



## DuPont™ SUVA® 407C Refrigerant

Version 2.3

Revision Date 17.07.2007

Ref. 13000000517

This SDS adheres to the standards and regulatory requirements of Great Britain and may not meet the regulatory requirements in other countries.

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### Product information

Product name : DuPont™ SUVA® 407C Refrigerant

Types : ASHRAE Refrigerant number designation: R-407C

Use of the Substance/Preparation : Refrigerant

Company : Du Pont de Nemours (Nederland) B.V.  
Baanhoekweg 22  
NL-3313 LA Dordrecht  
The Netherlands

Telephone : +31-78-630.1011

Emergency telephone : +44-(0)8456-006.640

E-mail address : sds-support@che.dupont.com

### 2. HAZARDS IDENTIFICATION

Rapid evaporation of the liquid may cause frostbite.  
Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	EC-No.	Classification	Concentration [%]
Difluoromethane (R32)	75-10-5	200-839-4	F+; R12	23
Pentafluoroethane (R125)	354-33-6	206-557-8		25
1,1,1,2-Tetrafluoroethane (R134a)	811-97-2	212-377-0		52

For the full text of the R phrases mentioned in this Section, see Section 16.

### 4. FIRST AID MEASURES

General advice : If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person. If breathing is irregular or stopped, administer artificial respiration. If symptoms persist, call a physician.

Inhalation : Move to fresh air. Keep patient warm and at rest. Artificial respiration and/or oxygen may be necessary.

Skin contact : Wash off with warm water. Take off all contaminated clothing immediately.

Eye contact : Rinse thoroughly with plenty of water, also under the eyelids. Consult a physician.


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**Notes to physician**

Treatment : Do not give adrenaline or similar drugs.

**5. FIRE-FIGHTING MEASURES**

Specific hazards during fire fighting : pressure build-up

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Cool containers / tanks with water spray.

**6. ACCIDENTAL RELEASE MEASURES**

Personal precautions : Evacuate personnel to safe areas. Ventilate the area. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Should not be released into the environment.

Methods for cleaning up : Evaporates.

**7. HANDLING AND STORAGE**
**Handling**

Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms. For personal protection see section 8.

Advice on protection against fire and explosion : No special protective measures against fire required.

**Storage**

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Store in original container.

Advice on common storage : No materials to be especially mentioned.

German storage class : 2A : Compressed, liquefied or pressurised gas

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**
**Components with workplace control parameters**

Components	CAS-No.	Type Form of exposure	Control parameters	Update	Basis


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1,1,1,2-Tetrafluoroethane (R134a)	811-97-2	TWA	4 240 mg/m3 1 000 ppm	2001	EH40 OES
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**Engineering measures**

Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment**

- Respiratory protection : For rescue and maintenance work in storage tanks use self-contained breathing apparatus. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.
- Hand protection : Heat insulating gloves
- Eye protection : Safety glasses
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

- Form : Liquefied gas,
- Colour : colourless,
- Odour : ether-like,
- pH : at ( 25 °C) neutral
- Boiling point/boiling range : ca. -44 °C at 1 013 hPa
- Flash point : does not flash
- Ignition temperature : 685 °C
- Vapour pressure : 11 740 hPa at 25 °C
- Vapour pressure : 21 860 hPa at 50 °C
- Density : 1,136 g/cm<sup>3</sup> at 25 °C, (as liquid)
- Density : 0,0042 g/cm<sup>3</sup> at 25 °C (1 013 hPa)

**10. STABILITY AND REACTIVITY**

- Materials to avoid : Alkali metals, Alkaline earth metals, Powdered metals, Powdered metal salts
- Hazardous decomposition products : Hydrogen halides, Carbon dioxide (CO<sub>2</sub>), Carbon monoxide, Fluorocarbons, Carbonyl halides



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### 11. TOXICOLOGICAL INFORMATION

Acute inhalation toxicity

- Difluoromethane (R32) : LC50/ 4 h/ rat : 2 158 mg/l

- Pentafluoroethane (R125) : ALC/ 4 h/ rat : > 3 480 mg/l

- 1,1,1,2-Tetrafluoroethane (R134a) : LC50/ 4 h/ rat : > 2 085 mg/l

Carcinogenicity assessment : Did not show carcinogenic effects in animal experiments.

Toxicity to reproduction assessment : Did not show mutagenic or teratogenic effects in animal experiments.

Human experience : Excessive exposures may affect human health, as follows:

Inhalation

Severe shortness of breath, narcosis, Irregular cardiac activity

Further information : Rapid evaporation of the liquid may cause frostbite.

### 12. ECOLOGICAL INFORMATION

Toxicity to fish

- 1,1,1,2-Tetrafluoroethane (R134a) : LC50 / 96 h/ Oncorhynchus mykiss (rainbow trout) : 450 mg/l

Aquatic toxicity

- 1,1,1,2-Tetrafluoroethane (R134a) : / EC50/ 48 h/ Daphnia: 980 mg/l

Global warming potential (GWP) : 1 653

### 13. DISPOSAL CONSIDERATIONS

Product : Can be used after re-conditioning.

Contaminated packaging : Empty pressure vessels should be returned to the supplier.

### 14. TRANSPORT INFORMATION

#### ADR

Class: 2  
 Classification Code: 2A  
 HI No.: 20  
 UN-Number: 3340  
 Labelling No.: 2.2

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Proper shipping name: Refrigerant gas R 407C

**IATA\_C**

Class: 2.2  
UN-Number: 3340  
Labelling No.: 2.2  
Proper shipping name: Refrigerant gas R 407C

**IMDG**

Class: 2.2  
UN-Number: 3340  
Labelling No.: 2.2  
Proper shipping name: Refrigerant gas R 407C

**15. REGULATORY INFORMATION****Labelling according to EC Directives**

The product does not need to be labelled in accordance with EC directives or respective national laws.

**16. OTHER INFORMATION****Text of R phrases mentioned in Section 3**

R12 Extremely flammable.

**Further information**

Before use read DuPont's safety information., For further information contact the local DuPont office or DuPont's nominated distributors., ® DuPont's registered trademark

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.