

# SAFETY DATA SHEET

## SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Bis(trimethylsilyl)selenide**

PRODUCT NO: 1386

CAS NO: 4099-46-1

CHEMICAL USE: Research and Development

SYNONYMS: Hexamethyldisilselanane

### MANUFACTURER:

WONIK MATERIALS NORTH AMERICA  
N115 W19392 EDISON DRIVE  
GERMANTOWN, WI 53022

PHONE: +1-262-293-0251  
FAX: +1-262-253-1258

IN CASE OF TRANSPORTATION EMERGENCY CONTACT CHEM-TREC: +1-703-741-5971

FOR TECHNICAL INFORMATION CONTACT: +1-262-293-0251

## SECTION 2 HAZARDS IDENTIFICATION

### CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

#### GHS CLASSIFICATION

Acute toxicity, Oral (Category 3)

Acute toxicity, Inhalation (Category 3)

Acute toxicity, Dermal (Category 3)

Flammable Liquid, (Category 3)

Pictogram



Signal Word

**Danger**

## SECTION 2 HAZARDS IDENTIFICATION (Cont.)

### Hazard Statements

H226	Flammable liquid and vapour
H301 + H331 + H331	Toxic if swallowed, in contact with skin or if inhaled
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled

### Precautionary Phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. –No smoking.
P222	Do not allow contact with air
P232	Protect from moisture
P233	Keep container tightly closed
P235	Keep cool
P240	Ground and bond container and receiving equipment
P241	Use explosion-proof electrical, ventilating and lighting equipment
P242	Use non-sparking tools
P243	Take action to prevent static discharges
P261	Avoid breathing fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling
P270	Do not eat, drink, or smoke when using this product
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves/protective clothing/eye protection/face protection
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P370 +P378	In case of fire: Use CO2, foam or extinguishing powder for extinction.
P402	Store in a dry place
P403	Store in a well-ventilated place

### OTHER HAZARDS

Additional precautionary phrases are located throughout the safety data sheet

### HMIS CLASSIFICATION:

Health: 3

Flammability: 3

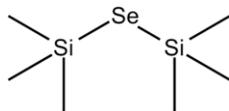
Reactivity: 1

Special: Water Reactive

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: C<sub>6</sub>H<sub>18</sub>SeSi<sub>2</sub>

Molecular Weight: 225.34



CHEMICAL NAME	CAS#
Bis(trimethylsilyl)selenide	4099-46-1

## SECTION 4 FIRST AID MEASURES

**EYE EXPOSURE:** Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Remove contacts if easily possible. Get immediate, professional care from qualified physician or emergency care facility.

**SKIN EXPOSURE:** Wash affected area with copious amounts of water for at least 15 minutes. Remove contaminated clothes and shoes if necessary. Seek medical assistance immediately.

**INHALATION:** Remove victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. If not breathing administer CPR. If having trouble breathing give oxygen if available. Seek immediate emergency medical assistance and call Poison Center.

**INGESTION:** Do not induce vomiting. Rinse out mouth with water provided person is conscious. Seek immediate medical assistance and call Poison Center.

## SECTION 5 FIREFIGHTING MEASURES

### EXTINGUISHING MEDIA:

Suitable In case of fire: Use CO<sub>2</sub>, foam or extinguishing powder  
Unsuitable DO NOT USE WATER!

### HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:

Carbon Monoxide, Carbon Dioxide, Hydrogen Selenide, and Sulfur Oxides

### SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

In combustion, toxic fumes may form.  
Vapors can form explosive mixtures.  
Moisture reactive, Exposure to moisture releases Hydrogen Selenide  
Contact with strong oxidizers may cause fire.

### ADVICE FOR FIRE FIGHTERS

Wear self-contained breathing apparatus.  
Wear protective clothing to prevent contact with skin and eyes.  
Vapors can form explosive mixtures  
If allowable withdrawal from area and allow to burn

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Eliminate all sources of ignition.  
Evacuate the area immediately.  
Do not attempt to take action without suitable protective clothing.

