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# Safety Data Sheet acc. to OSHA HCS

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Revision date 07/18/2024

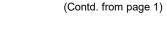
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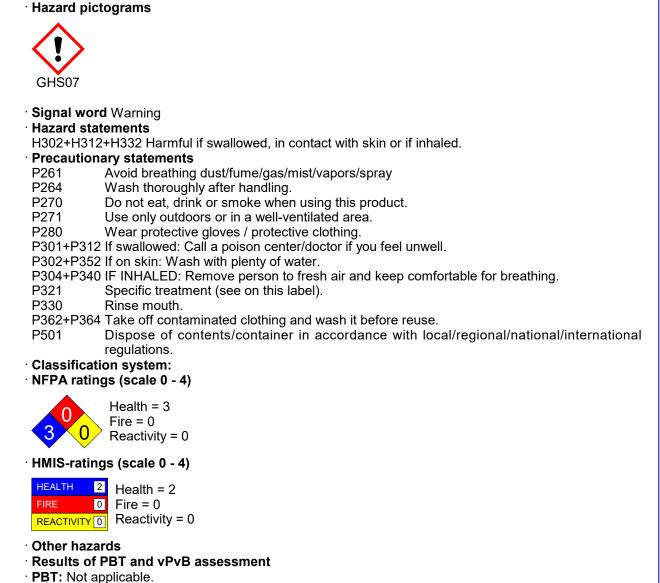
1 Identification	
· Product identifier	
<ul> <li>Trade name: <u>FIBF-c</u></li> <li>Synonym</li> </ul>	7 (hydrochloride)
	ntanyl-d7 fentanyl-d7
· Article number: 226 · CAS Number:	21
2747917-34-4	
	ubstance / the mixture search use - Not for human or veterinary diagnostic or therapeutic use.
·	ier of the safety data sheet
<ul> <li>Manufacturer/Supp Cayman Chemical C 1180 E. Ellsworth Ro Ann Arbor, MI 48108 USA</li> </ul>	0.
	nent: Product safety department
<ul> <li>Emergency telepho During normal openi</li> </ul>	ne number: ng times: +1 (734) 971-3335
US/CĂNADA: 800-42 Outside US/CANAD/	24-9300
2 Hazard(s) identi	fication
· Classification of the	e substance or mixture
GHS07	
Acute Toxicity - Oral	4 H302 Harmful if swallowed.
Acute Toxicity - Derr	
	ation 4 H332 Harmful if inhaled.
<ul> <li>Label elements</li> <li>GHS label elements</li> </ul>	
	ssified and labeled according to the Globally Harmonized System (GHS).
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· vPvB: Not applicable.

### **3** Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description
- 2747917-34-4 FIBF-d7 (hydrochloride)

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#### **4 First-aid measures**

#### • Description of first aid measures

#### · General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

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

- In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Generally the product does not irritate the skin.
- · After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: Immediately call a doctor.
- · Information for doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

## 5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- Protective equipment: Mouth respiratory protective device.

#### **6 Accidental release measures**

· Personal precautions, protective equipment and emergency procedures Not required.

- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Ensure adequate ventilation.
- **Reference to other sections** See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- PAC-1: Substance is not listed.
- · PAC-2: Substance is not listed.
- **PAC-3:** Substance is not listed.

## 7 Handling and storage

- Handling:
- **Precautions for safe handling** Thorough dedusting.
- Ensure good ventilation/exhaustion at the workplace.

· Information about protection against explosions and fires: No special measures required.

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- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed.
- Specific end use(s) No further relevant information available.

#### 8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see section 7.
- · Control parameters
- Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.

#### • Exposure controls

- · Personal protective equipment:
- · General protective and hygienic measures:

Wash hands before breaks and at the end of work.

- Avoid contact with the eyes and skin.
- · Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

• Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

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.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

Information on basic physica General Information	al and chemical properties	
Appearance:		
Form:	Solid	
Color:	Not determined.	
Odor:	Characteristic	
Structural Formula	C23H22D7FN2O • HCI	
Molecular Weight	412 g/mol	

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· Odor threshold:	Not determined.
<sup>·</sup> pH-value:	Not applicable.
<ul> <li>Change in condition</li> <li>Melting point/Melting range:</li> <li>Boiling point/Boiling range:</li> </ul>	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits: Lower: Upper:	Not determined. Not determined.
· Vapor pressure:	Not applicable.
<ul> <li>Density:</li> <li>Relative density</li> <li>Vapor density</li> <li>Evaporation rate</li> </ul>	Not determined. Not determined. Not applicable. Not applicable.
<ul> <li>Solubility in / Miscibility with Water:</li> </ul>	Not determined.
· Partition coefficient (n-octanol/wa	ter): Not determined.
· Viscosity: Dynamic: Kinematic: SOLUBILITY	Not applicable. Not applicable. DMF: 10 mg/mL; DMSO: 10 mg/mL; Ethanol: 20 mg/mL Methanol: 30 mg/mL;PBS (pH 7.2): 10 mg/mL
· Other information	No further relevant information available.

## 10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · **Incompatible materials:** No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

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#### **11 Toxicological information**

- · Information on toxicological effects
- · Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- · Additional toxicological information:

· Carcinogenic categories

- · IARC (International Agency for Research on Cancer) Substance is not listed.
- · NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

## **12 Ecological information**

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · 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 course or sewage system.

- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.
- Other adverse effects No further relevant information available.

## **13 Disposal considerations**

- · Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

· UN-Number		
· DOT, IMDG, IATA	not regulated	
· UN proper shipping name		
· DOT, IMDG, IATA	not regulated	

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· Transport hazard class(es)		
<sup>·</sup> DOT, ADN, IMDG, IATA <sup>·</sup> Class	not regulated	
<ul> <li>Packing group</li> <li>DOT, IMDG, IATA</li> </ul>	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
<ul> <li>Transport in bulk according to Anne MARPOL73/78 and the IBC Code</li> </ul>	<b>x II of</b> Not applicable.	
· UN "Model Regulation":	not regulated	

## **15 Regulatory information**

- Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
- · Sara
- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.
- · Proposition 65
- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### **16 Other information**

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- Contact: -
- · Date of preparation / last revision 07/18/2024 / -
- Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association

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CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Acute Toxicity - Oral 4: Acute toxicity – Category 4 * * Data compared to the previous version altered.	(Contd. from page 7)
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