PCS²

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product Identifier

Product name: **PCS² A-84**

Synonym: Mixture.

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Identified uses: Processing aid for industrial application.

Uses advised against: None Known.

1.3 COMPANY IDENTIFICATION

Company

PCS2 Inc.
PO Box 1073
Canonsburg, PA 15317

Telephone (412) 889-3571

Fax (724) 941-5030

1.4 EMERGENCY Telephone NUMBER

24-hour emergency number: Chemtrec (800) 424-9300 – CCN# 634803

SECTION 2: HAZARD IDENTIFICATION

2.1 GHS Classification of the substance or mixture

Classification according to paragraph (d) of Regulation 29 CFR 1910.1200

Corrosive to metals	Category 1
Acute toxicity, oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage	Category 1

2.2 Label elements

Labeling according to paragraph (f) of Regulation 29 CFR 1910:1200

Hazard symbol(s):

Signal word: Danger.

Hazard statement(s):

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.

2.3 Precautionary Statements

Response:

P301+P330+P331	IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of soap and 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.
P310	Immediately call a POISON CENTER or doctor/physician.
P321	Specific treatment (see supplemental first aid section)
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P390	Absorb spillage to prevent material damage.

Prevention:

P234	Keep only in original container.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash face, hands, and any exposed skin thoroughly after handling.
P270	Do not eat, drink, or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Storage:

P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.

Disposal:

P501	Dispose of contents/container in compliance with local, state and federal regulations.

2.4 Other hazards

May produce hydrogen gas on contact with metals.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Not Applicable. This product is not a substance.

3.2 Mixtures

Hazardous Components	*CAS Number*	*Weight %*
Ferric Sulfate	10028-22-5	30 - 40%
Water	7732-18-5	60 – 70%

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation:

Move to fresh air. No hazards which require special first aid measures. If irritation occurs, seek medical attention.

Skin Contact:

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. In case of persistent skin irritation, consult a physician.

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If irritation persists, get prompt medical attention.

Ingestion:

Rinse mouth with water. DO NOT induce vomiting. Call a poison center or doctor/physician if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed
Causes skin irritation and eye damage. May be harmful if inhaled.

4.3 Indication of any immediate medical attention and special treatment needed
None reasonably foreseeable.

4.4 Other Information
None.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Product is non-flammable.

Unsuitable extinguisher media:
None known.

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products:
Sulphur oxides. Not explosive but may release flammable/explosive hydrogen gas on contact with some metals. Reacts with strong oxidants causing fire and explosion hazard. May react violently with alkalis. May produce explosive hydrogen gas on contact with incompatibilities or upon thermal decomposition.

5.3 Advice for fire fighters

Protective measures:
Wear self- contained breathing apparatus and protective suit.

5.4 Other information

SECTION 6: ACCIDENTAL RELEASE MEASURE

6.1 Personal precautions, protective equipment, and emergency procedures

Personal precautions:
Do not touch or walk-through spilled material. Avoid all contact with skin, eyes, or clothing. Avoid breathing vapor, mist, or spray.

Protective equipment:
Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection).

Emergency procedures:
Use suitable absorbent material to soak up spill. Sweep up spills put in suitable container for disposal. Keep people away from spill/leak.

6.2 Environmental precautions
As with all chemical products, do not flush into surface water.

6.3 Methods and material for containment and cleaning up

Small spills:
Absorb with materials such as clay. Neutralize with lime or soda.

Large spills:
Contain by damming up. Absorb with materials such as clay. Dilute residues with water and then neutralized with lime or limestone powder.

Residues:
Flush away with large quantities of water and neutralize with lime or limestone powder.

6.4 Reference to other sections
Section 7: Handling and storage; Section 8: Exposure controls/personal protection; Section 9: Physical and chemical properties; Section 13: Disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling
Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink, or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities
Keep in a dry place away from heat and sources of ignition. Freezing may affect the physical condition of material. Keep at temperatures between 10-30 °C. Avoid contact with metals, brass, carbon steel, mineral acids and bases, oxidizers, and alkali's.

7.3 Specific end use(s)
None.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Occupational exposure limits on material as supplied:

Occupational exposure limits of hazardous components:

Components:	*CAS Number*	*OSHA PEL-TWA (ST) – STEL (C) - Ceiling*	*NIOSH-REL-TWA (ST) – STEL (C) - Ceiling*	*ACGIH TLV-TWA (ST) – STEL (C) - Ceiling*
Ferric Sulfate; as soluble Iron	10028-22-5	Not Established	1 mg/m^3	1 mg/m^3
Water	7732-18-5	Not Established	Not Established	Not Established

8.2 Exposure controls

Appropriate engineering controls:
Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mist.

Personal Protective Equipment (PPE)

Eye/Face protection:
Safety glasses with side shields, goggles, or face shield.

Skin protection:
Work clothes protecting arms, legs, and body.

Hand protection:
PVC or other plastic material gloves.

Respiratory protection:
None required under normal use.

