

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Thiokol 2235 SL Part A

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Holcim Solutions and Products US, LLC
26 Century Boulevard, Suite 205
Nashville, Tennessee 37214
1-800-878-7876 •www.polyspec.com

1.4. Emergency telephone number

Emergency number : For Chemical Emergency
Spill, Leak, Fire, Exposure, or Incident
CHEMTRAC:
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1-703-527-3887 (collect calls accepted)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Skin Sens. 1	H317
Carc. 1A	H350
Lact.	H362
STOT SE 3	H335
Aquatic Chronic 2	H411

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

: Danger

Hazard statements (GHS US) :

: H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

H335 - May cause respiratory irritation.

H350 - May cause cancer.

H362 - May cause harm to breast-fed children.

H411 - Toxic to aquatic life with long lasting effects.

Dispose of in accordance with local/national regulations

: P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P260 - Do not breathe /mist/vapors/spray.

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P263 - Avoid contact during pregnancy/while nursing.

P264 - Wash hands, forearms and face thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P271 - Use only outdoors or in a well-ventilated area.

P272 - Contaminated work clothing must not be allowed out of the workplace.

P273 - Avoid release to the environment.

P280 - Wear eye protection, protective gloves, protective clothing.

P302+P352 - If on skin: Wash with plenty of water.

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

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P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P312 - Call a poison center or doctor if you feel unwell.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P363 - Wash contaminated clothing before reuse.
P391 - Collect spillage.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Propane, 1,2,3-trichloro-, polymer with 1,1'-(methylenebis(oxy))bis[2-chloroethane] and sodium sulfide (Na ₂ (Sx)), reduced	(CAS-No.) 68611-50-7	30 – 60
Alkenes, C12-24, chloro	(CAS-No.) 68527-02-6	10 – 30
Titanium dioxide	(CAS-No.) 13463-67-7	3 – 7
Phenol, isobutyleneated methylstyrenated	(CAS-No.) 68457-74-9	1 – 5
Glycidoxypropyltrimethoxysilane	(CAS-No.) 2530-83-8	0.1 – 1
Trimethoxy(2-methylpropyl)silane	(CAS-No.) 18395-30-7	0.1 – 1
Silica: Crystalline, quartz	(CAS-No.) 14808-60-7	0.1 – 1
2-Butanone, O,O',O"-(methylsilylidene)trioxime	(CAS-No.) 22984-54-9	0.1 – 1

In accordance with paragraph (i) of the OSHA Hazard Communication Standard (29 CFR §1910.1200), the specific chemical identity or exact weight % has been withheld as a trade secret.

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general

: If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.

First-aid measures after inhalation

: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if breathing is affected. If breathing is difficult, supply oxygen.

First-aid measures after skin contact

: IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes. If irritation develops or persists, get medical attention.

First-aid measures after eye contact

: IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Continue rinsing if pain, blinking, or irritation develops or persists, get medical attention. Continue rinsing.

First-aid measures after ingestion

: IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Get medical attention if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects

: Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. May cause respiratory irritation. May cause harm to breast-fed children. May cause cancer.

Symptoms/effects after inhalation

: May cause respiratory irritation.

Symptoms/effects after skin contact

: Causes skin irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact

: Causes serious eye irritation.

Symptoms/effects after ingestion

: May cause gastrointestinal irritation.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Carbon dioxide. Dry powder. Water spray.
Unsuitable extinguishing media : Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Specific hazards arising from the chemical

Fire hazard : Not flammable
Explosion hazard : Product is not explosive.
Reactivity : No dangerous reactions known under normal conditions of use.

