

P-TTCL

CHEMICAL CODE: P-TTCL

PRODUCT NAME: THIXOTROPIC CEMENT LIQUID



NFPA RATING:

HEALTH HAZARD: 3 FLAMMABILITY: 0 REACTIVITY: 0 OTHER:

0=INSIGNIFICANT 1=SLIGHT 2=MODERATE 3=HIGH 4=EXTREME

1. IDENTIFICATION

Petrochem USA Identifier:

Recommended use

Manufacturer

Address

Telephone

Website

E-mail:

In case of emergency

P-TTCL

Used as a cementing additive in oilfield applications.

Petrochem USA, Inc.

4111-D N.W. 132 Street

Opa Locka, Fl. 33054

305-685-8282

www.petrochem.us

info@petrochem.us

1-800-424-9300 (INTERNATIONAL 1-703-527-3887)

24-HOUR EMERGENCY CONTACT: CHEMTREC - COLLECT CALLS ACCEPTED

2. HAZARDS IDENTIFICATION

Health hazards

Skin corrosion/irritation

Category 1

Serious eye damage/eye irritation

Category 4

Label elements

Hazard Pictograms



Signal word

Danger

Hazard statement

H314 Causes severe skin burns and eye damage

Precautionary statement

Prevention

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTER or doctor/ physician

P501 - Dispose of contents/container in accordance with local regulations.



SAFETY DATA SHEET

Supplemental information P264 - Wash face, hands and any exposed skin thoroughly after handling
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P363 - Wash contaminated clothing before reuse

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS number</u>	<u>%</u>
Aluminum sulfate hydrate		10043-01-3	30 - 60
Iron sulphate		7720-78-7	1 - 5
Sulfuric acid		7664-93-9	1 - 5

Comments

The product contains other ingredients which do not contribute to the overall classification. The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Inhalation	Move the exposed person to fresh air at once. If breathing is difficult, (trained personnel should give oxygen). If not breathing, give artificial respiration. Seek medical attention at once.
Skin contact	Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Chemical burns must be treated by a physician.
Eye contact	Remove contact lenses. Immediately flush eyes with water for 15 minutes while holding eyelids open. Seek medical attention.
Ingestion	Do NOT induce vomiting. Get immediate medical attention. Rinse mouth. Risk of product entering the lungs on vomiting after ingestion. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed: Seek medical attention for all burns, regardless how minor they may seem. The severity of the symptoms described will vary dependent of the concentration and the length of exposure. If adverse symptoms develop, the casualty should be transferred to hospital as soon as possible.

Main symptoms

Inhalation	Please see Section 11. Toxicological Information for further information.
Skin contact	Please see Section 11. Toxicological Information for further information.
Eye contact	Please see Section 11. Toxicological Information for further information.
Ingestion	Please see Section 11. Toxicological Information for further information.

Indication of immediate Medical attention and special treatment needed:

Notes to physician Treat symptomatically

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Suitable extinguishing media Use extinguishing media appropriate for surrounding material.

Unsuitable extinguishing media None known.

Special hazards arising from the substance or mixture

Unusual fire and explosion hazards Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous combustion products Fire or high temperatures create Sulphur oxides.

Advice for firefighters

Special protective equipment and precautions for firefighters: As in any fire, wear self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Do not get on skin or clothing. Wash thoroughly after handling. Do not breathe vapors or spray mist. Use personal protective equipment. See also section 8.

Environmental precautions:

The product should not be allowed to enter drains, water courses or the soil.

Environmental exposure controls:

Avoid release to the environment. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up:

Methods for containment

Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see Section 13).

Reference to other sections

See section 13 for more information.

7. HANDLING & STORAGE

Precautions for safe handling:

Handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Avoid spills and splashing during use. Do not breathe vapors or spray mist.

Hygiene measures

Use good work and personal hygiene practices to avoid exposure. When using do not smoke, eat or drink. Wash hands and face before breaks and immediately after handling the product.



SAFETY DATA SHEET

Conditions for safe storage, including any incompatibilities:

Technical measures/precautions Ensure adequate ventilation. Keep airborne concentrations below exposure limits.

