

SAFETY DATA SHEET

VULTREX™ API MODIFIED THREAD COMPOUND



000003001112

Version 2.3

Revision Date 2021/05/11

Print Date 2021/06/03

SECTION 1. IDENTIFICATION

Product name : VULTREX™ API MODIFIED THREAD COMPOUND

Product code : VULTHRD, VULTHRDP17

Manufacturer or supplier's details

Petro-Canada America Lubricants LLC
2828 N. Harwood St., Suite 1300
Dallas TX 75201
United States
Telephone : 1-214-871-3555

Emergency telephone number

Emergency telephone number : CHEMTREC: 1-800-424-9300;
Poison Control Centre: Consult local telephone directory for emergency number(s).

Recommended use of the chemical and restrictions on use

Recommended use : Vultrex API Modified Thread Compound is used in drilling operations for the lubrication of casing, tubing, and line pipe, as protection for threads and as a sealant against drilling fluids.

Prepared by : Product Safety: +1 905-491-0565

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Carcinogenicity : Category 2

Reproductive toxicity : Category 1A

Effects on or via lactation

Specific target organ toxicity : Category 1
- repeated exposure

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Suspected of causing cancer.
May damage fertility. May damage the unborn child.
May cause harm to breast-fed children.
Causes damage to organs through prolonged or repeated exposure.

SAFETY DATA SHEET

VULTREX™ API MODIFIED THREAD COMPOUND



000003001112

Version 2.3

Revision Date 2021/05/11

Print Date 2021/06/03

Precautionary statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Avoid contact during pregnancy/ while nursing.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF exposed or concerned: Get medical advice/ attention.
Storage:
Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

IARC

Group 1: Carcinogenic to humans

Talc ($\text{Mg}_3\text{H}_2(\text{SiO}_3)_4$) 14807-96-6

Group 2B: Possibly carcinogenic to humans

lead powder [particle diameter < 1 mm] 7439-92-1

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

Known to be human carcinogen

Talc ($\text{Mg}_3\text{H}_2(\text{SiO}_3)_4$) 14807-96-6

Reasonably anticipated to be a human carcinogen

lead powder [particle diameter < 1 mm] 7439-92-1

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified	64742-52-5	30 - 50
lead powder [particle diameter < 1 mm]	7439-92-1	30 - 50

SAFETY DATA SHEET

VULTREX™ API MODIFIED THREAD COMPOUND



000003001112

Version 2.3

Revision Date 2021/05/11

Print Date 2021/06/03

zinc powder — zinc dust (pyrophoric)	7440-66-6	10 - 20
Graphite	7782-42-5	10 - 20
Talc (Mg ₃ H ₂ (SiO ₃) ₄)	14807-96-6	1 - 5
copper flakes (coated with aliphatic acid)	7440-50-8	1 - 5
Quartz (SiO ₂)	14808-60-7	1 - 5
zinc oxide	1314-13-2	0.1 - 1

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

- If inhaled : Move to fresh air.
Artificial respiration and/or oxygen may be necessary.
Seek medical advice.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Wash skin thoroughly with soap and water or use recognized skin cleanser.
Wash clothing before reuse.
Seek medical advice.
In the event of a known, or potential, high pressure injection injury, worker should obtain immediate medical evaluation.
- In case of eye contact : Remove contact lenses.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Obtain medical attention.
- If swallowed : Rinse mouth with water.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Never give anything by mouth to an unconscious person.
Seek medical advice.
- Most important symptoms and effects, both acute and delayed : First aider needs to protect himself.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : No information available.
- Specific hazards during fire-fighting : Cool closed containers exposed to fire with water spray.
- Hazardous combustion products : Carbon oxides (CO, CO₂), lead compounds (PbOx), metal oxides, silicon oxides (SiOx), smoke and irritating vapours as products of incomplete combustion.

SAFETY DATA SHEET

VULTREX™ API MODIFIED THREAD COMPOUND



000003001112

Version 2.3

Revision Date 2021/05/11

Print Date 2021/06/03

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
Material can create slippery conditions.
Mark the contaminated area with signs and prevent access to unauthorized personnel.
Only qualified personnel equipped with suitable protective equipment may intervene.

Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.
Do not allow uncontrolled discharge of product into the environment.

Methods and materials for containment and cleaning up : Prevent further leakage or spillage if safe to do so.
Remove all sources of ignition.
Soak up with inert absorbent material.
Non-sparking tools should be used.
Ensure adequate ventilation.
Contact the proper local authorities.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : None known.

Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid contact with skin, eyes and clothing.
Do not ingest.
Keep away from heat and sources of ignition.
Keep container closed when not in use.