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire : Eliminate all ignition sources if safe to do so.
Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Do not dispose of fire-fighting water in the environment.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Ventilate area. Keep upwind. Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection

6.1.1. For non-emergency personnel

Protective equipment : Wear Protective equipment as described in Section 8.
Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air respirator, in case of emergency.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Prevent entry to sewers and public waters.
Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

See Sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Keep container closed when not in use. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container closed when not in use. Containers which are opened should be properly resealed and kept upright to prevent leakage. Store in a dry, cool and well-ventilated place.
Incompatible materials : No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Propane, 1,2,3-trichloro-, polymer with 1,1'-[methylenebis(oxy)]bis[2-chloroethane] and sodium sulfide (Na2(Sx)), reduced (68611-50-7)

OSHA	Remark (OSHA)	OELs not established
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Alkenes, C12-24, chloro (68527-02-6)		
Not applicable		
Phenol, isobutyleneated methylstyrenated (68457-74-9)		
Not applicable		
Glycidoxypolytrimethoxysilane (2530-83-8)		
ACGIH	Remark (ACGIH)	
Trimethoxy(2-methylpropyl)silane (18395-30-7)		
Not applicable		
Titanium dioxide (13463-67-7)		
ACGIH	ACGIH OEL TWA	10 mg/m ³
ACGIH	Remark (ACGIH)	TLV® Basis: LRT irr; pneumoconiosis. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
ACGIH	Regulatory reference	ACGIH 2023
OSHA	OSHA PEL TWA [1]	15 mg/m ³ total dust
OSHA	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
IDLH	IDLH	5000 mg/m ³
NIOSH	NIOSH REL TWA	2.4 mg/m ³ (CIB 63-fine) 0.3 mg/m ³ (CIB 63-ultrafine, including engineered nanoscale)
Limestone (1317-65-3)		
OSHA	OSHA PEL TWA [1]	5 mg/m ³ respirable fraction
OSHA	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
NIOSH	NIOSH REL TWA	10 mg/m ³ (total dust) 5 mg/m ³ (respirable dust)
Silica: Crystalline, quartz (14808-60-7)		
ACGIH	ACGIH OEL TWA	0.025 mg/m ³ (respirable fraction)
ACGIH	Remark (ACGIH)	TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)
ACGIH	Regulatory reference	ACGIH 2022
OSHA	OSHA PEL TWA [1]	50 µg/m ³ (respirable fraction) (source: 29 CFR § 1910.1053)
OSHA	OSHA PEL TWA [2]	Where 1910.1053 is not in force, use formulas: (250 / (%SiO ₂ +5)) for mppcf and (10 mg/m ³ / (%SiO ₂ +2)) for mg/m ³ (source: Table Z-3)
OSHA	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-3 Mineral Dusts
IDLH	IDLH	50 mg/m ³ (respirable dust)
NIOSH	NIOSH REL TWA	0.05 mg/m ³ (respirable dust)

8.2. Appropriate engineering controls

Appropriate engineering controls

: Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Ensure adequate ventilation, especially in confined areas.

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8.3. Individual protection measures/Personal protective equipment

Personal protective equipment symbol(s):



Personal protective equipment:

Gloves. Protective goggles. Protective clothing.

Hand protection:

Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl. Suitable gloves for this specific application can be recommended by the glove supplier.

Eye protection:

Wear eye protection, including chemical splash goggles and a face shield when possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection:

Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure.

Respiratory protection:

Use NIOSH (or other equivalent national standard) -approved dust/particulate respirator. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: No data available
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (n-butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

None under normal use.

10.4. Conditions to avoid

Heat. High temperatures.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Phenol, isobutyleneated methylstyrenated (68457-74-9)

LD50 oral rat	> 2500 mg/kg
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LD50 dermal rat	> 2000 mg/kg
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LD50 dermal rabbit	> 2000 mg/kg (no deaths occurred)
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LC50 Inhalation - Rat	> 23250 mg/m ³ 4 hr
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Glycidoxypropyltrimethoxysilane (2530-83-8)

LD50 oral rat	22600 µl/kg
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LD50 dermal rabbit	3970 µl/kg
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LC50 Inhalation - Rat	> 5.3 mg/l/4h
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Trimethoxy(2-methylpropyl)silane (18395-30-7)

LD50 oral rat	> 2000 mg/kg RSDB
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LC50 Inhalation - Rat	11 mg/l RSDB
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Titanium dioxide (13463-67-7)

LD50 oral rat	> 10000 mg/kg
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LC50 Inhalation - Rat	5.09 mg/l/4h
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Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : May cause cancer.

