



中国认可国际互认

中国检验认证集团^{检验}

CHINA CERTIFICATION & INSPECTION

INSPECTION

CNAS IB0074-032

GROUP

正本
ORIGINAL

DESIGN REPORT OF SAFETY DATA SHEET

No.:AH01240364B

Date:May.27,2024



Name of the sample	Tetrahydrothiophene		
Applicant	SHANDONG XUCHEN CHEMICAL TECHNOLOGY CO,. LTD.		
Supplier	SHANDONG XUCHEN CHEMICAL TECHNOLOGY CO,. LTD.		
Composition of the sample	Tetrahydrothiophene: $\geq 99.5\%$; Water: $\leq 0.5\%$		
Warranty of Design	GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) Ninth revised edition		
Design Result of SDS please see next page.			
Designer		Approver	<i>For and on behalf of</i> CCIC ANHUI CO., LTD. 中国检验认证集团安徽有限公司 <i>授权签字人 Authorized Signature(s)</i>

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公司: 中国检验认证集团安徽有限公司 地址: 安徽省合肥市包河区芜湖路 367 号电话

(Tel): +86-551-62879359 网址: <http://www.ccicah.com.cn>



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Section 1 Product and Company Identification

>Product Identifier

Product Name	Tetrahydrothiophene
Synonyms	-
CAS No.	110-01-0
EC No.	203-728-9
Molecular Formula	C ₄ H ₈ S

>Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant Identified Uses	Please consult manufacturer.
Uses Advised Against	Please consult manufacturer.

>Details of the Supplier of the Safety Data Sheet

Applicant Name	SHANDONG XUCHEN CHEMICAL TECHNOLOGY CO., LTD.
Application Address	No.52 Lutai Road, Zhangdian District, Zibo City, Shandong Province
Applicant Post Code	255000
Applicant Telephone	+86-180 0642 3128
Applicant Fax	—
Applicant E-mail	service@xcchemico.com
Supplier Name	SHANDONG XUCHEN CHEMICAL TECHNOLOGY CO., LTD.
Supplier Address	No.52 Lutai Road, Zhangdian District, Zibo City, Shandong Province
Supplier Post Code	—

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Supplier Telephone 255000
Supplier Fax ---
Supplier E-mail service@xcchemico.com

>Emergency Phone Number
Emergency Phone Number +86-180 0642 3128

Section 2 Hazards Identification

Hazard class and label elements of the product according to GHS(the ninth revised edition):

>GHS Hazard Class
Flammable Liquids Category 2



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Acute Toxicity -Oral Category 4

Acute Toxicity-Dermal Category 4

Skin

Category

Corrosion/Irritation 2

Serious Eye

Category 2A

Damage/Eye Irritation

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Acute Toxicity -

Inhalation Category 4

Hazardous To The

Aquatic Environment - Category 3

Long-Term (Chronic)

Hazard

>GHS Label Elements



Pictogram
Signal Word

Danger

>Hazard Statements

H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H412	Harmful to aquatic life with long lasting effects

>Precautionary Statements

Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.

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P273 Avoid release to the environment.
 P280 Wear protectivegloves/protective clothing/eye protection/faceprotection/hearing protection.
 P264+P265 Wash hands and other contact area thoroughly after handling.Do not touch eyes.

Response

P317 Get medical help.
 P321 Specific treatment (see measures on this label).
 P330 Rinse mouth.
 P301+P317 IF SWALLOWED:Get medical help.
 P304+P340 IF INHALED:Remove person to fresh air and keep comfortable for breathing. f
 P332+P317 skin irritation occurs:Get medical help. f eye irritation persists:Get medical help.
 P337+P317 Take off contaminated clothing and wash it before reuse.
 P362+P364 In case of fire:Use suitable extinguishing medium to extinguish.
 P370+P378 IF ON SKIN (or hair):Take off immediately all contaminated clothing.Rinse affected areas with water [or shower].
 P303+P361+P353 IF IN EYES:Rinse cautiously with water for several minutes.Remove contact lenses, if present and easy to do.Continue rinsing.
 P305+P351+P338

Storage

P403+P235 Store in a well-ventilated place.Keep cool.

Disposal

P501 Dispose of contents/container in accordance with local/regional/nationall international regulations.

Section 3 Composition/Information on Ingredients

Component	CAS No.	EC No.	Concentration (weight percent, %)
Tetrahydrothiophene	110-01-0	203-728-9	≥99.5
Water	7732-18-5	231-791-2	≤0.5

Section4 FirstAidMeasures

>Description ofFirst Aid Measures

Immediate medical attention is required.Show this safety data sheet (SDS)to the

General Advice

doctor in attendance.

Eye Contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.

Skin Contact

Take off contaminated clothing and shoes immediately.Wash off with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.

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Do not induce vomiting. Never give anything by mouth to an unconscious person. Call

Ingestion a physician or Poison Control Center immediately.

Inhalation Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.

