIV: Transport Information

### Shipping Information / ORM-D

Proper shipping name:	Difluoroethane
Hazard class:	2.1; UN no. 1030
DOT/IMO label:	Flammable gas
Shipping paper information:	None required
Mark Packages:	Difluoroethane, UN 1030, DOT-E11516



Placarding: None required

### Shipping Information / DOT/IMO

Proper shipping name: 1,1-Difluoroethane  
Hazard class: 2.1  
UN no.: 1030  
DOT/IMO label: Flammable Gas  
Special information: Cargo Aircraft Only

## Section XV: Regulatory Information

### U.S. Federal Regulations

TSCA inventory status: Reported/included

### Title III Hazard Classifications sections 311, 312

Acute: Yes  
Chronic: No  
Fire: Yes  
Reactivity: No  
Pressure: Yes

### Lists

SARA Extremely Hazardous Substance: No  
CERCLA Hazardous Substance: See Disposal Information  
SARA Toxic Chemicals: No

**NOTE:** Dymel 152a is a flammable gas as defined by OSHA in 29CFR 1910.1200(c). Use of this product may require compliance with 29CFR 1910.119, Process Safety Management of Highly Hazardous Chemicals.

## Section XVI: Other Information

### NPCA-HMIS Ratings

Health: 1  
Flammability: 4  
Reactivity: 1

**NOTE:** Personal Protection rating to be supplied by user depending on use conditions.

This information is offered in good faith as typical values and not as a product specification. No warranty, expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

