

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 29.07.2010

Revision: 29.07.2010

1 Identification of substance**Product details****Trade name****1,1,1,2-Tetrafluoro-2-iodo-2-(trifluoromethoxy)ethane****Stock number:**

B21544

Manufacturer/Supplier:Alfa Aesar GmbH & Co.KG
Benzstrasse 3
D-76185 Karlsruhe / GermanyE-mail: gcat@matthey.com
www.alfa-chemcat.com**Informing department:**

Product safety department.

Emergency information:Giftnotruf Universität Mainz / Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240**2 Hazards identification****Hazard designation:**

Xn Harmful

Information pertaining to particular dangers for man and environmentR 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R 36/37/38 Irritating to eyes, respiratory system and skin.**GHS label elements****Warning**

H302 - Harmful if swallowed.
 H312 - Harmful in contact with skin.
 H332 - Harmful if inhaled.
 H315 - Causes skin irritation.
 H319 - Causes serious eye irritation.
 H335 - May cause respiratory irritation.
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P321 Specific treatment (see on this label).
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Prevention:**Response:****Storage:****Disposal:****3 Composition/information on ingredients****Chemical characterization:****Designation: (CAS#)**1,1,1,2-Tetrafluoro-2-iodo-2-(trifluoromethoxy)ethane
(CAS# 139604-89-0): 100%**4 First aid measures****After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. Seek immediate medical advice.

After skin contact

Instantly wash with water and soap and rinse thoroughly. Seek immediate medical advice.

After eye contact

Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing

Seek immediate medical advice.

5 Fire fighting measures**Suitable extinguishing agents**

CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

Special hazards caused by the material, its products of combustion or flue gases:

Can be released in case of fire:
 Carbon monoxide and carbon dioxide
 Hydrogen fluoride (HF)
 Hydrogen iodide (HI)
 Wear self-contained breathing apparatus.
 Wear full protective suit.

Protective equipment:**6 Accidental release measures****Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection:

Ensure adequate ventilation

Measures for cleaning/collecting:

Do not allow material to be released to the environment without proper governmental permits.
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Dispose of contaminated material as waste according to item 13.
 Ensure adequate ventilation.
 See Section 7 for information on safe handling
 See section 8 for information on personal protection equipment.
 See Section 13 for information on disposal.

Additional information:**7 Handling and storage****Handling****Information for safe handling:**

Keep containers tightly sealed.
 Store in cool, dry place in tightly closed containers.
 Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Storage
Requirements to be met by storerooms and containers:
Information about storage in one common storage facility:

No special requirements.

Store in the dark.
 Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly sealed.
 Store in cool, dry conditions in well sealed containers.
 Protect from the effects of light.

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8 Exposure controls and personal protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with critical values that require monitoring at the workplace:
Additional information:

Not required.
 No data

Personal protective equipment
General protective and hygienic measures

The usual precautionary measures should be adhered to in handling the chemicals.
 Keep away from foodstuffs, beverages and food.
 Instantly remove any soiled and impregnated garments.
 Wash hands during breaks and at the end of the work.
 Avoid contact with the eyes and skin.
 Use breathing protection with high concentrations.
 Check protective gloves prior to each use for their proper condition.
 The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Breathing equipment:
Protection of hands:
Material of gloves

Impervious gloves

Penetration time of glove material
Eye protection:

Not determined
 Safety glasses

Body protection:

Face protection
 Protective work clothing.

9 Physical and chemical properties:**General Information**

Form: Liquid
Colour: Colourless
 Purple
Smell: Not determined

Change in condition
Melting point/Melting range: Not determined
Boiling point/Boiling range: 43-44°C
Sublimation temperature / start: Not determined

Flash point: Not determined

Ignition temperature: Not determined

Decomposition temperature: Not determined

Danger of explosion: Product is not explosive.

Critical values for explosion:
Lower: Not determined
Upper: Not determined

Steam pressure: Not determined

Density Not determined

Solubility in / Miscibility with Water: Not miscible or difficult to mix

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

Materials to be avoided:

Light
 Oxidizing agents
 No dangerous reactions known
 Carbon monoxide and carbon dioxide
 Hydrogen fluoride
 Hydrogen iodide (HI)

Dangerous reactions:

Dangerous products of decomposition:

11 Toxicological information

Acute toxicity:
Primary irritant effect:
on the skin:
on the eye:
Sensitization:

Irritant for skin and mucous membranes.

Irritant effect.

No sensitizing effect known.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
 Danger by skin resorption.
 No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:

Additional ecological information:
General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water.
 Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
 Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations

Product:
Recommendation

Hand over to disposers of hazardous waste.
 Must be specially treated under adherence to official regulations.
 Consult state, local or national regulations for proper disposal.

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Uncleaned packagings:
Recommendation:

Disposal must be made according to official regulations.

14 Transport information

Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)
ADR/RID-GGVS/E Class:

None

Maritime transport IMDG/GGVSea:
IMDG/GGVSea Class:
Marine pollutant:

None
No

Air transport ICAO-TI and IATA-DGR:
ICAO/IATA Class:

None

Transport/Additional information:

Not dangerous according to the above specifications.

15 Regulatory information**Designation according to EC guidelines:****Code letter and hazard designation of product:**

Xn Harmful

Risk phrases:

20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
36/37/38 Irritating to eyes, respiratory system and skin.

Safety phrases:

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36/37 Wear suitable protective clothing and gloves.

National regulations**Information about limitation of use:**

For use only by technically qualified individuals.
Employment restrictions concerning young persons must be observed.

Water hazard class:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet: Health, Safety and Environmental Department.**Contact:**

Zachariah Holt

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)