Protecting of Ensure that medical personnel are aware of the substance involved. Take precautions **First-aiders** to protect themselves and prevent spread of contamination.

>Most Important Symptoms and Effects, both Acute and Delayed

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

>Indication of Any Immediate Medical Attention and Special Treatment Needed

- 1 Treat symptomatically.
- 2 Symptoms may be delayed.

Section 5 Fire Fighting Measures

>Extinguishing Media

Suitable Extinguishing Media Dry chemical, carbon dioxide or alcohol-resistant foam.

Media

Unsuitable Do not use a solid water stream as it may scatter or spread fire. **Extinguishing Media**

>Specific Hazards Arising from the Substance or Mixture

- 1 Will form explosive mixtures with air.
- 2 Fire exposed containers may vent contents through pressure relief valves thereby increasing fire intensity and/ or vapour concentration.
- 3 Vapours may travel to source of ignition and flash back.
- 4 Liquid and vapour are flammable.
- 5 Containers may explode when heated.
- 6 Fire exposed containers may vent contents through pressure relief valves.

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7 May expansion or decompose explosively when heated or involved in fire.

>Advice for Firefighters

- 1 As in any fire,wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent)and full protective gear.
- 2 Fight fire from a safe distance,with adequate cover.
- 3 Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6 Accidental Release Measure

>Personal Precautions,Protective Equipmentand Emergency Procedures

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- 1 Avoid breathing vapors and contacting with skin and eye.
- 2 Beware of vapours accumulating to form explosive concentrations.
- 3 Vapours can accumulate in low areas.
Emergency personnel wear positive pressure self-contained breathing apparatus.Wear protective and
- 4 anti-static clothing.Wear chemical impermeable gloves.
- 5 Ensure adequate ventilation.Remove all sources of ignition.
- 6 Evacuate personnel to safe areas.Keep people away from and upwind of spill/leak.
- 7 Use personal protective equipment.Avoid breathing vapours,mist,gas or dust.

>Environmental Precautions

- 1 Prevent further leakage or spillage if safe to do so.
- 2 Discharge into the environment must be avoided.

>Methods and Materials for Containmentand Cleaning Up

- Absorb spilled material in drysand or inert absorbent.In case of large amount of spillage,contain a spill by 1 bunding.
Adhered or collected material should be promptly disposed of,in accordance with appropriate laws and 2 regulations.
- 3 Remove all sources of ignition.Use spark-proof tools and explosion-proof equipment.

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Section 7 Handling and Storage

>Precautions for Handling

- 1 Avoid inhalation of vapors.
- 2 Use only non-sparking tools.
- 3 To prevent fire caused by electrostatic discharge, equipment on all metal parts should be grounded.
- 4 Use explosion proof equipment.
- 5 Handling is performed in a well ventilated place.
- 6 Wear suitable protective equipment.
- 7 Avoid contact with skin and eyes.
- 8 Keep away from heat/sparks/open flames/hot surfaces.
- 9 Take precautionary measures against static discharges.

>Precautions for Storage

- 1 Keep containers tightly closed.
- 2 Keep containers in a dry, cool and well-ventilated place.
- 3 Keep away from heat/sparks/open flames/hot surfaces.
- 4 Store away from incompatible materials and foodstuff containers.

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Section 8 Exposure Controls/Personal Protection

>Control Parameters

Occupational Exposure Limit Values

Component	Country/Region	Limit Value -Eight Hours		Limit Value -Short Term	
		ppm	mg/m ³	ppm	mg/m ³
Tetrahydrothiophene	Switzerland	50	180	50	180
	Germany (DFG)	50	180	100	360

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110-01-0	Germany (AGS)	50	180	50	180
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Biological Limit Values

No information available

Monitoring Methods

EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of 1 exposure to chemical and biological agents.

GBZ/T 160 Determination of toxic substances in workplace air (Series effective standard) and GBZ/T 300.2 Determination of toxic substances in workplace air (Series standard).

>Engineering Controls

- 1 Ensure adequate ventilation, especially in confined areas.
- 2 Ensure that eyewash stations and safety showers are close to the workstation location.
- 3 Use explosion-proof electrical/ventilating/lighting/equipment.
- 4 Set up emergency exit and necessary risk-elimination area.

>Personal Protection Equipment

Eye Protection Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US).

Hand Protection Wear protective gloves (such as butyl rubber), passing the tests according to EN 374(EU), US F739 or AS/NZS 2161.1 standard.

Respiratory protection If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.

Skin and Body Protection Wear fire/flame resistant retardant clothing and antistatic boots.