Conditions for safe storage : Store in original container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in a dry, cool and well-ventilated place.
Keep in properly labelled containers.
To maintain product quality, do not store in heat or direct sunlight.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of	Control parameters / Permissible	Basis
------------	---------	------------------------	----------------------------------	-------

SAFETY DATA SHEET

VULTREX™ API MODIFIED THREAD COMPOUND



000003001112

Version 2.3

Revision Date 2021/05/11

Print Date 2021/06/03

		exposure)	concentration	
lead powder [particle diameter < 1 mm]	7439-92-1	TWA	0.05 mg/m3 (Lead)	ACGIH
		PEL	0.05 mg/m3 (Lead)	OSHA CARC
		TWA	0.05 mg/m3 (Lead)	NIOSH REL
Graphite	7782-42-5	TWA (Respirable)	2.5 mg/m3	NIOSH REL
		TWA (Dust)	15 Million particles per cubic foot	OSHA Z-3
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total dust)	10 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
		TWA (Respirable particulate matter)	2 mg/m3	ACGIH
		TWA (respirable dust fraction)	2.5 mg/m3	OSHA P0
Talc (Mg3H2(SiO3)4)	14807-96-6	TWA (Dust)	20 Million particles per cubic foot	OSHA Z-3
		TWA (respirable dust fraction)	2 mg/m3	OSHA P0
		TWA (Respirable)	2 mg/m3	NIOSH REL
		TWA	0.1 fibres per cubic centimeter	ACGIH
		TWA (Respirable particulate matter)	2 mg/m3	ACGIH
copper flakes (coated with aliphatic acid)	7440-50-8	TWA (Dust and mist)	1 mg/m3 (Copper)	ACGIH
		TWA (Fumes)	0.2 mg/m3 (Copper)	ACGIH
		TWA (Dust)	1 mg/m3 (Copper)	NIOSH REL
		TWA (Mist)	1 mg/m3 (Copper)	NIOSH REL
		TWA (dusts and mists)	1 mg/m3 (Copper)	OSHA Z-1
		TWA (Fumes)	0.1 mg/m3 (Copper)	OSHA Z-1
		TWA (Fumes)	0.1 mg/m3 (Copper)	OSHA P0
		TWA (Dust)	1 mg/m3	OSHA P0

SAFETY DATA SHEET

VULTREX™ API MODIFIED THREAD COMPOUND



000003001112

Version 2.3

Revision Date 2021/05/11

Print Date 2021/06/03

		and mist)	(Copper)	
Quartz (SiO ₂)	14808-60-7	TWA (Respirable particulate matter)	0.025 mg/m ³	ACGIH
		TWA (total dust)	30 mg/m ³ / %SiO ₂ +2	OSHA Z-3
		TWA (respirable)	10 mg/m ³ / %SiO ₂ +2	OSHA Z-3
		TWA (respirable)	250 mppcf / %SiO ₂ +5	OSHA Z-3
		TWA (Respirable dust)	0.05 mg/m ³	OSHA Z-1
		TWA (respirable dust fraction)	0.1 mg/m ³	OSHA P0
		TWA (Respirable particulate matter)	0.025 mg/m ³ (Silica)	ACGIH
		PEL (respirable)	0.05 mg/m ³	OSHA CARC
		TWA (Respirable dust)	0.05 mg/m ³ (Silica)	NIOSH REL
zinc oxide	1314-13-2	TWA (Respirable particulate matter)	2 mg/m ³	ACGIH
		STEL (Respirable particulate matter)	10 mg/m ³	ACGIH
		TWA (Dust)	5 mg/m ³	NIOSH REL
		TWA (Fumes)	5 mg/m ³	NIOSH REL
		STEL (Fumes)	10 mg/m ³	NIOSH REL
		C (Dust)	15 mg/m ³	NIOSH REL
		TWA (Fumes)	5 mg/m ³	OSHA Z-1
		TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (respirable fraction)	5 mg/m ³	OSHA Z-1
		TWA (Total dust)	10 mg/m ³	OSHA P0
		TWA (respirable dust fraction)	5 mg/m ³	OSHA P0
		TWA (Fumes)	5 mg/m ³	OSHA P0
		STEL (Fumes)	10 mg/m ³	OSHA P0

Engineering measures : Use only in well-ventilated areas.

SAFETY DATA SHEET

VULTREX™ API MODIFIED THREAD COMPOUND



000003001112

Version 2.3

Revision Date 2021/05/11

Print Date 2021/06/03

Personal protective equipment

Respiratory protection	:	Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Filter type	:	organic vapour filter
Hand protection Material	:	neoprene, nitrile.
Remarks	:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eye protection	:	Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Protective measures	:	Wash contaminated clothing before re-use.
Hygiene measures	:	Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash face, hands and any exposed skin thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Semi-solid.
Colour	:	Brown-black.
Odour	:	Light petroleum odour.
Odour Threshold	:	No data available
pH	:	No data available
Pour point	:	No data available
Boiling point	:	No data available
Flash point	:	> 200 °C (> 392 °F) Method: Cleveland open cup Base Fluid Blend

