

Chemical Safety Data Sheet MSDS / SDS

Thiamethoxam

Revision Date:2026-03-20 Revision Number:1

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

Product identifier

Product name : Thiamethoxam
CBnumber : CB5105069
CAS : 153719-23-4
EINECS Number : 428-650-4
Synonyms : Thiomethoxam

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

Warning

Precautionary statements

P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P301+P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.
P391 Collect spillage. Hazardous to the aquatic environment
P501 Dispose of contents/container to.....

Hazard statements

H302 Harmful if swallowed
H410 Very toxic to aquatic life with long lasting effects

SECTION 3: Composition/information on ingredients

Substance

Product name	: Thiamethoxam
Synonyms	: Thiomethoxam
CAS	: 153719-23-4
EC number	: 428-650-4
MF	: C ₈ H ₁₀ CIN ₅ O ₃ S
MW	: 291.71

SECTION 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; consult doctor in case of complaints.

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.

SECTION 5: Firefighting 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

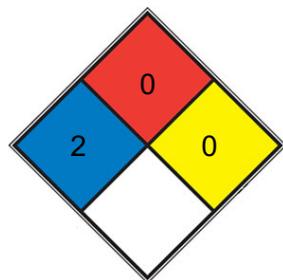
No further relevant information available.

Advice for firefighters

Protective equipment

No special measures required.

NFPA 704



HEALTH 2 Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

FIRE 0 Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)

REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,[N2](#))

SPEC.
 HAZ.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Environmental precautions

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

Protective Action Criteria for Chemicals

PAC-1

Substance is not listed.

PAC-2

Substance is not listed.

PAC-3

Substance is not listed.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

SECTION 7: Handling and storage

Handling

Precautions for safe handling

No special precautions are necessary if used correctly.

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

Avoid prolonged or repeated exposure.

Keep away from sources of ignition.

Take precautionary measures against static discharge.re.

Information about protection against explosions and fires

Keep ignition sources away - Do not smoke.

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.

SECTION 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

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Breathing equipment

Not required.

Protection of hands

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.

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

Appearance

Physical State

Solid

Color

Off-white to yellow

Odor

Characteristic

Structural Formula

C₈H₁₀ClN₅O₃S

Molecular Weight

291.7 g/mol

Odor Threshold

Not determined.

pH

Not applicable.

Change in condition

Melting point/Melting range

Undetermined.

Boiling point/Boiling range

485.8±55.0 °C(Predicted)

Flash point

Not applicable.

Flammability

Product is not flammable.

Decomposition temperature

Not determined.

Ignition temperature

Not determined.

Danger of explosion

Not determined.

Explosion limits

Lower: Not determined.

Upper: Not determined.

Vapor Pressure

6.6 x 10⁻⁹ Pa (25 °C)

Density

1.71±0.1 g/cm³(Predicted)

Relative Density

1.71±0.1 g/cm³(Predicted)

Vapor Density

Not applicable.

Evaporation Rate

Not applicable.

Solubility in / Miscibility with

DMSO: 250 mg/mL (857.02 mM)

Water

Not determined.

Partition coefficient (n-octanol/water)

Not determined.

Viscosity**Dynamic**

Not applicable.

Kinematic

Not applicable.

SOLUBILITY

Chloroform: Slightly Soluble; Methanol: Slightly Soluble

Water solubility

4.1 x 10³ mg l⁻¹ (25 °C)

No information available

SECTION 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

strong oxidizing agents

Hazardous decomposition products

carbon dioxide, carbon monoxide, hydrogen chloride gas, nitrogen oxides, sulfur oxides

SECTION 11: Toxicological information

RTECS Number

RO0470000

Information on toxicological effects

Acute toxicity

LD/LC50 values that are relevant for classification:

Route	Endpoint	Value
Oral	LDLO	1,563 mg/kg (rat)
Oral	TDLO	1,287 ml/kg/90D intermittent (mouse)
Oral	LD50	780 mg/kg (ATE)

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.

SECTION 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.

Ecotoxicological effects

Remark

Very toxic for fish

Additional ecological information

General notes

Water hazard class 3 (Self-assessment) extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

Results of PBT and vPvB assessment

PBT

Not applicable.

vPvB

Not applicable.

PBT:

Not applicable.

vPvB:

Not applicable.

Other adverse effects

No further relevant information available.

SECTION 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.

SECTION 14: Transport information

UN-Number

DOT, IMDG, IATA UN1325

UN proper shipping name

DOT Flammable solids, organic, n.o.s. (Thiamethoxam)

IMDG FLAMMABLE SOLID, ORGANIC, N.O.S.

(Thiamethoxam)

IATA Flammable solid, organic, n.o.s. (Thiamethoxam)

Transport hazard class(es)**DOT**

Class: 4.1 Flammable solids, self-reactive substances and

Label: 4.1

IMDG

Class: 4.1 Flammable solids, self-reactive substances and

Label: 4.1

IATA

Class: 4.1 Flammable solids, self-reactive substances and

Label: 4.1

Packing group

DOT, IMDG, IATA II

IATA

Flammable solid, organic, n.o.s. (Thiamethoxam) 12)

Environmental hazards

Environmentally hazardous substance, solid

Marine pollutant

Symbol (fish and tree)

Special precautions for user

Warning: Flammable solids, self-reactive substances and solid desensitised explosives

Hazard identification number (Kemler code)

40

EMS Number

F-A,S-G

Stowage Category

B

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

Not applicable.

Transport/Additional information**DOT:****Quantity limitations**

On passenger aircraft/rail: 15 kg

On cargo aircraft only: 50 kg

IMDG:**Limited quantities (LQ)**

1 kg

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

IATA:

Remarks

When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.

UN "Model Regulation"

UN 1325 FLAMMABLE SOLID, ORGANIC, N.O.S.
(THIAMETHOXAM), 4.1, II, ENVIRONMENTALLY
HAZARDOUS

SECTION 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.

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.
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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.

SECTION 16: Other information

Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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

Flammable Solids 1: Flammable solids – Category 1

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Toxic to Reproduction 2: Reproductive toxicity – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

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.