Storage precautions Keep containers tightly closed in a dry, cool and well-ventilated place. Avoid contact with:
Strong bases Metals

Packaging material Use specially constructed containers only.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Control parameters

Component Information

Component	ACGIH TLV	OSHA PEL
Aluminum Sulfate Hydrate	Not Determined	Not Determined
Iron Sulphate	Not Determined	Not Determined
Sulfuric Acid	0.2 mg/m ³	1 mg/m ³ TWA

Exposure controls

All chemical Personal Protective Equipment (PPE) should be selected based on an assessment of both the chemical hazard present and the risk of exposure to those hazards. The PPE recommendations below are based on an assessment of the chemical hazards associated with this product. Where this product is used in a mixture with other products or fluids, additional hazards may be created and as such further assessment of risk may be required. The risk of exposure and need of respiratory protection will vary from workplace to workplace and should be assessed by the user in each situation.

Engineering measures to reduce exposure

Ensure adequate ventilation. Keep airborne concentrations below exposure limits.

Personal protective equipment

Eye protection Chemical splash goggles and/or face shield.

Hand protection Impervious gloves made of Neoprene, Nitrile, Be aware that liquid may penetrate the gloves. Frequent change is advisable.

Respiratory protection All respiratory protection equipment should be used within a comprehensive respiratory protection program that meets the requirements of 29 CFR 1910.134 (U.S. OSHA Respiratory Protection Standard) or local equivalent. If exposed to airborne mist/aerosol of this product, use at least a NIOSH-approved N95 half-mask disposable or re-usable particulate respirator. In work environments containing oil mist/aerosol, use at least a NIOSH-approved P95 half-mask disposable or reusable particulate respirator. If exposed to vapors from this product use a NIOSH/MSHA-approved respirator with an Organic Vapor cartridge.

Skin and body protection Wear suitable protective clothing, Eye wash and emergency shower must be available at the work place.

Hygiene measures Wash hands before breaks and immediately after handling the product, Remove and wash contaminated clothing before re-use.

9. PHYSICAL & CHEMICAL PROPERTIES

Appearance	Solution
Physical state	Liquid
Color	Light Green
Odor	None
Odor Threshold	No test data available
pH	1.5
Melting point/range	No information available
Freezing point	<= 0 °C (<= 32 °F) Estimated.
Boiling point (760 mmHg)	> 100 °C / 212 °F
Flash point	Not Applicable
Evaporation rate (BuAc =1)	No information available
Flammability (solid, gas)	Not Applicable
Flammability Limits in Air	
Upper flammability limit	No information available
Lower flammability limit	No information available
Vapor pressure	No information available
Vapor density	No information available
Specific gravity	1.3 @ 20 °C
Bulk density	No information available
Water solubility	Soluble in water
Solubility in other solvents	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	10 mm ² /s @ 20 °C
Dynamic viscosity	No information available
Log Pow	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Pour point	No information available
Molecular weight	No information available
VOC content (%)	No information available
Density	No information available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY & REACTIVITY

Reactivity	Corrosive.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	None known.
Incompatible materials	Metals. Strong bases.
Hazardous decomposition products	See also section 5.2.

SAFETY DATA SHEET

11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

Information on toxicological effects

Acute toxicity

Inhalation

Causes burns. Inhaled corrosive substances can lead to a toxic edema of the lungs.

Eye contact

Causes burns. May cause irreversible damage to eyes.

Skin contact

Causes burns.

Ingestion

Causes burns.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Aluminum Sulfate Hydrate	= 1930 mg/kg (Rat)	No data available	No data available
Iron Sulphate	= 237 mg/kg (Rat)	No data available	No data available
Sulfuric Acid	= 2140 mg/kg (Rat)	No data available	= 510 mg/m ³ (Rat) 2 h = 347 ppm (Rat) 1 h

Component	IARC Group 1 or 2	ACGIH - Carcinogens	OSHA listed carcinogens	NTP
Aluminum Sulfate Hydrate	No data available	No data available	No data available	No data available
Iron Sulphate	No data available	No data available	No data available	No data available
Sulfuric Acid	Group 1; Monograph 54 [1992] Monograph 54 [1992] (Occupational exposure to mists and vapors from sulfuric acid and other strong inorganic acids)	A2 Suspected Human Carcinogen	Present	Known Human Carcinogen

Sensitization

This product does not contain any components suspected to be sensitizing.

Mutagenic effects

This product does not contain any known or suspected mutagens.

Carcinogenicity

This product does not contain any known or suspected carcinogens.

Reproductive toxicity

This product does not contain any known or suspected reproductive hazards.

Developmental toxicity

Not known to cause birth defects or have a deleterious effect on a developing fetus.

Routes of exposure

Skin contact. Inhalation. Eye contact.

Routes of entry

None known.

