

Creation Date 28-May-2009

Revision Date 16-Nov-2010

Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Description:

4-Thioanisolemagnesium bromide, 0.5M solution in THF

Cat No.

399070000; 399071000

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

Recommended Use

Laboratory chemicals

Uses advised against

No Information available

Details of the supplier of the safety data sheet

Company

Acros Organics BVBA
Janssen Pharmaceuticaaan 3a
2440 Geel, Belgium

E-mail address

begel.sdsdesk@thermofisher.com

Emergency Telephone Number

For information in the US, call: 800-ACROS-01

For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99

Emergency Number, US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

CHEMTREC Phone Number, Europe: 703-527-3887

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Skin Corrosion / irritation	Category 1
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ systemic toxicity (single exposure)	Category 3
Flammable liquids.	Category 2

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R phrases mentioned in this Section, see Section 16

Symbol(s)

C - Corrosive

F - Highly flammable

R -phrase(s)

R11 - Highly flammable

R14 - Reacts violently with water

R19 - May form explosive peroxides

R34 - Causes burns

2. HAZARDS IDENTIFICATION

Label Elements



Signal Word

Danger

Hazard Statements

H335 - May cause respiratory irritation
H314 - Causes severe skin burns and eye damage
H225 - Highly flammable liquid and vapor
EUH019 - May form explosive peroxides
EUH014 - Reacts violently with water

Precautionary Statements - EU (§28, 1272/2008)

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P280 - Wear eye protection/face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P402 + P404 - Store in a dry place. Store in a closed container
P233 - Keep container tightly closed
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P240 - Ground/Bond container and receiving equipment

Other Hazards

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	Weight %	CAS-No	Classification	GHSCLAS	REACH Reg. No.
4-Thioanisolemagnesium bromide 18620-04-7		12	18620-04-7	C;R34 R14	Skin Corr. 1B (H314) (EUH014)	-
Tetrahydrofuran 109-99-9	EEC No. 203- 726-8	88	109-99-9	F;R11 R19 Xi;R36/37	Flam. Liq. 2 (H225) Eye Irrit. 2 (H319) STOT SE 3 (H335) [EUH019]	-

For the full text of the R phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

Description of first aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
Immediate medical attention is required

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes Immediate medical attention
is required

Ingestion

Do not induce vomiting Call a physician or Poison Control Center immediately

Inhalation

Move to fresh air If breathing is difficult, give oxygen Do not use mouth-to-mouth resuscitation
if victim ingested or inhaled the substance; induce artificial respiration with a respiratory
medical device Immediate medical attention is required

Notes to Physician

Treat symptomatically

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

CO₂, dry chemical, dry sand, alcohol-resistant foam Cool closed containers exposed to fire with water spray

Extinguishing media which must not be used for safety reasons

Water

Special hazards arising from the substance or mixture

Flammable Containers may explode when heated Vapors may form explosive mixtures with air Vapors may travel to source of ignition
and flash back Reacts violently with water May form explosive peroxides

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective
gear Thermal decomposition can lead to release of irritating gases and vapors

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment Keep people away from and upwind of spill/leak Evacuate personnel to safe areas Remove all
sources of ignition Take precautionary measures against static discharges Do not get in eyes, on skin, or on clothing

Environmental precautions

Should not be released into the environment

Methods and material for containment and cleaning up

Soak up with inert absorbent material Keep in suitable and closed containers for disposal Remove all sources of ignition Use spark-
proof tools and explosion-proof equipment Do not expose spill to water

7. HANDLING AND STORAGE

Precautions for Safe Handling

Use only under a chemical fume hood Wear personal protective equipment Do not get in eyes, on skin, or on clothing Keep away from open flames, hot surfaces and sources of ignition Use only non-sparking tools Use explosion-proof equipment Do not breathe vapors/dust Do not ingest Take precautionary measures against static discharges Handle under an inert atmosphere Do not allow contact with water If peroxide formation is suspected, do not open or move container

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place Flammables area Keep away from heat and sources of ignition Store under an inert atmosphere Store indoors Keep away from water May form explosive peroxides Containers should be dated when opened and tested periodically for the presence of peroxides Should crystals form in a peroxidizable liquid, peroxidation may have occurred and the product should be considered extremely dangerous. In this instance, the container should only be opened remotely by professionals

Specific End Uses

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure limits

Component

Tetrahydrofuran

European Union	The United Kingdom	France	Belgium	Spain
		VME: 150 mg/m ³ VME: 50 ppm VLCT: 100 ppm VLCT: 300 mg/m ³	STEL: 100 ppm STEL: 300 mg/m ³ TWA: 150 mg/m ³ TWA: 50 ppm	VLA-EC: 100 ppm VLA-EC: 300 mg/m ³ VLA-ED: 50 ppm VLA-ED: 150 mg/m ³