### ENVIRONMENTAL PRECAUTIONS

Do not discharge into drains or rivers.  
Contain the spillage.

### METHODS AND MATERIALS

Use non-sparking tools for clean-up procedure.  
Use dry lime, soda ash, or sand.

## SECTION 7 HANDLING AND STORAGE

### PERSONAL PRECAUTIONS

SAFE HANDLING: WARNING! FLAMMABLE LIQUID TOXIC BY INHALATION  
AIR SENSITIVE WATER AND MOISTURE REACTIVE!

Ensure there is sufficient ventilation of the area. Do not eat, drink or smoke when using this product. Ground container and receiving equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Safety showers, Eye wash station readily available in working area.

PROTECTION AGAINST EXPLOSIONS AND FIRES: KEEP AWAY FROM INCOMPATIBLE MATERIALS! Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting. Use only non-sparking tools.

### CONDITIONS FOR SAFE STORAGE

MANAGING STORAGE RISKS: Package and store containers in a blanket of Nitrogen. Store in cool, well-ventilated area. Keep away from sources of ignition. Keep container tightly closed.

STORAGE CONTROLS: Store in a well-ventilated area. Keep away from incompatibles. Keep cool.

MAINTAINING INTEGRITY: Keep away from heat/sparks/open flames/hot surfaces. –No smoking. Keep container tightly closed. Handle and use in a controlled environment under inert atmosphere. To be handled and used by competent individuals only.

## SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

**EYE PROTECTION:** Approved safety glasses w/side shields, or safety goggles and face shield

**SKIN PROTECTION:** Wear appropriate chemical resistant gloves, rubber, neoprene

**VENTILATION:** Chemical fume hood. Handle and use under inert atmosphere.

**RESPIRATOR:** If adequate ventilation is not available, a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29CFR 1910.34 or NIOSH/MSHA or European Standard EN 149 approved respirator.

**ADDITIONAL PROTECTION:** WARNING! FLAMMABLE LIQUID TOXIC BY INHALATION Water/Moisture reactive and Air Sensitive. Avoid contact with skin, eyes, clothing, shoes. Do not inhale vapors. Use with adequate ventilation. Use in a controlled environment. Avoid contact with WATER, MOISTURE, Oxidizing agents, friction, heat, flames and sparks. Use adequate protection to avoid contact with skin, clothing, and shoes. (Apron, lab coat, arm sleevelets). Eyewash and safety shower in area capable of sustained flushing. Do not eat, drink or smoke in area.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**COLOR AND FORM:** Colorless liquid