Specific target organ toxicity (single exposure)

Not classified

Specific target organ toxicity (repeated exposure)

Not classified.

Aspiration hazard

Not Applicable.

SAFETY DATA SHEET

12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

Toxicity

Toxicity to algae

See component information below.

Toxicity to fish

See component information below.

Toxicity to daphnia and other aquatic invertebrates

See component information below.

Component	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
Aluminum Sulfate Hydrate	100 mg/L LC50 (Carassius auratus) = 96 h 37 mg/L LC50 (Gambusia affinis) = 96 h	No information available	136 mg/L EC50 (Daphnia magna) = 15 min
Iron Sulphate	925 mg/L LC50 (Poecilia reticulata) = 96 h 0.56 mg/L LC50 (Cyprinus carpio) = 96 h	No information available	152 mg/L EC50 (Daphnia magna) = 48 h 6.15 - 9.26 mg/L EC50 (Daphnia magna) = 48 h
Sulfuric Acid	500 mg/L LC50 (Brachydanio rerio) = 96 h	No information available	29 mg/L EC50 (Daphnia magna) = 24 h

Persistence and degradability

No product level data available.

Bioaccumulative potential

No data available.

Mobility in soil

The product is water soluble, and may spread in water systems.

Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)

This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

Other adverse effects

None known.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal Method

Disposal should be made in accordance with federal, state and local regulations.

Contaminated packaging

Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

UN Number	
UN No. (DOT)	UN 3264
UN No. (TDG)	UN 3264
UN/ID No. (ADR/RID/ADN/ADG)	UN 3264
UN No. (IMDG)	UN 3264
UN No. (ICAO)	UN 3264

Proper shipping name

CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (contains sulfuric acid),

Product (RQ): 1440 gallons (aluminum sulfate)

Hazard class (es)

DOT Hazard class	8
TDG Hazard class	8
ADR/RID/ADN/ADG Hazard class	8
IMDG Hazard class	8
ICAO Hazard class/division	8

Packing group

DOT Packing group	PG III
TDG Packing group	III
ADR/RID/ADN/ADG Packing group	III
IMDG Packing group	III
ICAO Packing group	III



Environmental hazard Marine pollutant No

Special precautions

Hazard identification no (ADR) 80

EmS (IMDG) F-A, S-B

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.



SAFETY DATA SHEET

15. REGULATORY INFORMATION

International inventories

USA (TSCA)	Complies
Canada (DSL)	Complies
European Union (EINECS and ELINCS)	Complies
Philippines (PICCS)	Complies
Japan (ENCS)	Complies
China (IECSC)	Complies
Australia (AICS)	Complies
Korean (KECL)	Complies
New Zealand (NZIoC)	Complies

U.S. Federal and State Regulations

SARA 311/312 Hazard Categories Immediate (acute) health hazard.

Component	SARA 302 / TPQs	SARA 313	CERCLA RQ
Aluminum Sulfate Hydrate	N/A	N/A	5000 lb final RQ 2270 kg final RQ
Iron Sulphate	N/A	N/A	1000 lb final RQ 454 kg final RQ
Sulfuric Acid	1000 lb TPQ	1.0 %	1000 lb final RQ 454 kg final RQ

State Comments

Proposition 65: This product is not known to contain chemicals considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 as causing cancer and/or reproductive toxicity at levels that are expected to pose a significant risk under anticipated use conditions.

Canadian Classification

This Safety Data Sheet has been prepared in compliance with the Hazardous Products Regulations.

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Supersedes date August 20, 2008
Revision date August 14, 2015
Version 3

The following sections have been revised:

SDS fully updated in the new database. Updated according to GHS/CLP.

HMIS classification

Health 3
Flammability 0
Physical hazard 0
PPE D

Comments: This new SDS format also replaces Canadian SDS Revision date: October 18, 2012, Version: 3
N/A - Not Applicable, N/D - Not Determined.



SAFETY DATA SHEET

Disclaimer The data supplied herein is for use only in connection with occupational safety and health. The information provided in this Safety Data Sheet is believed to be correct as of the date issued. Updates to this information may be obtained by contacting Petrochem USA, Inc. Petrochem USA MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. This information is not meant to be an all-inclusive document on worldwide hazard communication regulations. Each user of the material described herein must evaluate the conditions of use and design, many of which will be solely within the user's knowledge and control, and the appropriate protective actions, including proper notification and training of employees, necessary to prevent employee exposures, property damage or release to the environment.