

ThermaCote

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of issue: 01/26/2016

Supersedes: 07/20/2015

Version: 4.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : ThermaCote

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

Use of the substance/mixture : Ceramic insulating coating for structures, pipes, tanks, etc.

1.3. Details of the supplier of the safety data sheet

Manufacturer:
ThermaCote, Inc.
1369 Herrington Rd.
Lawrenceville, GA 30044 USA
Phone: 770-458-6877
email: info@thermacote.com

1.4. Emergency telephone number

Emergency number : 770-458-6877

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

GHS-US labelling

No labelling applicable

2.3. Other hazards

other hazards which do not result in classification : May cause irritation to the skin and eyes. May cause eye, skin and respiratory system irritation. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product contains greater than 0.1% by weight titanium dioxide. Titanium dioxide inhalation studies in rats indicate that there is sufficient evidence that inhalation of excessive amounts of titanium dioxide is carcinogenic in the lungs of experimental animals. Titanium dioxide is classified as "Group 2B (possibly carcinogenic to humans)" by IARC. The substance is contained within the polymer matrix and is not bioavailable.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Titanium dioxide	(CAS No) 13463-67-7	<1.078	Carc. 2, H351

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical attention.
First-aid measures after skin contact : Wash skin with plenty of water. Seek medical attention if irritation develops.
First-aid measures after eye contact : Rinse eyes with water as a precaution. Obtain medical attention if irritation persists.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May cause respiratory irritation.
Symptoms/injuries after skin contact : May cause slight irritation to the skin.
Symptoms/injuries after eye contact : Contact may cause eye irritation.
Symptoms/injuries after ingestion : Ingestion of large amounts may produce some discomfort and gastrointestinal disturbances including a laxative action.

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4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Use of heavy stream of water may spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

Explosion hazard : No direct explosion hazard. Prolonged exposure to fire may cause containers to rupture/explode.

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters

Protective equipment for firefighters : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid any direct contact with the product. Spilled material may present a slipping hazard.

6.1.1. For non-emergency personnel

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Keep upwind of the spilled material and isolate exposure. Evacuate unnecessary personnel. Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

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.

Methods for cleaning up : Take up liquid spill into absorbent material. Sweep or shovel spills into appropriate container for disposal.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: Exposure-controls/personal protection. For disposal of residues refer to section 13: Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with the skin and the eyes.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Handle in accordance with good industrial hygiene and safety practices.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Store in tightly closed, leak-proof containers. Keep cool. Keep out of direct sunlight. Avoid freezing. Avoid high temperatures.

Incompatible materials : Strong oxidizers. Strong acids. Metal salts. Hydrofluoric acid.

Maximum storage period : 1 year Material over 5 years old that has been properly stored indoors with no direct sunlight or wide temperature swings may still be acceptable. No hazardous decomposition takes place in pail. Temperature swings and direct sunlight, however, can cause material to harden in the pail.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Titanium dioxide (13463-67-7)		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
ACGIH	Remark (ACGIH)	LRT irr; A4

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Titanium dioxide (13463-67-7)

OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³
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8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment : Wear protective gloves. Safety glasses. Wear suitable protective clothing.



Hand protection : Protective gloves.

Eye protection : Safety glasses. Use splash goggles when eye contact due to splashing is possible.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Not required for normal conditions of use. In case of insufficient ventilation, wear suitable respiratory equipment. An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits.

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Viscous.
Color	: Bright white
Odor	: ammonia odor
Odor threshold	: No data available
pH	: 8.45 - 9.5
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 212 °F
Flash point	: Non-combustible liquids
Relative evaporation rate (butyl acetate=1)	: < 1
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: 20 mm Hg @ 25°C
Relative density	: No data available
Relative vapor density at 20 °C	: < 1
Density	: 0.622
Solubility	: Water: Soluble
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: 3500 - 7000 cP
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

VOC content : 5.3 g/l Total Volatile Matter: 45.26%

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

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10.2. Chemical stability

Stable under normal conditions. Hazardous polymerization will not occur.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Excessive heat.

10.5. Incompatible materials

Metallic salts. Hydrofluoric acid. Strong oxidizing agents. Strong acids.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. On incomplete combustion releases: Carbon oxides (CO, CO₂). Hydrocarbons. May react with hydrofluoric acid to form a toxic gas.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Skin and eye contact; Ingestion; Inhalation

Acute toxicity : Not classified

(Based on available data, the classification criteria are not met)

Titanium dioxide (13463-67-7)

LD50 dermal rat	> 10000 mg/kg
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Skin corrosion/irritation : Not classified
(Based on available data, the classification criteria are not met)

pH: 8.45 - 9.5

Serious eye damage/irritation : Not classified
(Based on available data, the classification criteria are not met)

pH: 8.45 - 9.5

Respiratory or skin sensitization : Not classified
(Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified
(Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified
(Based on available data, the classification criteria are not met. Titanium dioxide is in a form that is not available for respiration.)

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Additional information	This product contains less than 1% by weight Titanium dioxide. Studies of rats that inhaled titanium dioxide; there was sufficient evidence that titanium dioxide is carcinogenic in experimental animals. There is inadequate evidence in humans for the carcinogenicity of Titanium dioxide. Titanium dioxide is classified as "Group 2B (possibly carcinogenic to humans)" by IARC.
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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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Reproductive toxicity : Not classified
(Based on available data, the classification criteria are not met)

Specific target organ toxicity (single exposure) : Not classified
(Based on available data, the classification criteria are not met)

Specific target organ toxicity (repeated exposure) : Not classified
(Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified
(Based on available data, the classification criteria are not met)

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin contact : May cause slight irritation to the skin.

Symptoms/injuries after eye contact : Contact may cause eye irritation.

Symptoms/injuries after ingestion : Ingestion of large amounts may produce some discomfort and gastrointestinal disturbances including a laxative action.

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : This material has not been tested for environmental effects.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Non-hazardous waste. Dispose of contents/container in accordance with licensed collector's sorting instructions. Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

TDG

Not regulated for transport

Transport by sea

Not regulated for transport

IATA (Air transport)

Not regulated for transport

SECTION 15: Regulatory information

15.1. US Federal regulations

Titanium dioxide (13463-67-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Titanium dioxide (13463-67-7)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
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EU-Regulations

No additional information available

National regulations

Titanium dioxide (13463-67-7)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican national Inventory of Chemical Substances)
Listed on CICR (Turkish Inventory and Control of Chemicals)

15.3. US State regulations

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U.S. – California – Proposition 65 – Other information	Titanium dioxide (airborne, unbound particles of respirable size) is listed on California's Proposition 65. However, the listing does not cover titanium dioxide when it remains bound within a product matrix.
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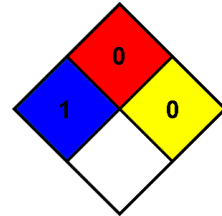
SECTION 16: Other information

Indication of changes : 8.1. Control parameters. 9. Physical and chemical properties. 15. Regulatory information.
Abbreviations and acronyms : IARC (International Agency for Research on Cancer)
ACGIH (American Conference of Government Industrial Hygienists)
OSHA - Occupational Safety and Health Administration
LRT (lower respiratory tract)
irr (irritation)
A4 (ACGIH not classifiable as a human carcinogen)
Revision Date: : 09/21/2015
Other information : None.

Full text of H-statements:

Carc. 2	Carcinogenicity, Category 2
H351	Suspected of causing cancer

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA fire hazard : 0 - Materials that will not burn.
NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible
Flammability : 0 Minimal Hazard - Materials that will not burn
Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

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