

Chemical Safety Data Sheet MSDS / SDS

4-fluoro-5-oxo-2,4-bis(trifluoromethyl)-1,3-dioxolane-2-carbonyl fluoride

Revision Date:2026-05-30 Revision Number:1

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

Product name : 4-fluoro-5-oxo-2,4-bis(trifluoromethyl)-1,3-dioxolane-2-carbonyl fluoride
CBnumber : CB0936037
CAS : 7345-49-5
EINECS Number : 230-864-6
Synonyms : 1,3-Dioxolane-2-carbonyl fluoride, 4-fluoro-5-oxo-2,4-bis(trifluoromethyl)-;4-Fluoro-5-oxo-2,4-bis(trifluoromethyl)-1,3-dioxolane-2-carboxylic acid fluoride

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.
Uses advised against : none

Company Identification

Company : Chemicalbook
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone : 010-86108875

SECTION 2: Hazards identification**GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Danger

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P310 Immediately call a POISON CENTER or doctor/physician.

Hazard statements

H319 Causes serious eye irritation
H315 Causes skin irritation
H314 Causes severe skin burns and eye damage

SECTION 3: Composition/information on ingredients

Substance

Product name	: 4-fluoro-5-oxo-2,4-bis(trifluoromethyl)-1,3-dioxolane-2-carbonyl fluoride
Synonyms	: 1,3-Dioxolane-2-carbonyl fluoride, 4-fluoro-5-oxo-2,4-bis(trifluoromethyl)-;4-Fluoro-5-oxo-2,4-bis(trifluoromethyl)-1,3-dioxolane-2-carboxylic acid fluoride
CAS	: 7345-49-5
EC number	: 230-864-6
MF	: C6F8O4
MW	: 288.05

SECTION 4: First aid measures

First Aid Measures

General advice

Consult a physician if necessary. Remove to fresh air.

Eye contact

Wash with plenty of water.

Skin Contact

Wash skin with soap and water.

Inhalation

Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

Ingestion

Never give anything by mouth to an unconscious person. Clean mouth with water.

Most important symptoms and effects, both acute and delayed

Symptoms

No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians

Treat symptomatically.

SECTION 5: Firefighting measures

Suitable Extinguishing Media In case of fire chemical for firefighters (approved or

Use CO₂, dry chemical, or foam for extinction. uivalent) and full protective gear.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions

See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Pick up and transfer to properly labeled containers.

SECTION 7: Handling and storage

Precautions for safe handling

Advice on safe handling

Thermal decomposition can lead to release of toxic/corrosive gases and vapors.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store at room temperature.

Incompatible materials

Bases. Water.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure Guidelines

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Other Information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Column 1	Column 2	Column 3	Column 4
2,4-Bis(trifluoromethyl)-4-fluoro-5-oxo-1,3-dioxolane-2-carbonyl fluoride 7345-49-5	TWA: 2.5 mg/m3 F	TWA: 2.5 mg/m3 F (vacated) TWA: 2.5 mg/m3	IDLH: 250 mg/m3 F

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls

Showers

Eyewash stations

Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and Body Protection

Wear protective gloves and protective clothing.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

Physical State	liquid
Appearance	No information available
Odor	No information available
pH	No information available
Melting point/freezing point	No information available
Boiling point	72 °C
Flash point	No information available
Liquid Density	No information available
Evaporation rate	No information available
Upper flammability limits	No information available
Lower flammability limit	No information available
Vapor pressure	No information available
Vapor density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Density and/or relative density	1.80±0.1 g/cm ³ (Predicted)

SECTION 10: Stability and reactivity

Reactivity

Not applicable

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization

No information available.

Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

Bases. Water.

Hazardous Decomposition Products

Substance will react with water (some violently), releasing corrosive and/or toxic gases and runoff. Carbon oxides. Phosgene. Hydrogen fluoride.

SECTION 11: Toxicological information

Information on likely routes of exposure**Inhalation**

Classified based on available data. For more details, see section 2.

Eye contact

Classified based on available data. For more details, see section 2.

Skin Contact

Classified based on available data. For more details, see section 2.

Ingestion

Classified based on available data. For more details, see section 2.

Information on toxicological effects**Symptoms**

Classified based on available data. For more details, see section 2.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Chronic Toxicity**

Classified based on available data. For more details, see section 2.

Numerical measures of toxicity - Product Information**Unknown acute toxicity**

100% of the mixture consists of ingredient(s) of unknown toxicity

SECTION 12: Ecological information

Ecotoxicity

May cause long lasting harmful effects to aquatic life

100% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

SECTION 13: Disposal considerations

Disposal of wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not reuse container.

US EPA Waste Number

D002

SECTION 14: Transport information

DOT

UN/ID no

UN3265

Hazard Class

8

Packing Group

III

Proper shipping name

Corrosive liquid, acidic, organic, n.o.s.

Description

UN3265, Corrosive liquid, acidic, organic, n.o.s., 8, III

Emergency Response Guide Number

IMDG**UN/ID no**

UN3265

Hazard Class

8

Packing Group

III

Proper shipping name

Corrosive liquid, acidic, organic, n.o.s.

Description

UN3265, Corrosive liquid, acidic, organic, n.o.s., 8, III

Special Provisions

223, 274

EmS-No

F-A, S-B

IATA**UN/ID no**

UN3265

Hazard Class

8

Packing Group

III

Proper shipping name

Corrosive liquid, acidic, organic, n.o.s.

Description

UN3265, Corrosive liquid, acidic, organic, n.o.s., 8, III

ERG Code

8L

SECTION 15: Regulatory information

International Inventories

All of the components in the product are on the following Inventory lists

TSCA (United States): Canada (DSL/NDL) Europe (EINECS/ELINCS/NLP)

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

Chemical name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
2,4-Bis(trifluoromethyl)-4-fluoro-5-oxo-1,3-dioxolane-2-carbonyl fluoride	X	-	X	X	-	-	-	-	-	-
Chemical name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
2,4-Bis(trifluoromethyl)-4-fluoro-5-oxo-1,3-dioxolane-2-carbonyl fluoride	X	-	X	X	-	-	-	-	-	oro-5-oxo-1,3-dioxolane-2-c

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard

Yes

Chronic Health Hazard

No

Fire hazard

No

Sudden release of pressure hazard

No

Reactive hazard

No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
2,4-Bis(trifluoromethyl)-4-fluoro-5-oxo-1,3-dioxolane-2-carbonyl fluoride 7345-49-5	X	Not Listed	Not Listed

SECTION 16: Other information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.