# **SIGMA-ALDRICH**

# **Material Safety Data Sheet**

Version 4.0 Revision Date 07/21/2010 Print Date 01/05/2012

Product name	: (4-Phenylthiophenyl)diphenylsulfonium triflate
Product Number	: 527009
Brand	: Aldrich
Company	: Sigma-Aldrich
	3050 Spruce Street SAINT LOUIS MO 63103
	USA
Telephone	: +1 800-325-5832
Fax	: +1 800-325-5052
Emergency Phone #	: (314) 776-6555
ZARDS IDENTIFICATION	
Emergency Overview	
OSHA Hazards Irritant	
GHS Label elements, incl	uding precautionary statements
Pictogram	
Signal word	Warning
Hazard statement(s)	
H315	Causes skin irritation.
H319 H335	Causes serious eye irritation. May cause respiratory irritation.
Precautionary statement(s) P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses
	present and easy to do. Continue rinsing.
HMIS Classification	
Health hazard:	2
Flammability: Physical hazards:	0 0
NFPA Rating	
Health hazard:	2
Fire:	0
Reactivity Hazard:	0
Potential Health Effects	
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes Ingestion	Causes eye irritation. May be harmful if swallowed.

# COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms

: (4-Phenylthiophenyl)diphenylsulfonium trifluoromethanesulfonate

Formula	:	C <sub>25</sub> H <sub>19</sub> F <sub>3</sub> O <sub>3</sub> S <sub>3</sub>
Molecular Weight		520.61 g/mol

CAS-No.	EC-No.	Index-No.	Concentration				
(4-Phenylthiophenyl)diphenylsulfonium triflate							
111281-12-0	-	-	-				

# 4. FIRST AID MEASURES

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

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

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

# 5. FIRE-FIGHTING MEASURES

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

# 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

#### **Environmental precautions**

Do not let product enter drains.

#### Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

# 7. HANDLING AND STORAGE

#### Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

#### Conditions for safe storage

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

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

#### Personal protective equipment

#### **Respiratory protection**

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

# Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin and body protection

impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Appearance

	Form	solid
Sa	afety data	
	рН	no data available
	Melting point	81 - 85 °C (178 - 185 °F) - lit.
	Boiling point	no data available
	Flash point	no data available
	Ignition temperature	no data available
	Lower explosion limit	no data available
	Upper explosion limit	no data available
	Water solubility	no data available

# **10. STABILITY AND REACTIVITY**

#### Chemical stability

Stable under recommended storage conditions.

# Conditions to avoid no data available

Materials to avoid acids, Strong oxidizing agents

#### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides, Hydrogen fluoride

# **11. TOXICOLOGICAL INFORMATION**

Acute toxicity no data available

Skin corrosion/irritation no data available

Serious eye damage/eye irritation no data available

**Respiratory or skin sensitization** no data available

Germ cell mutagenicity no data available

# Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

#### **Reproductive toxicity**

no data available

#### Specific target organ toxicity - single exposure (GHS)

Inhalation - May cause respiratory irritation.

# Specific target organ toxicity - repeated exposure (GHS)

no data available

Aspiration hazard

no data available

#### Potential health effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

#### Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

# **Additional Information**

#### **12. ECOLOGICAL INFORMATION**

#### Toxicity

no data available

#### Persistence and degradability no data available

**Bioaccumulative potential** no data available

Mobility in soil no data available

#### PBT and vPvB assessment no data available

# Other adverse effects

no data available

# **13. DISPOSAL CONSIDERATIONS**

# Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

# **14. TRANSPORT INFORMATION**

# **DOT (US)** Not dangerous goods

# IMDG

Not dangerous goods

# ΙΑΤΑ

Not dangerous goods

# **15. REGULATORY INFORMATION**

#### **OSHA Hazards**

Irritant

#### **DSL Status**

This product contains the following components that are not on the Canadian DSL nor NDSL lists.

(4-Phenylthiophenyl)diphenylsulfonium triflate

# SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

# SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

CAS-No.

111281-12-0

#### SARA 311/312 Hazards

Acute Health Hazard

# Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components		
(4-Phenylthiophenyl)diphenylsulfonium triflate	CAS-No. 111281-12-0	Revision Date
New Jersey Right To Know Components		
(4-Phenylthiophenyl)diphenylsulfonium triflate	CAS-No. 111281-12-0	Revision Date

# California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

# **16. OTHER INFORMATION**

# **Further information**

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