



# JOHNSEN'S DUSTER R152A 10 OZ.

## Safety Data Sheet

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

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Version: 1.2

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

#### 1.1. Product identifier

Product form : Substance  
Trade name : JOHNSEN'S DUSTER R152A 10 OZ.  
CAS No : 75-37-6  
Product code : 4607  
Formula : C<sub>2</sub>H<sub>4</sub>F<sub>2</sub>  
Synonyms : 1,1-difluoroethane / 1,1-Difluoroethane (refrigerant gas R 152a) / algofrene type 67 / difluoroethane / dymel 152 / dymel 152A / ethane, 1,1-difluoro- / ethylene fluoride (=1,1-difluoroethane) / ethylidene difluoride / ethylidene fluoride / FC 152A / fluorocarbon 152A / freon 152 / freon 152A / genetron 100 / genetron 152 / genetron 152A / halocarbon R 152A / HCFC-152a / HCFC-152A / HFC-152a / hydrofluorocarbon 152A / refrigerant 152A

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

Use of the substance/mixture : Aerosol Duster

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Liquefied gas H280

Full text of H statements : see section 16

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS04

Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H280 - Contains gas under pressure; may explode if heated

Precautionary statements (GHS-US) :

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

: In accordance with aerosol flammability definitions, this product is non-flammable. However, the pressurized liquefied gas is extremely flammable. Using this product in an upside-down position, or shaking while using, can cause liquid product to be expelled. The information pertaining to flash point below applies to the liquefied gas. Contact with liquid may cause cold burns/frostbite. Contains gas under pressure; may explode if heated. Asphyxiant in high concentrations. Intentional misuse and inhalation abuse may cause cardiac or central nervous systems effects. Warning. May Cause frostbite in contact with skin. (Liquid form can be ejected if the aerosol can is not held upright during use.) Warning. This product dispenses liquid. Liquid may drip onto skin causing frostbite, blistering, red skin. WARNING.

#### 2.4. Unknown acute toxicity (GHS US)

No data available

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substance

Name	Product identifier	%	GHS-US classification
1,1-Difluoroethane, Liquefied, Under Pressure (Main constituent)	(CAS No) 75-37-6	> 99	Liquefied gas, H280

Full text of H-phrases: see section 16

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### 3.2. Mixture

Not applicable

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 alcohol to drink.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. In case of frostbites: Wash immediately with lots of water (15 minutes)/shower. 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.
First-aid measures after eye contact	: Rinse with water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Not applicable.

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

Symptoms/injuries	: Contains refrigerated gas; may cause cryogenic burns or injury.
Symptoms/injuries after inhalation	: EXPOSURE TO HIGH CONCENTRATIONS: Dizziness. Slight irritation. Headache. Nausea. Vomiting. Coordination disorders. Disturbances of consciousness. Disturbances of heart rate.
Symptoms/injuries after skin contact	: Frostbites.
Symptoms/injuries after eye contact	: No data available.
Symptoms/injuries after ingestion	: Not applicable.
Chronic symptoms	: No effects known.

### 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	: Water spray. BC powder. Carbon dioxide.
Unsuitable extinguishing media	: No unsuitable extinguishing media known.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD. Extremely flammable. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD. May build up electrostatic charges: risk of ignition. May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard.
Explosion hazard	: DIRECT EXPLOSION HAZARD. Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. Heat may cause pressure rise in tanks/drums: explosion risk. may be ignited by sparks.
Reactivity	: On heating/burning: release of toxic and corrosive gases/vapours e.g.: hydrofluoric acid, carbonylfluoride. Reacts violently with (strong) oxidizers.

### 5.3. Advice for firefighters

Firefighting instructions	: If no hazard for/from the surroundings: controlled burning. If hazardous substances are nearby: consider extinguishment. Extinguish only if gas supply/leak can be shut afterwards. Cool tanks/drums with water spray/remove them into safety. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion. Dilute toxic gases with water spray.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus.
Other information	: NFPA Aerosol Level 1.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources.
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#### 6.1.1. For non-emergency personnel

Protective equipment	: Insulating gloves. Protective goggles. Protective clothing. Large spills/in enclosed spaces: compressed air apparatus. See "Material-Handling" to select protective clothing.
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Emergency procedures : Keep upwind. Mark the danger area. Consider evacuation. Seal off low-lying areas. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Avoid ingress of water in the containers. Wash contaminated clothes.

### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent spreading in sewers.

### 6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. Tip the container on one side to stop the leakage. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute/disperse combustible gas/vapour with water curtain. Provide equipment/receptacles with earthing. Do not spray water on unheated tank walls. Do not use compressed air for pumping over spills.

Methods for cleaning up : Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. See "Material-handling" for suitable container materials. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Pressurized container: Do not pierce or burn, even after use.

Precautions for safe handling : Comply with the legal requirements. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not use compressed air for pumping over. Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Observe normal hygiene standards. Measure the concentration in the air regularly. Measure the oxygen concentration in the air. Work under local exhaust/ventilation.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. 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

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

Storage conditions : Do not expose to temperatures exceeding 50 °C/ 122 °F.

Incompatible materials : Direct sunlight.

Storage temperature : < 50 °C

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents.

Storage area : Ventilation at floor level. Fireproof storeroom. Provide for an automatic sprinkler system. Provide for a tub to collect spills. Provide the tank with earthing. Keep out of direct sunlight. Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: with pressure relief valve. clean. correctly labelled. meet the legal requirements.

Packaging materials : SUITABLE MATERIAL: steel. stainless steel. monel steel. lead. aluminium. copper. tin.

### 7.3. Specific end use(s)

Follow Label Directions.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 8.2. Exposure controls

Appropriate engineering controls : Local exhaust ventilation, vent hoods . Ensure good ventilation of the work station.

Personal protective equipment : Gloves. Safety glasses.



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Materials for protective clothing	: GIVE GOOD RESISTANCE: butyl rubber. leather. neoprene. polyethylene. PVC.
Hand protection	: Insulated gloves.
Eye protection	: Safety glasses.
Skin and body protection	: Protective clothing.
Respiratory protection	: High vapour/gas concentration: self-contained respirator. Maintain oxygen levels above 19.5% in the workplace. Use supplied air respiratory protection if oxygen levels are below 19.5% or during emergency response to a release of this product.
Environmental exposure controls	: Avoid release to the environment.
Consumer exposure controls	: Avoid contact during pregnancy/while nursing.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Gas
Appearance	: Liquefied gas.
Molecular mass	: 66.05 g/mol
Color	: Colourless.
Odor	: Odourless.
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -117 °C
Freezing point	: No data available
Boiling point	: -25 °C
Flash point	: < -50 °C
Critical temperature	: 114 °C
Auto-ignition temperature	: 455 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 5100 hPa (20 °C)
Vapor pressure at 50 °C	: 11700 hPa (50 °C)
Critical pressure	: 44960 hPa
Relative vapor density at 20 °C	: 2.3
Relative density	: 1.0 @ -25 deg C
Specific gravity / density	: 1004 kg/m <sup>3</sup> @ -25 deg C
Solubility	: Poorly soluble in water. Soluble in organic solvents. Water: 0.54 g/100ml @ 0 deg C
Log Pow	: 0.75 (Experimental value)
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.37 Pa.s @ -31 deg C
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: 4 - 19 vol % 112 - 518 g/m <sup>3</sup>

### 9.2. Other information

VOC content	: 100 % VOC Exempt
Gas group	: Liquefied gas
Other properties	: Gas/vapour heavier than air at 20°C. May generate electrostatic charges.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

On heating/burning: release of toxic and corrosive gases/vapours e.g.: hydrofluoric acid, carbonyl fluoride. Reacts violently with (strong) oxidizers.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

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### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### JOHNSEN'S DUSTER R152A 10 OZ. ( f )75-37-6

LC50 inhalation rat (mg/l)	176 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	> 437500 ppm/4h Mortality in 2/6 at 43.75% and 1/6 at 38.3%. At $\geq$ 17.52% lethargy, laboured breathing, reduced responsiveness to sound were observed. At 6.64% only hyperaemia and shallow breathing were observed.

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Symptoms/injuries after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Dizziness. Slight irritation. Headache. Nausea. Vomiting. Coordination disorders. Disturbances of consciousness. Disturbances of heart rate.

Symptoms/injuries after skin contact : Frostbites.

Symptoms/injuries after eye contact : No data available.

Symptoms/injuries after ingestion : Not applicable.

Chronic symptoms : No effects known.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5.

Ecology - water : Mild water pollutant (surface water). No data available on ecotoxicity.

### 12.2. Persistence and degradability

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Persistence and degradability	Biodegradability in water: no data available.
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### 12.3. Bioaccumulative potential

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Log Pow	0.75 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- Waste disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Refer to manufacturer/supplier for information on recovery/recycling.
- Additional information : LWCA (the Netherlands): KGA category 06. Hazardous waste according to Directive 2008/98/EC.

### SECTION 14: Transport information

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

- US DOT (ground): UN1950, Aerosols, Flammable, 2.1, Limited Quantity
- ICAO/IATA (air): UN1950, Aerosols, Flammable, 2.1, Limited Quantity
- IMO/IMDG (water): UN1950, Aerosols, Flammable, 2.1, Limited Quantity
- Special Provisions: N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols

#### 14.2. UN proper shipping name

- Proper Shipping Name (DOT) : Aerosols, Flammable  
Flammable, (each not exceeding 1 L capacity)
- Class (DOT) : 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115
- Hazard labels (DOT) : 2.1 - Flammable gas



- DOT Special Provisions (49 CFR 172.102) : N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols
- DOT Packaging Exceptions (49 CFR 173.xxx) : 306
- DOT Packaging Non Bulk (49 CFR 173.xxx) : None
- DOT Packaging Bulk (49 CFR 173.xxx) : None

#### 14.3. Additional information

- Emergency Response Guide (ERG) Number : 126
- Other information : No supplementary information available.
- Special transport precautions : DOT-SP 11516: In accordance with this special permit, this product is not subject to labeling requirements unless offered for transportation by air. This product is not subject to placarding requirements. Outside packaging must be marked with proper shipping description and 'DOT-SP 11516'.

#### Overland transport

- Class (ADR) : 2 - Gases
- Hazard identification number (Kemler No.) : 23
- Classification code (ADR) : 2F
- Hazard labels (ADR) : 2.1 - Flammable gases



- Orange plates : An orange rectangular plate with a black border. The number '23' is in the top half and '1030' is in the bottom half, both in black.

- Tunnel restriction code (ADR) : B/D

#### 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

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DOT Vessel Stowage Other	: 25 - Shade from radiant heat, 87 - Stow "separated from" Class 1 (explosives) except Division 14, 126 - Segregation same as for Class 9, miscellaneous hazardous materials
EmS-No. (1)	: F-D
EmS-No. (2)	: S-U

### Air transport

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

#### JOHNSEN'S DUSTER R152A 10 OZ. (75-37-6)

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

SARA Section 311/312 Hazard Classes	Fire hazard Sudden release of pressure hazard Immediate (acute) health hazard
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### 15.2. International regulations

#### CANADA

#### JOHNSEN'S DUSTER R152A 10 OZ. (75-37-6)

WHMIS Classification	Class A - Compressed Gas Class B Division 5 - Flammable Aerosol
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### EU-Regulations

No additional information available

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

Flam. Gas 1 H220  
Press. Gas

Full text of hazard classes and H-statements : see section 16

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

F+; R12

Full text of R-phrases: see section 16

### 15.2.2. National regulations

No additional information available

### 15.3. US State regulations

#### JOHNSEN'S DUSTER R152A 10 OZ. (75-37-6)

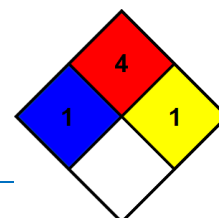
U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List

## SECTION 16: Other information

Full text of H-phrases:

H280	Contains gas under pressure; may explode if heated
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NFPA health hazard	: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA fire hazard	: 4 - Will rapidly or completely vaporize at normal pressure and temperature, or is readily dispersed in air and will burn readily.



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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 : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 4 Severe Hazard

Physical : 1 Slight Hazard

Personal Protection : B

SDS US (GHS HazCom 2012) - TCC

*The Supplier identified in Section 1 of this SDS 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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