

SAFETY DATA SHEET



Revision date 04/05/2023

Revision Number 1

1. Identification

Product identifier

Product Name TOF

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Supplier Address

1665 Enterprise Parkway
Twinsburg, OH 44087

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300

2. Hazard(s) identification

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

The product contains no substances which at their given concentration, are considered to be hazardous to health.

Appearance

Physical state Liquid

Odor Pungent

Other information

May be harmful if inhaled.

3. Composition/information on ingredients

Substance

Formula C24H5104P

Chemical name	CAS No	Weight-%	Trade secret
TOF	78-42-2	100	

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Ingestion	Rinse mouth.

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.

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	No information available.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

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.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

8. Exposure controls/personal protection

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.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
Appearance
Color clear
Odor Pungent
Odor threshold

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	7	None known
Melting point / freezing point	-74 °C / -101.2 °F	
Initial boiling point and boiling range	215 °C / 419 °F	at 5 hPA (4mmHg)-lit
Flash point	207 °C / 404.6 °F	Cleveland Open Cup
Evaporation rate	No data available	
Flammability	No data available	
Flammability Limit in Air		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	2.1 mm Hg <0.01 hPa (<0.01 mmHg)	
Relative vapor density	15.01 -(Air =1.0)	
Relative density	0.92 g/cm ³ at 20 C	
Water solubility	Slightly soluble	
Solubility(ies)	No data available	
Partition coefficient	No data available	
Autoignition temperature	No data available	
Decomposition temperature		
Kinematic viscosity	No data available	
Dynamic viscosity	No data available	
<u>Other information</u>		
Explosive properties	No information available	
Oxidizing properties	No information available	
VOC content	No information available	
Liquid Density	0.92 g/cm ³ at 20 C	

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be harmful if inhaled.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	No information available.
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Acute toxicity

Numerical measures of toxicity

Oral LD50 37,000 mg/kg (rat)
Dermal LD50 20,000 mg/kg (rabbit)
Inhalation LC50 450
Inhalation LC50 447 ml/m³ (rat)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
TOF 78-42-2	= 37 g/kg (Rat)	> 20000 mg/kg (Rabbit)	> 447 mg/m ³ (Rat) 4 h

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

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Other adverse effects

Interactive effects

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Persistence and degradability

Bioaccumulation

Component Information

Chemical name	Partition coefficient
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TOF 78-42-2	>6.26
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Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

14. Transport information

DOT Not regulated

15. Regulatory information

International Inventories

Chemical name	TSCA	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AIIC	NZIoC
TOF	X	X	X	X	X	X	X	X	X

TSCA Complies

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
TOF	78-42-2	Present	Active

- DSL/NDSL Complies
- EINECS/ELINCS Complies
- ENCS Complies
- IECSC Complies
- KECL Complies
- PICCS Complies
- AIIC Complies
- NZIoC Complies

Legend:

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

DSL/NDSL - 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
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

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

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

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).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 4	Flammability 1	Instability 0	Special hazards -
HMIS	Health hazards 4	Flammability 1	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 04/05/2023

Revision Note

Disclaimer

Information given herein is offered in good faith as accurate, but without guarantee. The conditions of use and suitability of the product for an application is beyond our control. All risks of use of the product are therefore assumed by the user and we expressly disclaim all warranties of every kind of nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of this product. Appropriate warnings and safe handling procedures should be provided to handlers and users.

End of Safety Data Sheet