

SAFETY DATA SHEET

Preparation Date: 6/23/2017

Revision date 12/10/2018

Revision Number: G2

1. Identification

Product identifier

Product code: S1037
Product Name: SILICOTUNGSTIC ACID, REAGENT

Other means of identification

Synonyms: No information available
CAS #: 12027-38-2
RTECS # Not available
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Tom Tyner (USA - West Coast)
Contact Person: Ibad Tirmiz (USA - East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

| | |
|--|-------------|
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2A |
| Specific target organ toxicity (single exposure) | Category 3 |

Label elements

Warning

Hazard statements
 Causes skin irritation
 Causes serious eye irritation
 May cause respiratory irritation

**Hazards not otherwise classified (HNOC)**

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Avoid breathing dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

Wear protective gloves

Wear eye/face protection

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash it before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS No | Weight-% |
|---------------------|------------|----------|
| Silicotungstic Acid | 12027-38-2 | 100 |

4. FIRST AID MEASURES**First aid measures****General Advice:**

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact:

Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms Causes eye irritation
Eye contact may result in redness or pain
Causes skin irritation
Skin contact may result in redness, pain, inflammation, itching, scaling
Irritating to respiratory system
May affect behavior/central nervous system
May cause diarrhea

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous combustion products No information available.

Specific hazards No information available.

Special Protective Actions for Firefighters

Specific Methods: No information available

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep refrigerated. Keep at temperatures between 2 and 8 °C. Store away from incompatible materials. Deliquescent. Protect from moisture.

Incompatible Materials:

Strong oxidizing agents
Strong bases

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

| Component | CAS No | OSHA | NIOSH | ACGIH | AIHA WEEL |
|---------------------|------------|------|---|--|-----------|
| Silicotungstic Acid | 12027-38-2 | None | 5 mg/m ³ TWA; 10 mg/m ³ STEL (as W)(Tungsten insoluble compounds) | 3 mg/m ³ TWA (as W)(Tungsten compounds) | None |

Canada

| Component | CAS No | Canada - Alberta | Canada - British Columbia | Canada - Ontario | Canada - Quebec |
|---------------------|------------|-----------------------------|-----------------------------|------------------|-------------------------------|
| Silicotungstic Acid | 12027-38-2 | 5 mg/m ³ TWA; 10 | 5 mg/m ³ TWA; 10 | None | 5 mg/m ³ TWAEV; 10 |

| | | | | | |
|--|--|---|---|--|---|
| | | mg/m ³ STEL (as W)(Tungsten insoluble compounds) | mg/m ³ STEL (as W)(Tungsten insoluble compounds) | | mg/m ³ STEV (as W)(Tungsten insoluble compounds) |
|--|--|---|---|--|---|

Australia and Mexico

| Component | CAS No | Australia | Mexico |
|---------------------|------------|---|---|
| Silicotungstic Acid | 12027-38-2 | 5 mg/m ³ TWA; 10 mg/m ³ STEL (as W)(Tungsten insoluble compounds) | 5 mg/m ³ TWA; 10 mg/m ³ STEL (as W)(Tungsten insoluble compounds) |

Appropriate engineering controls

Engineering measures to reduce exposure: Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Safety glasses with side-shields. or Goggles

Skin and body protection: Chemical resistant apron
Gloves
Long sleeved clothing

Respiratory protection: Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|--|--|---|
| Physical state: Low melting point solid Liquid above 25 °C | Appearance: Crystalline powder. | Color: White. Off-white. Light yellow. |
| Odor: Odorless. | Taste No information available. | Formula H ₄ [SiO ₄ .(WO ₉) ₄].xH ₂ O |
| Molecular/Formula weight (g/mole): 2878.44 + xH ₂ O | Flammability (solid, gas) no data available | Flashpoint (°C/°F): No information available |
| Flash Point Tested according to: Not available | Autoignition Temperature (°C/°F): No information available | Lower Explosion Limit (%): No information available |
| Upper Explosion Limit (%): No information available | Melting point/range(°C/°F): No information available | Decomposition temperature(°C/°F): No information available |
| Boiling point/range(°C/°F): | | |

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No information available

Bulk density:
No information available

Density (g/cm³):
No information available

Specific gravity:
No information available

pH
No information available

Vapor pressure @ 20°C (kPa):
No information available

Evaporation rate:
No information available

Vapor density:
No information available

VOC content (g/L):
No information available

Odor threshold (ppm):
No information available

**Partition coefficient
(n-octanol/water):**
No information available

Viscosity:
No information available

Miscibility:
No information available

Solubility:
Very soluble in water

10. STABILITY AND REACTIVITY

Reactivity

No information available

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Avoid dust formation. Incompatible materials. Exposure to moisture.