**pH:** not applicable

**MELTING POINT/ FREEZING POINT:** -7 deg C.

**BOILING POINT:** 31 deg C @ 2.00mm Hg (87.80 deg F)

**FLASH POINT:** 43 deg C

**AUTO-IGNITION TEMPERATURE:** not known

**LOWER EXPLOSION LIMIT:** not applicable

**UPPER EXPLOSION LIMIT:** not applicable

**VAPOR PRESSURE:** ~ 2mm @ 25 deg C

**RELATIVE DENSITY:** 0.900

**SOLUBILITY IN WATER:** Insoluble, reacts

**PARTITION COEFFICIENT:** n-octanol/water: not applicable

**VAPOR DENSITY:** not applicable

**ODOR:** Strong stench

**ODOR THRESHOLD:** not applicable

**EVAPORATION RATE:** not applicable

## SECTION 10 STABILITY AND REACTIVITY

**STABILITY:** Stable if stored in sealed corrosion resistant containers under dry inert atmosphere.

**HAZARDOUS POLYMERIZATION:** Has not been reported.

**CONDITIONS TO AVOID:** Moist, humid conditions, exposure to air, heat, friction, flames, sparks.

**INCOMPATIBILITY:** Water, moisture, *strong* oxidizing agents

**DECOMPOSITION PRODUCTS:** Hexamethyldisiloxane, silicon oxide

## SECTION 11 TOXICOLOGICAL DATA

**ACUTE TOXICITY:** No data available

**SKIN CORROSION/IRRITATION:** Irritant for skin and mucous membranes

**SERIOUS EYE DAMAGE/IRRITATION:** Irritant effect

**RESPIRATORY OR SKIN SENSITIZATION:** No sensitizing effect known

**GERM CELL MUTAGENICITY:** Not known

**CARCINOGENICITY:** Not known

**REPRODUCTIVE TOXICITY:** Not known

**SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE:** Not known

**SPECIFIC TARGET ORGAN TOXICITY-REPEATED EXPOSURE:** Not known

**ASPIRATION HAZARD:** Not known

**ADDITIONAL INFORMATION:** To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA, or ACGIH

## SECTION 12 ECOLOGICAL DATA

**TOXICITY:** Not known

**PERSISTENCE AND DEGRADABILITY:** Not known

**BIOACCUMULATIVE POTENTIAL:** Not known

**MOBILITY AND SOIL:** Not known

**PBT AND vPvB ASSESMENT:** Not known

**OTHER ADVERSE EFFECTS:** Water hazard class 2 (self assessment); hazardous for water

**ECOLOGICAL INFORMATION:** May be hazardous to aquatic life. Do not allow product to reach ground water, water course or sewage system. Do not allow product to be released to the environment without proper governmental permits

## SECTION 13 DISPOSAL CONSIDERATIONS

**DISPOSAL OF PACKAGING:** Disposal must be made according to official regulations

## SECTION 14 TRANSPORTATION DATA

Toxic liquid, flammable, organic, n.o.s. (Bis(trimethylsilyl)selenide)

Class 6.1 Subclass 3

UN2929

PG II

DOT, IATA, and IMDG Regulated

Marine Pollutant: YES

## SECTION 15 REGULATORY INFORMATION

### OSHA HAZARDS

None of the chemicals in this product are considered highly hazardous by OSHA

### TSCA

CAS # 4099-46-1 is not listed on the TSCA inventory. It is for research and development use only.

### CLEAN AIR ACT:

CAS #4099-46-1 (listed as Selenium compounds) is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters

This material does not contain any Class 2 Ozone depleters

### CLEAN WATER ACT:

CAS # 4099-46-1 is listed as a Toxic Pollutant

### SARA 302 COMPONENTS

None of the chemicals in this products have a TPQ

### SARA 313 COMPONENTS

This material contains bis(trimethylsilyl)Selenide (listed as Selenium compounds), 98%, (CAS # 4099-46-1) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373

### STATE

CAS # 4099-46-1 can be found on the following state right to know lists: California, (listed as Silica, amorphous), California, (listed as Selenium compounds), New Jersey, (listed as silica, amorphous), Pennsylvania, (listed as Silica, amorphous), Pennsylvania, (listed as Selenium compounds), Minnesota, (listed as Silica, amorphous), Massachusetts, (listed as Silica, amorphous).

### CALIFORNIA PROP 65

California No significant Risk Level: None of the chemicals in this product are listed.

## SECTION 16 OTHER INFORMATION

### OTHER INFORMATION:

CAS: Chemical Abstract Service  
DOT: Department of Transportation  
EPA: Environmental Protection Agency  
IARC: International Agency for the Research on Cancer  
IATA: International Air Transport Association  
IMDG: International Maritime Code for Dangerous Goods  
OSHA: Occupational Safety and Health Administration  
SDS: Safety Data Sheet  
TSCA: Toxic Substances Control Act

DISCLAIMER: The information herein is believed to be accurate and reliable as of the date compiled. However, Wonik Materials North America makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

DATE PREPARED: 03/2013

REVISED DATE: 09/2018

MSDS DEPT