Titanium dioxide (13463-67-7)

IARC group	2B - Possibly carcinogenic to humans
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In OSHA Hazard Communication Carcinogen list	Yes
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Silica: Crystalline, quartz (14808-60-7)

IARC group	1 - Carcinogenic to humans
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National Toxicology Program (NTP) Status	Known Human Carcinogens
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In OSHA Hazard Communication Carcinogen list	Yes
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Reproductive toxicity : May cause harm to breast-fed children.

STOT-single exposure : May cause respiratory irritation.

STOT-repeated exposure : Not classified

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Aspiration hazard	: Not classified
Viscosity, kinematic	: Not applicable
Symptoms/effects	: Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. May cause respiratory irritation. May cause harm to breast-fed children. May cause cancer.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: May cause gastrointestinal irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No data available.

Alkenes, C12-24, chloro (68527-02-6)

LC50 - Fish [1]	> 300 mg/l Lepomis macrochirus, static
LC50 - Other aquatic organisms [1]	> 300 mg/l Oncorhynchus mykiss, static
LC50 - Fish [2]	> 300 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

Glycidoxypolytrimethoxysilane (2530-83-8)

LC50 - Fish [1]	55 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static])
EC50 - Crustacea [1]	710 mg/l Source: SIDS
ErC50 algae	350 mg/l Source: SIDS
LOEC (chronic)	> 100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	≥ 100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Titanium dioxide (13463-67-7)

LC50 - Fish [1]	> 100 mg/l
EC50 - Other aquatic organisms [1]	> 100 mg/l Test organisms (species):
LOEC (chronic)	5 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Glycidoxypolytrimethoxysilane (2530-83-8)

Partition coefficient n-octanol/water (Log Pow)	-0.92
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other adverse effects : No data available.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: Do not discharge to public wastewater systems without permit of pollution control authorities. No discharge to surface waters is allowed without a permit.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

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SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

Transport by sea (IMDG)

Not regulated for transport

Air transport (IATA)

Not regulated for transport

SECTION 15: Regulatory information

15.1. US Federal regulations

Thiokol 2235 SL Part A	
All chemical substances in this product are listed as "Active" in the EPA (Environmental Protection Agency) "TSCA Inventory Notification (Active-Inactive) Requirements Rule" ("the Final Rule") of Feb. 2019, as amended Feb. 2021, or are otherwise exempt or regulated by other agencies such as FDA or FIFRA	
SARA Section 311/312 Hazard Classes	Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation Health hazard - Specific target organ toxicity (single or repeated exposure) Health hazard - Carcinogenicity Health hazard - Respiratory or skin sensitization

Propane, 1,2,3-trichloro-, polymer with 1,1'-[methylenebis(oxy)]bis[2-chloroethane] and sodium sulfide (Na2(Sx)), reduced (68611-50-7)	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
Alkenes, C12-24, chloro (68527-02-6)	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a final TSCA section 4 test rule.
Glycidoxypropyltrimethoxysilane (2530-83-8)	
EPA TSCA Regulatory Flag	TP - TP - indicates a substance that is the subject of a proposed TSCA section 4 test rule.

15.2. International regulations

No additional information available

15.3. US State regulations

WARNING: This product can expose you to Titanium dioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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Component	Carcinogenicity	Developmental toxicity	Reproductive toxicity male	Reproductive toxicity female	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Titanium dioxide(13463-67-7)	X				Not available	
Silica: Crystalline, quartz(14808-60-7)	X					

Component	State or local regulations
Titanium dioxide(13463-67-7)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List
Silica: Crystalline, quartz(14808-60-7)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List
Limestone(1317-65-3)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

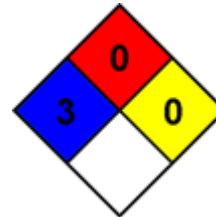
SECTION 16: Other information

Other information : Author: AK.

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand..

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



HMIS Hazard Rating

Health : 3

Health

Flammability : 0

Physical : 0

Indication of changes:

Revision 1.0: New SDS Created.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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