Incompatible Materials: Strong oxidizing agents
Strong bases

Hazardous decomposition products: No information available.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Toxicity

Component Information

Silicotungstic Acid

CAS No | 12027-38-2

LD50/oral/rat = No information available

LD50/oral/mouse = No information available

LD50/dermal/rabbit = No information available

LD50/dermal/rat = No information available

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LC50/inhalation/rat = No information available
 LC50/inhalation/mouse = No information available
 Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
 Value - Acute Tox Dermal = > No information available

LD50/oral/mouse =
 Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
 Value - Acute Tox Dermal = No information available

LD50/dermal/rat
 VALUE - Acute Tox Dermal = No information available

LC50/inhalation/rat
 VALUE-Vapor = No information available
 VALUE-Gas = No information available
 VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
 VALUE-Vapor = No information available
 VALUE - Gas = No information available
 VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Causes skin irritation.
Eye Contact: Causes serious eye irritation.
Inhalation Irritating to respiratory system.
Ingestion May cause diarrhea. May cause central nervous system effects (affect behavior).
Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity No information available.
Sensitization: No information available.
Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

| Component | CAS No | IARC | ACGIH - Carcinogens | NTP | OSHA HCS - Carcinogens | Australia - Notifiable Carcinogenic Substances | Australia - Prohibited Carcinogenic Substances |
|---------------------|------------|------------|---------------------|------------|------------------------|--|--|
| Silicotungstic Acid | 12027-38-2 | Not listed | Not listed | Not listed | Not listed | Not listed | Not listed |

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure respiratory system.
STOT - repeated exposure No information available.
Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility in soil No information available
Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

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

| Component | CAS No | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|---------------------|------------|------------------------|------------------------|------------------------|------------------------|
| Silicotungstic Acid | 12027-38-2 | None | None | None | None |

14. TRANSPORT INFORMATION

DOT

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class No information available
Subsidiary Class No information available
Packing group: No information available
Emergency Response Guide No information available

Number
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions No Information available
Symbol(s): No information available
Description: No information available

TDG (Canada)
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No Information available
Description: No information available

ADR
UN Number Not regulated
Proper Shipping Name: No information available
Transport hazard class(es) No information available
Packing group No information available
Subsidiary Risk: No information available

IMDG
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No information available

RID
UN Number Not Regulated
Proper Shipping Name: No information available
Transport hazard class(es) No information available
Subsidiary Risk: No information available
Packing group No information available

ICAO (air)
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class No information available
Subsidiary Risk: No information available
Packing Group: No information available

IATA
UN Number Not Regulated
Proper Shipping Name: No information available
Transport hazard class(es) No information available
Subsidiary Risk: No information available
Packing group No information available
Precautionary Statements - Response IF exposed or concerned
Special Provisions No information available

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|-----------------------------------|
| 15. REGULATORY INFORMATION |
|-----------------------------------|

International Inventories

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| Component | CAS No | U.S. TSCA | KOREA KECL | Philippines (PICCS) | Japan ENCS | China IECSC | Australia AICS | EINECS-No. |
|---------------------|------------|---------------|------------------|---------------------|------------------|-------------|----------------|-------------------|
| Silicotungstic Acid | 12027-38-2 | PresentACTIVE | Present KE-35415 | Present | Present (1)-1080 | X | X | Present 234-719-8 |

U.S. Regulations

Silicotungstic Acid

Minnesota - Hazardous Substance List: Present (Tungsten compounds)

California Directors List of Hazardous Substances: Present (Tungsten compounds)

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

| Component | CAS No | Carcinogen | Developmental Toxicity | Male Reproductive Toxicity | Female Reproductive Toxicity: |
|---------------------|------------|------------|------------------------|----------------------------|-------------------------------|
| Silicotungstic Acid | 12027-38-2 | Not Listed | Not Listed | Not Listed | Not Listed |

CERCLA/SARA

| Component | CAS No | CERCLA - Hazardous Substances and their Reportable Quantities | Section 302 Extremely Hazardous Substances and TPQs | Section 302 Extremely Hazardous Substances and RQs | Section 313 - Chemical Category | Section 313 - Reporting de minimis |
|---------------------|------------|---|---|--|---------------------------------|------------------------------------|
| Silicotungstic Acid | 12027-38-2 | None | None | None | None | None |

U.S. TSCA

| Component | CAS No | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) -Health and Safety Reporting |
|---------------------|------------|---|--|
| Silicotungstic Acid | 12027-38-2 | Not Applicable | Not Applicable |

Canada

WHIMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

The WHMIS 2015 classification of this product has not been validated or reviewed yet.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

DSL/NDSL

| Component | CAS No | Canada (DSL) | Canada (NDSL) |
|---------------------|------------|--------------|---------------|
| Silicotungstic Acid | 12027-38-2 | Present | Not Listed |

| | | |
|---------------------|------------|---|
| Component | CAS No | CEPA Schedule I - Toxic Substances |
| Silicotungstic Acid | 12027-38-2 | Not listed |
| Component | CAS No | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
| Silicotungstic Acid | 12027-38-2 | Not listed |

EU Classification

EU GHS - SV - CLP 1272/2008

| | | |
|---------------------|------------|-------------------------------|
| Component | CAS No | EU GHS - SV - CLP (1272/2008) |
| Silicotungstic Acid | 12027-38-2 | |

EU - CLP (1272/2008)

R-phrase(s)

R36/37/38 - Irritating to eyes, respiratory system and skin

S-phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S37 - Wear suitable gloves

| Component | CAS No | Classification | Concentration Limits: | Safety Phrases |
|---------------------|------------|----------------|-----------------------|----------------|
| Silicotungstic Acid | 12027-38-2 | | No information | |

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xi - Irritant

Xi



16. OTHER INFORMATION

Preparation Date: 6/23/2017
Revision date: 12/10/2018
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the

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End of Safety Data Sheet