Section 9 Physical and Chemical Properties

Appearance: colourless transparent liquid

Odor Threshold: No information available

Melting Point/Freezing Point (°C): -96.2

Flash Point (°C) (Closed Cup): 13

Flammability: Not applicable

Odor: No information available

pH: No information available

Initial Boiling Point and Boiling Range (°C): 119~121

Evaporation Rate: No information available

Upper/lower explosive limits [% (v/v)]: Upper limit: 12.3;
Lower limit: 1.1

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Vapor Pressure (KPa): 19hPa (20°C)

Relative Vapour Density(Air=1): 3.05

Relative Density(Water=1): 1.0

Solubility: Insoluble in water, soluble in ethanol, ether, benzene, acetone

n-Octanol/Water Partition Coefficient:1.6

Decomposition Temperature (°C):No information available

Auto-Ignition Temperature(°C): 200

Particle characteristics: Not applicable

Kinematic Viscosity (mm²/s):No information available

Critical Temperature(°C):Not applicable

Section 10 Stability and Reactivity

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical Stability	Stable under proper operation and storage conditions.
Possibility of Hazardous Reactions	In contact with active metals (alkali metals,Na,Ca etc.)causes a reaction and release hydrogen.
Conditions to Avoid	Incompatible materials,heat,flame and spark.
Incompatible Materials	Alkali,sodium,calcium,and other active metal,halogen,metal oxide,nonmetal oxide,acyl halide and metal phosphide.
Hazardous Decomposition products	Under normal conditions of storage and use,hazardous decomposition products should not be produced.

Section 11 Toxicological Information

>Acute Toxicity

Component	CAS No	LD ₅₀ (Oral)	LD ₅₀ (Dermal)	LC ₅₀ (Inhalation, 4h)
Tetrahydrothiophene	110-01-0	1750mg/kg (Rat)	No information available	No information available

>Skin Corrosion/Irritation

Causes skin irritation(Category 2)

>Serious Eye Damage/Irritation

Causes serious eye irritation(Category 2A)

>Skin Sensitization

No information available

>Respiratory Sensitization



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No information available

>Germ Cell Mutagenicity

No information available

>Carcinogenicity

ID	CAS No.	Component	IARC	NTP
1	110-01-0	Tetrahydrothiophene	Not Listed	Not Listed
2	7732-18-5	Water	Not Listed	Not Listed

>Reproductive Toxicity

No information available

>Reproductive Toxicity (Additional)

No information available

>STOT-Single Exposure

No information available

>STOT-Repeated Exposure

No information available

>Aspiration Hazard

No information available

Section 12 Ecological Information**>Acute Aquatic Toxicity**

No information available

>Chronic Aquatic Toxicity

No information available

>Others

Persistence and Degradability Bioaccumulative Potential Mobility in Soil Results of PBT and No information available
Tetrahydrothiophene does not meet the criteria for PBT and vPvB according to

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vPvB Assessment

Regulation (EC)No 1907/2006,annex XIII.
 Water does not meet the criteria for PBT and vPvB according to Regulation (EC)No 1907/2006,annex XIII.

Section 13 Disposal Considerations

Waste Chemicals Contaminated Packaging Disposal Recommendations

Before disposal should refer to the relevant national and local laws and regulation.
 Containers may still present chemical hazard when empty.Keep away from hot and ignition source of fire.Return to supplier for recycling if possible.
 Refer to Waste chemicals and Contaminated packaging.

Section 14 Transport Information



Transporting Label

Marine pollutant No
UN Number 2412
UN Proper Shipping Name TETRAHYDROTHIOPHENE
Transport Hazard Class 3
Transport Subsidiary NONE II
Hazard Class
Packing Group

Section 15 Regulatory Information

>International Chemical Inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS	ENCS
-----------	--------	------	-----	-------	-------	-------	------	------	------

Tetrahydrothiophene	✓	✓	✓	✓	✓	✓	✓	✓	✓
Water	✓	✓	✓	✓	✓	✓	✓	✓	✓

【EINECS】 European Inventory of Existing Commercial Chemical Substances.

【TSCA】 United States Toxic Substances Control Act Inventory.

【DSL】 Canadian Domestic Substances List.

【IECSC】 China Inventory of Existing Chemical Substances.

【NZIoC】 New Zealand Inventory of Chemicals.

【PICCS】 Philippines Inventory of Chemicals and Chemical Substances.

【KECI】 Existing and Evaluated Chemical Substances.

【AICS】 Australia Inventory of Chemical Substances.

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网址：http://www.ccicah.com.cn 电话



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【ENCS】 Existing And New Chemical Substances.

Note

“√”Indicates that the substance included in the regulations

“×”That no data or included in the regulations

Section 16 Additional Information

Creation Date May. 27, 2024

Revision Date May. 27, 2024

Reason for Revision -

>Disclaimer

This Safety Data Sheet (SDS) was prepared according to UN GHS (the 9th revised edition). The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

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地址：安徽省合肥市包河区芜湖路 367 号

话 (Tel) : +86-551-62879359

网址：http://www.ccicah.com.cn 电



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2. According to the demand of this SDS, CCIC requires the applicant to provide true and exact sample and data.
3. Information from applicant is the key of this SDS, so CCIC will not respond for the wrong of applicant.
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