

Thermo-Flex 250

Safety Data Sheet

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

Date of issue: 06/23/2015 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
 Trade name : Thermo-Flex 250
 Product code : TF 250 Series

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

Use of the substance/mixture : Acrylic elastomeric fluid-applied coating that withstands intense heat and ultraviolet rays in low humidity desert environments

1.3. Details of the supplier of the safety data sheet

Lapolla Industries, Inc.
 15402 Vantage Parkway East, Ste. 322
 Houston, Texas 77032
 Tel: +1 281 219 4100 , (877) 636-2648
 Email: sds@lapolla.com

1.4. Emergency telephone number

Emergency number : CARECHEM (866) 928-0789

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Carc. 2	H351

Full text of H-statements: see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H315 - Causes skin irritation
H319 - Causes serious eye irritation
H351 - Suspected of causing cancer

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P264 - Wash hands thoroughly after handling
P280 - Wear eye protection, protective gloves
P302+P352 - If on skin: Wash with plenty of water
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
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P405 - Store locked up
P501 - Dispose of contents/container to comply with applicable local, national and international regulation.

2.3. Other hazards

other hazards which do not result in classification : May cause irritation to the respiratory tract.

2.4. Unknown acute toxicity (GHS-US)

Not applicable

Thermo-Flex 250

Safety Data Sheet

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

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	0,5 - 8	Carc. 2, H351
hydroxyethylcellulose	(CAS No) 9004-62-0	0,2 - 1	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
Ammonia	(CAS No) 7664-41-7	0,1 - 1	Flam. Gas 2, H221 Compressed gas, H280 Acute Tox. 3 (Inhalation: gas), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Suspected of causing cancer.
- First-aid measures after inhalation : Allow breathing of fresh air. Allow the victim to rest.
- First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.rin
- First-aid measures after eye contact : 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.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

- Symptoms/injuries after inhalation : Inhalation may cause irritation, cough, short breathing.
- Symptoms/injuries after skin contact : Causes skin irritation.
- Symptoms/injuries after eye contact : Causes serious eye irritation.
- Symptoms/injuries after ingestion : Abdominal pain, nausea.

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 : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Material can splatter above 100° C (212° F). Dried product can burn. On combustion forms: Carbon dioxide. Carbon monoxide. Silicon oxides.
- Explosion hazard : No direct explosion hazard.
- Reactivity : No dangerous reactions known under normal conditions of use.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protective equipment for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Wear protective clothing as described in Section 8 of this safety data sheet.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : For further information refer to section 8 : Exposure-controls/personal protection. Equip cleanup crew with proper protection.

Thermo-Flex 250

Safety Data Sheet

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

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or 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.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

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 : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Hygiene measures : 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 : Protect from freezing. Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ammonia (7664-41-7)		
ACGIH	ACGIH TWA (ppm)	25 ppm
ACGIH	ACGIH STEL (ppm)	35 ppm
ACGIH	Remark (ACGIH)	Eye dam; URT irr
OSHA	OSHA PEL (TWA) (mg/m ³)	35 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	50 ppm
Titanium dioxide (13463-67-7)		
ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³
ACGIH	Remark (ACGIH)	LRT irr; A3
OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³

8.2. Exposure controls

Appropriate engineering controls : Use local exhaust ventilation with a minimum capture velocity of 100 ft/min at the point of vapour evolution.

Personal protective equipment : Avoid all unnecessary exposure. Protective goggles. Gloves.



Hand protection : Wear suitable gloves resistant to chemical penetration.

Eye protection : Chemical goggles or safety glasses. Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection : Wear suitable protective clothing.

Thermo-Flex 250

Safety Data Sheet

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

Respiratory protection	:	Wear appropriate mask. If the occupational exposure limit is exceeded: Wear a NIOSH approved amine and ammonia respiratory cartridge or NIOSH approved air supplied breathing equipment.
Other information	:	Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	white
Odour	:	characteristic
Odour threshold	:	No data available
pH	:	8,5 - 9,5
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	212 °F
Flash point	:	> 205 °F
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	No data available
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Vapour pressure	:	No data available
Relative density	:	No data available
Relative vapour density at 20 °C	:	No data available
Density	:	1,44
Solubility	:	Water: Soluble
Log Pow	:	No data available
Log Kow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available

9.2. Other information

VOC content	:	26,2 g/l
-------------	---	----------

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use. Hazardous polymerization will not occur.