SAFETY DATA SHEET

VULTREX™ API MODIFIED THREAD COMPOUND



000003001112

Version 2.3

Revision Date 2021/05/11

Print Date 2021/06/03

Fire Point	:	No data available
Evaporation rate	:	No data available
Flammability	:	Remarks: Low fire hazard. This material must be heated before ignition will occur.
Auto-Ignition Temperature	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	1.9 kg/l (59 °F / 15 °C)
Solubility(ies) Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity Viscosity, kinematic	:	No data available
Explosive properties	:	Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	Hazardous polymerisation does not occur. Stable under normal conditions.
Conditions to avoid	:	No data available
Incompatible materials	:	Reactive with oxidising agents.
Hazardous decomposition products	:	No data available

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of exposure	:	Eye contact Ingestion Inhalation Skin contact
--	---	--

SAFETY DATA SHEET

VULTREX™ API MODIFIED THREAD COMPOUND

000003001112



Version 2.3

Revision Date 2021/05/11

Print Date 2021/06/03

Acute toxicity

Product:

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

Components:

Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg,

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg,

zinc oxide:

Acute oral toxicity : LD50 (Mouse): 7,950 mg/kg,

Skin corrosion/irritation

Product:

Remarks : No data available

Serious eye damage/eye irritation

Product:

Remarks : No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : Remarks: No data available

SAFETY DATA SHEET

VULTREX™ API MODIFIED THREAD COMPOUND



000003001112

Version 2.3

Revision Date 2021/05/11

Print Date 2021/06/03

Toxicity to daphnia and other :
aquatic invertebrates Remarks: No data available

Toxicity to algae/aquatic :
plants Remarks: No data available

Toxicity to microorganisms : Remarks: No data available

Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Offer surplus and non-recyclable solutions to a licensed disposal company.
Waste must be classified and labelled prior to recycling or disposal.
Send to a licensed waste management company.
Dispose of product residue in accordance with the instructions of the person responsible for waste disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not permitted for transport

IMDG-Code

UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(lead, zinc (powder))
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

National Regulations

SAFETY DATA SHEET

VULTREX™ API MODIFIED THREAD COMPOUND



000003001112

Version 2.3

Revision Date 2021/05/11

Print Date 2021/06/03

49 CFR

UN/ID/NA number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., Environmentally hazardous substance, solid, n.o.s. (lead, zinc (powder))
Class : 9
Packing group : III
Labels : Class 9 - Miscellaneous dangerous substances and articles
ERG Code : 171
Marine pollutant : yes

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

California Prop. 65

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. The chemicals include:
lead 7439-92-1

The components of this product are reported in the following inventories:

DSL : On the inventory, or in compliance with the inventory
TSCA : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.
IECSC : On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

Further information

SAFETY DATA SHEET

VULTREX™ API MODIFIED THREAD COMPOUND



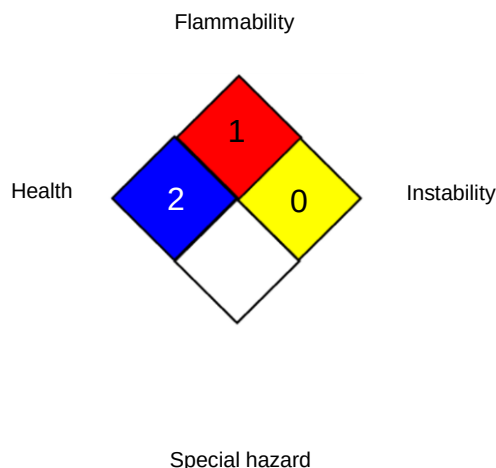
000003001112

Version 2.3

Revision Date 2021/05/11

Print Date 2021/06/03

NFPA 704:



HMIS® IV:

HEALTH	*	2
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	: USA. NIOSH Recommended Exposure Limits
OSHA CARC	: OSHA Specifically Regulated Chemicals/Carcinogens
OSHA P0	: USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	: USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA	: 8-hour, time-weighted average
ACGIH / STEL	: Short-term exposure limit
NIOSH REL / TWA	: Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / STEL	: STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
NIOSH REL / C	: Ceiling value not be exceeded at any time.
OSHA CARC / PEL	: Permissible exposure limit (PEL)
OSHA P0 / TWA	: 8-hour time weighted average
OSHA P0 / STEL	: Short-term exposure limit
OSHA Z-1 / TWA	: 8-hour time weighted average
OSHA Z-3 / TWA	: 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); Ec_x - Concentration associated with x% response; EHS - Extremely Hazardous Substance; El_x - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErC_x - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC₅₀ - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Ex-

SAFETY DATA SHEET

VULTREX™ API MODIFIED THREAD COMPOUND



000003001112

Version 2.3

Revision Date 2021/05/11

Print Date 2021/06/03

isting Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

For Copy of SDS : Internet: lubricants.petro-canada.com/sds
United States, telephone: 1-800-268-5850; fax: 1-800-201-6285
For Product Safety Information: 1 905-491-0565

Prepared by : Product Safety: +1 905-491-0565

Revision Date : 2021/05/11
Date format : yyyy/mm/dd

The information is considered as correct, but not exhaustive, and will be used only as a guide, which is based in the current knowledge of the substance or mixture, and is applicable to proper safety precautions for the product.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN