

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 02 Apr 2021

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

### 1.1. Product name:

Hexafluoroacetone trideuterate

### 1.1. Catalog No.:

1109

### 1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

ARMAR (Europa) GmbH  
Permoserstrasse 15

04318 Leipzig  
Germany

Tel. +49 341 5295 183  
Fax. +49 341 5295 182  
E-mail: info@armar-europa.de

## 2. HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Company

CLP Classification - Regulation (EC) No 1272/2008

Health hazards

Acute oral toxicity Category 3 (H301) Skin Corrosion/irritation Category 2 (H315) Serious Eye Damage/Eye Irritation

Category 2 (H319) Specific target organ toxicity - (single exposure) Category 3 (H335)

Environmental hazards Based on available data, the classification criteria are not met

Physical hazards

Based on available data, the classification criteria are not met

### 2.2. Label elements

#### 2.2.1. Pictogram



#### 2.2.2.

2.2. Label elements

Signal Word Danger

Hazard Statements H301 - Toxic if swallowed H315 - Causes skin irritation H319 - Causes serious eye irritation H335 -

May cause respiratory irritation

Precautionary Statements P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water P337 + P313 - If eye irritation persists: Get medical  
advice/ attention P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing  
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection P332 + P313 - If skin irritation occurs:  
Get medical advice/ attention

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component: 1,1,1,3,3,3-Hexafluoroacetone deuterate

Classification: Acute Tox. 3 (H301) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)

Concentration: <=100 %

#### 3.1.1. Formula

C3D6F6O4

#### 3.1.2. Molecular Weight (g/mol)

226.10

#### 3.1.3. CAS-No.

109640-39-3

### 4. FIRST AID MEASURES

#### 4.1. Description of first aid measures

General Advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Ingestion Do not induce vomiting. Call a physician or Poison Control Center immediately.

Inhalation Move to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

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

None reasonably foreseeable.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

#### 5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media which must not be used for safety reasons No information available.

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

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products None under normal use conditions.

#### 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA-NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

### 6. ACCIDENTAL RELEASE MEASURES

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

Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak.

Evacuate personnel to safe areas.

#### 6.2. Environmental precautions Should not be released into the environment. See Section 12 for additional ecological information

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

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

#### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

## 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe vapors or spray mist. Do not ingest.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities  
Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)  
Use in laboratories

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

Exposure limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Biological limit values This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring methods BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC)

No information available.

### 8.2. Exposure controls

Engineering Measures Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment Eye Protection Goggles (European standard - EN 166)

Hand Protection Protective gloves

Skin and body protection Long sleeved clothing

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Large scale/emergency use Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced Recommended Filter type: Organic gases and vapours filter

Type A Brown conforming to EN14387

Small scale/Laboratory use Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141 When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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

Appearance Physical State Liquid

Odor No information available Odor Threshold No data available pH No information available Melting Point/Range 21 °C /

69.8 °F Softening Point No data available Boiling Point/Range No information available Flash Point No information

available Method - No information available Evaporation Rate No data available Flammability (solid,gas) Not applicable

Liquid Explosion Limits No data available

Vapor Pressure No data available Vapor Density No data available (Air = 1.0) Specific Gravity / Density 1.71 g/cm3 @ 20

°C Bulk Density Not applicable Liquid Water Solubility No information available Solubility in other solvents No information

available Partition Coefficient (n-octanol/water) Autoignition Temperature No data available Decomposition Temperature

No data available Viscosity No data available Explosive Properties No information available Oxidizing Properties No

information available

### 9.2. Other information

Molecular Formula CF<sub>3</sub> COCF<sub>3</sub>.3D<sub>2</sub> O Molecular Weight 226.10 (166.02anhy)

## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

None known, based on information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Hazardous Polymerization No information available. Hazardous Reactions None under normal processing.

- 10.4. Conditions to avoid  
Incompatible products. Excess heat.  
10.5. Incompatible materials  
None known.  
10.6. Hazardous decomposition products None under normal use conditions.

## 11. TOXICOLOGICAL INFORMATION

- 11.1. Information on toxicological effects  
Odor  
Product Information  
(a) acute toxicity; Oral Category 3 Dermal No data available Inhalation No data available  
(b) skin corrosion/irritation; Category 2  
(c) serious eye damage/irritation; Category 2  
(d) respiratory or skin sensitization; Respiratory No data available Skin No data available  
(e) germ cell mutagenicity; No data available  
(f) carcinogenicity; No data available There are no known carcinogenic chemicals in this product  
(g) reproductive toxicity; No data available  
(h) STOT-single exposure; Category 3  
Results / Target organs Respiratory system.  
(i) STOT-repeated exposure; No data available  
Target Organs None known.  
(j) aspiration hazard; No data available  
Symptoms / effects, both acute and delayed  
No information available

## 12. ECOLOGICAL INFORMATION

- 12.1. Toxicity Ecotoxicity effects Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.  
12.2. Persistence and degradability No information available  
12.3. Bioaccumulative potential No information available  
12.4. Mobility in soil No information available  
12.5. Results of PBT and vPvB assessment  
No data available for assessment.  
12.6. Other adverse effects Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors Persistent Organic Pollutant This product does not contain any known or suspected substance Ozone Depletion Potential This product does not contain any known or suspected substance

## 13. DISPOSAL CONSIDERATIONS

- 13.1. Waste treatment methods  
Waste from Residues / Unused Products  
Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste.  
Dispose of in accordance with local regulations.  
Contaminated Packaging Dispose of this container to hazardous or special waste collection point.  
European Waste Catalogue (EWC) According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Other Information Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

## 14. TRANSPORT INFORMATION

- IMDG/IMO  
14.1. UN number UN2552 14.2. UN proper shipping name HEXAFLUOROACETONE HYDRATE, LIQUID 14.3. Transport hazard class(es) 6.1 14.4. Packing group II  
ADR  
14.1. UN number UN2552 14.2. UN proper shipping name HEXAFLUOROACETONE HYDRATE, LIQUID 14.3. Transport hazard class(es) 6.1 14.4. Packing group II  
IATA  
14.1. UN number UN2552 14.2. UN proper shipping name HEXAFLUOROACETONE HYDRATE, LIQUID 14.3. Transport hazard class(es) 6.1 14.4. Packing group II  
14.5. Environmental hazards No hazards identified  
14.6. Special precautions for user No special precautions required  
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code  
Not applicable, packaged goods

## 15. REGULATORY INFORMATION

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
International Inventories X = listed.

National Regulations

WGK Classification Water endangering class = 1 (self classification)

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

**16. OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!