

Safety data sheet

according to 1907/2006/EC, Article 31

Revision: 13.06.2012

Printing date 02.07.2013

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name

1,1,2,2-Tetrafluoroiodoethane

Stock number:

L16795

CAS Number:

354-41-6

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

Identified use:

SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
 A Johnson Matthey Company
 Zeppelinstr. 7b
 76185 Karlsruhe / Germany
 Tel: +49 (0) 721 84007 280
 Fax: +49 (0) 721 84007 300
 Email: tech@alfa.com
 www.alfa.com
 Product safety Tel + +049 (0) 7275 988687-0
 Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)
 Poison Information Center Mainz
 www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

Informing department:

1.4 Emergency telephone number:**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.

Information concerning particular hazards

for human and environment:

Not applicable

Other hazards that do not result in classification

No information known.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Hazard statements

The substance is classified and labelled according to the CLP regulation.

GHS07

Warning

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF ON SKIN: Wash with plenty of soap and water.

P302+P352 Specific treatment (see on this label).

P321 Store locked up.

P405

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

SECTION 3: Composition/information on ingredients**3.1 Substances**

CAS# Designation:

354-41-6 1,1,2,2-Tetrafluoroiodoethane

Additional information:

Stabilized with:

Copper (CAS# 7440-50-8)

SECTION 4: First aid measures**4.1 Description of 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.

Instantly wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

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

Seek medical treatment.

After skin contact

After eye contact

After swallowing

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing agents

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

5.2 Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Carbon monoxide and carbon dioxide

Hydrogen fluoride (HF)

Hydrogen iodide (HI)

5.3 Advice for firefighters

Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

6.2 Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

(Contd. on page 2)
DE/E

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(Contd. of page 1)

6.3 Methods and material for containment and cleaning up:**Prevention of secondary hazards:****6.4 Reference to other sections**

Do not allow product to reach sewage system or water bodies.
Do not allow to enter the ground/soil.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
No special measures required.
See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Keep containers tightly sealed.
Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires:

No information known.

7.2 Conditions for safe storage, including any incompatibilities**Storage Requirements to be met by storerooms and containers:**

Refrigerate

Information about storage in one common storage facility:

Store in the dark.
Protect from heat.
Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly sealed.
Protect from the effects of light.

7.3 Specific end use(s)

Refrigerate
No further relevant information available.

SECTION 8: Exposure controls/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.

8.1 Control parameters**Components with critical values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information:

No data

8.2 Exposure controls**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.
Maintain an ergonomically appropriate working environment.
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****Penetration time of glove material****Eye protection:**

Impervious gloves

Not determined

Safety glasses

Face protection

Body protection:

Protective work clothing.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****General Information****Appearance:****Form:**

Liquid

Colour:

Colorless to purple-brown

Smell:

Not determined

Odour threshold:

Not determined.

pH-value:

Not determined.

Change in condition**Melting point/Melting range:**

Not determined

Boiling point/Boiling range:

41-42 °C

Sublimation temperature / start:

Not determined

Inflammability (solid, gaseous)

Not determined.

Ignition temperature:

Not determined

Decomposition temperature:

Not determined

Self-inflammability:

Not determined.

Critical values for explosion:**Lower:**

Not determined

Upper:

Not determined

Steam pressure:

Not determined

Density

Not determined

Relative density

Not determined.

Vapour density

Not determined.

Evaporation rate

Not determined.

Solubility in / Miscibility with**Water:**

Not miscible or difficult to mix

Partition coefficient (n-octanol/water):

Not determined.

Viscosity:**dynamic:**

Not determined.

kinematic:

Not determined.

9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity**10.1 Reactivity****10.2 Chemical stability**

No information known.
Stable under recommended storage conditions.

(Contd. on page 3)
DE/E

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(Contd. of page 2)

Thermal decomposition / conditions to be avoided:

10.3 Possibility of hazardous reactions

10.5 Incompatible materials:

10.6 Hazardous decomposition products:

No decomposition if used and stored according to specifications.
 Reacts with strong oxidizing agents
 Oxidizing agents
 Heat
 Light
 Carbon monoxide and carbon dioxide
 Hydrogen fluoride
 Hydrogen iodide (HI)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:

Skin irritation or corrosion:

Eye irritation or corrosion:

Sensitization:

Germ cell mutagenicity:

Carcinogenicity:

No effects known.

No data

Causes skin irritation.

Causes serious eye irritation.

No sensitizing effect known.

No effects known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

No effects known.

Reproductive toxicity:

Specific target organ system toxicity - repeated exposure:

Specific target organ system toxicity - single exposure:

Aspiration hazard:

Additional toxicological information:

No effects known.

May cause respiratory irritation.

No effects known.

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

12.2 Persistence and degradability

12.3 Bioaccumulative potential

12.4 Mobility in soil

Additional ecological information:

General notes:

No further relevant information available.

No further relevant information available.

No further relevant information available.

No further relevant information available.

Do not allow material to be released to the environment without proper governmental permits.
 Generally not hazardous for water.
 Avoid transfer into the environment.

12.5 Results of PBT and vPvB assessment

PBT:

vPvB:

12.6 Other adverse effects

Not applicable.

Not applicable.

No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Uncleaned packagings:

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.

Disposal must be made according to official regulations.

SECTION 14: Transport information

UN-Number

ADR, ADN, IMDG, IATA

Not applicable

14.2 UN proper shipping name

ADR, ADN, IMDG, IATA

Not applicable

14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

Not applicable

Packing group

ADR, IMDG, IATA

Not applicable

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC

Code

Not applicable.

UN "Model Regulation":

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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory of Chemical

Substances

Standard for the Uniform Scheduling of

Drugs and Poisons

National regulations

Information about limitation of use:

Substance is not listed.

Substance is not listed.

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

Water hazard class: Generally not hazardous for water.

Other regulations, limitations and prohibitive regulations

ELINCS (European List of Notified Chemical

Substances)

Substances of very high concern (SVHC)

according to REACH, Article 57

REACH - Pre-registered substances

15.2 Chemical safety assessment:

Substance is not listed.

Substance is not listed.

Substance is not listed.

A Chemical Safety Assessment has not been carried out.

DE/E

(Contd. on page 4)

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(Contd. of page 3)

SECTION 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.

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)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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