Thermo-Flex 250

Safety Data Sheet

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

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Avoid exposure to temperatures above 150 °F (65.6 °C)
May emit toxic materials when heated to 350° F (177 °C) or above.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

On combustion, forms: Carbon monoxide. Carbon dioxide. Silicon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Ingestion; Inhalation; Skin and eye contact
Acute toxicity : Not classified
(Based on available data, the classification criteria are not met)

Ammonia (7664-41-7)	
LD50 oral rat	350 mg/kg
LC50 inhalation rat (ppm)	2000 ppm/4h
ATE US (oral)	350,000 mg/kg bodyweight
ATE US (gases)	2000,000 ppmv/4h
Titanium dioxide (13463-67-7)	
LD50 oral rat	> 10000 mg/kg

Skin corrosion/irritation : Causes skin irritation.
pH: 8,5 - 9,5
Serious eye damage/irritation : Causes serious eye irritation.
pH: 8,5 - 9,5
Respiratory or skin sensitisation : 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 : Suspected of causing cancer.

Titanium dioxide (13463-67-7)	
IARC group	2B - Possibly carcinogenic to humans
In OSHA Hazard Communication Carcinogen list	Yes

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 : Inhalation may cause irritation, cough, short breathing.
Symptoms/injuries after skin contact : Causes skin irritation.
Symptoms/injuries after eye contact : Causes serious eye irritation.
Symptoms/injuries after ingestion : Abdominal pain, nausea.

Thermo-Flex 250

Safety Data Sheet

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

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Mixture not tested.

Ammonia (7664-41-7)	
LC50 fish 1	0,44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio)
EC50 Daphnia 1	25,4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	0,26 - 4,6 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)

12.2. Persistence and degradability

Thermo-Flex 250	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Thermo-Flex 250	
Bioaccumulative potential	Not established.

Ammonia (7664-41-7)	
Log Pow	-1,14 (at 25 °C)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer : No additional information available

Effect on the global warming : No additional information available

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

Thermo-Flex 250

Safety Data Sheet

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

SECTION 15: Regulatory information

15.1. US Federal regulations

Ammonia (7664-41-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the United States SARA Section 302
Listed on United States SARA Section 313

RQ (Reportable quantity, section 304 of EPA's List of Lists)

100 lb

SARA Section 302 Threshold Planning Quantity (TPQ)

500

SARA Section 313 - Emission Reporting

1,0 % (includes anhydrous Ammonia and aqueous Ammonia from water dissociable Ammonium salts and other sources, 10% of total aqueous Ammonia is reportable under this listing)

Titanium dioxide (13463-67-7)

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

hydroxyethylcellulose (9004-62-0)

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

15.2. International regulations

CANADA

Ammonia (7664-41-7)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification

Class A - Compressed Gas
Class B Division 1 - Flammable Gas
Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects
Class E - Corrosive Material

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

hydroxyethylcellulose (9004-62-0)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification

Uncontrolled product according to WHMIS classification criteria

EU-Regulations

Ammonia (7664-41-7)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Titanium dioxide (13463-67-7)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Ammonia (7664-41-7)

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)
Japanese Poisonous and Deleterious Substances Control Law
Listed on the Canadian IDL (Ingredient Disclosure List)

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)

Thermo-Flex 250

Safety Data Sheet

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

hydroxyethylcellulose (9004-62-0)

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)

15.3. US State regulations

Titanium dioxide (13463-67-7)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	

SECTION 16: Other information

Other information : None.

Full text of H-statements:

Acute Tox. 3 (Inhalation: gas)	Acute toxicity (inhalation: gas) Category 3
Carc. 2	Carcinogenicity, Category 2
Compressed gas	Gases under pressure : Compressed gas
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Flam. Gas 2	Flammable gases, Category 2
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H221	Flammable gas
H280	Contains gas under pressure; may explode if heated
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled
H335	May cause respiratory irritation
H351	Suspected of causing cancer

SDS US (GHS HazCom 2012)

WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY LAPOLLA INDUSTRIES, INC. HEREUNDER ARE GIVEN GRATIS AND LAPOLLA INDUSTRIES, INC. ASSUMES NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK. LAPOLLA INDUSTRIES, INC. WILL NOT MAKE ITS PRODUCTS AVAILABLE TO CUSTOMERS FOR USE IN THE MANUFACTURE OF MEDICAL DEVICES WHICH ARE INTENDED FOR PERMANENT IMPLANTATION IN THE HUMAN BODY OR IN PERMANENT CONTACT WITH INTERNAL BODILY TISSUES OR FLUIDS.