Component

Tetrahydrofuran

Italy	Portugal	The Netherlands	Finland	Denmark
TWA: 150 mg/m ³ TWA: 50 ppm STEL: 100 ppm STEL: 300 mg/m ³	STEL: 100 ppm TWA: 50 ppm	STEL: 600 mg/m ³ TWA: 300 mg/m ³	TWA: 150 mg/m ³ TWA: 50 ppm STEL: 300 mg/m ³ STEL: 100 ppm	TWA: 148 mg/m ³ TWA: 50 ppm

Component

Tetrahydrofuran

Austria	Switzerland	Poland	Norway	Ireland
STEL: 300 mg/m ³ STEL: 100 ppm MAK: 150 mg/m ³ MAK: 50 ppm	STEL: 300 mg/m ³ STEL: 100 ppm MAK: 150 mg/m ³ MAK: 50 ppm	NDSch: 300 mg/m ³ NDS: 150 mg/m ³	TWA: 150 mg/m ³ TWA: 50 ppm	TWA: 118 mg/m ³ TWA: 40 ppm STEL: 295 mg/m ³ STEL: 100 ppm Skin

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

Exposure controls

Engineering Measures

Use only under a chemical fume hood Ensure that eyewash stations and safety showers are close to the workstation location Use explosion-proof electrical/ventilating/lighting/equipment

Personal protective equipment

Eye Protection

Safety glasses with side-shields

Hand Protection

Protective gloves

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice
Environmental exposure controls No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Tan
pH	No information available.
Boiling Point/Range	No information available.
Melting Point/Range	No information available.
Flash Point	< -17°C / < 1.4°F
Specific Gravity	0.965
Molecular Formula	C7 H7 Br Mg S
Molecular Weight	227.4

10. STABILITY AND REACTIVITY

Reactivity

Reactive Hazard Yes

Chemical Stability

Air sensitive. Moisture sensitive. May form explosive peroxides. Reacts violently with water.

Possibility of Hazardous Reactions

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions . May form explosive peroxides.. Reacts violently with water..

Conditions to Avoid

Incompatible products, Excess heat, Keep away from open flames, hot surfaces and sources of ignition, Exposure to air, Exposure to moist air or water.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO₂). Magnesium oxides. Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component

Tetrahydrofuran

LD50 Oral	LD50 Dermal	LC50 Inhalation
1650 mg/kg (Rat)		180 mg/L (Rat) 1 h 53.9 mg/L (Rat) 4 h

Chronic Toxicity

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen

Sensitization	No information available.		
Mutagenic Effects	No information available		
Reproductive Effects	No information available.		
Developmental Effects	No information available.		
Target Organs	Skin Respiratory system Eyes Gastrointestinal tract (GI) Heart Liver Kidney spleen Central nervous system (CNS) Blood		
Other Adverse Effects	The toxicological properties have not been fully investigated.		
Endocrine Disruptor Information	None known		
Component	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Tetrahydrofuran	Group III Chemical		

12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity effects Do not empty into drains

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Tetrahydrofuran		Leuciscus idus: LC50: 2820 mg/L/48h		EC50: >10000 mg/L/24h

Persistence and degradability

No information available

Bioaccumulative potential

No information available.

Component	log Pow
Tetrahydrofuran	0.45

Mobility in soil

No information available.

Results of PBT and vPvB assessment

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues / Unused Products

Dispose of in accordance with local regulations

Contaminated Packaging

Empty containers should be taken for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

IMDG/IMO

UN-No	UN2924
Hazard Class	3
Subsidiary Hazard Class	8

14. TRANSPORT INFORMATION

Packing Group II
Proper Shipping Name Flammable liquid, corrosive, n.o.s

ADR

UN-No UN2924
Hazard Class 3
Subsidiary Class 8
Packing Group II
Proper Shipping Name Flammable liquid, corrosive, n.o.s

IATA

UN-No UN2924
Hazard Class 3
Subsidiary Hazard Class 8
Packing Group II
Proper Shipping Name Flammable liquid, corrosive, n.o.s

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Tetrahydrofuran	203-726-8	-		T	X	-	X	X	X	X	KE-33454 X

Legend

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

EINECS/ELINCS - European Inventory Lists

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

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

CHINA - China Inventory of Existing Chemical Substances

AICS - Inventory of Chemical Substances

KECL - Existing and Evaluated Chemical Substances

Chemical Safety Assessment

16. OTHER INFORMATION

Text of R phrases mentioned in Section 2-3

R11 - Highly flammable

R14 - Reacts violently with water

R19 - May form explosive peroxides

R34 - Causes burns

R36/37 - Irritating to eyes and respiratory system

16. OTHER INFORMATION

Revision Date 16-Nov-2010

Revision Summary Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

End of Safety Data Sheet