Additional advice:
Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls:
Do not allow uncontrolled discharge of product into the environment. Do not flush into surface water.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Red/brown liquid
Odor	Acidic, earthy
Odor Threshold	Not applicable
pH	< 2
Melting point/freezing point	< -18 °C / < - 0.5 °F
Initial boiling point and boiling range	220 – 230 °F.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas):	Not flammable
Upper/lower flammability or explosive limits	Not expected to create explosive atmospheres
Vapor pressure	No data available
Vapor density	No data available
Relative density	1.38 – 1.59
Solubility(ies)	Completely miscible in water
Partition coefficient	No data available
Auto ignition temperature	Does not self-ignite (based on the chemical structure)
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	Not applicable
Oxidizing properties	Not applicable

9.2 Other information
None.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
Stable under recommended storage conditions. Corrosive to metals.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Alkali's can cause exothermic reactions.

10.4 Conditions to avoid
Protect from freezing, heat, and sunlight. Incompatible materials.

10.5 Incompatible materials
Carbon steel, brass, Strong acids, bases, and oxidizers.

10.6 Hazardous decomposition products
Thermal decomposition may produce: Sulphur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Information on the product as supplied: Ferric Sulfate, Anhydrous

Acute oral toxicity	LD50/oral/rat 220 mg/kg. (OECD 423)
Acute dermal toxicity	LD50/dermal/rat >2000 mg/kg. (OECD 402) LD50/ dermal/rat > 881 mg/kg – calculated as Fe, (OECD 402)
Acute inhalation toxicity	No observed adverse effect. 1.1 mg/L (EPA OPP 81-3)
Skin corrosion/irritation	May cause skin irritation or burns.

Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory/skin sensitization	Not expected to experience sensitization
Mutagenicity	This product is not expected to be mutagenic
Carcinogenicity	This product is not expected to be carcinogenic
Reproductive toxicity	This product is not expected to interfere with reproduction
STOT-single exposure	No known effects
STOT – repeated exposure	No known effects
Aspiration hazard	No hazards resulting from material as supplied

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Information on the product as supplied: Ferric Sulfate, Anhydrous

Acute toxicity to fish	LC50/Oncorhynchus mykiss/96 hours: > 100 mg/L
Acute toxicity to invertebrates	EC50/Daphnia/48 hours: 82.8 mg/L
Acute toxicity to algae	No data available.
Chronic toxicity to fish	No data available.
Chronic toxicity to invertebrates	No data available.
Toxicity to microorganisms	No data available.
Effects on terrestrial organisms	No data available.
Sediment toxicity	No data available.

12.2 Persistence and degradability

Degradation:	Not applicable.
Hydrolysis:	Does not hydrolyse.
Photolysis:	No data available.

12.3 Bio-accumulative potential

Information on the product as supplied:

Not expected to bio-accumulate

Partition co-efficient (Log Pow):	No data available.
Bio concentration factor (BCF):	No data available.

12.4 Mobility in soil

Information on the product as supplied:	No data available.

12.5 Other adverse effects

May lower the pH of water and thus be harmful to aquatic organisms, but considered to have no long term effects due to rapid formation of insoluble hydroxides.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from residues / unused products:	Dispose of in accordance with local, state, and federal regulations.
Contaminated packaging:	Rinse empty containers with water and the use the rinse water to prepare working solution. Dispose in accordance with the local and national regulations.
Recycling:	The product and its packaging are not suitable for recycling.

SECTION 14: TRANSPORT INFORMATION

Land transport (DOT)

UN Number	UN3264
Proper Shipping Name	Corrosive liquid, acidic, inorganic, n.o.s. (Ferric sulfate solution)
Hazard Class	8
Packing Group	III

Sea transport (IMDG)

UN Number	UN3264
Proper Shipping Name	Corrosive liquid, acidic, inorganic, n.o.s. (Ferric sulfate solution)
Hazard Class	8
Packing Group	III

Air transport (IATA)

UN Number	UN3264
Proper Shipping Name	Corrosive liquid, acidic, inorganic, n.o.s. (Ferric sulfate solution)
Hazard Class	8
Packing Group	III

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations / legislation specific for the substance or mixture

Information on the product as supplied:

TSCA Chemical Substances Inventory:

All components of this product are either listed on the inventory or are exempt from listing.

US SARA Reporting Requirements:

Section 302/ 304: None

Section 311/312: Immediate Hazard ☒ Pressure Hazard ☐ Delayed Hazard ☐ Reactivity Hazard ☐ Fire Hazard ☐

Section 313: This material contains the following chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Component(s)	*CASRN*	*Threshold Values (%)*
None		

CAA (112r)/ HAPS: No

CWA: This product containa the following substance(s) regulated as pollutants pursuant to the CWA (40 CFR 122.21 and 40 CFR 122.42).

Component(s)	*CASRN*	*RQ (lbs)*	*Product RQ (lbs)*
Ferric Sulfate	10028-22-5	1000	2500

CERCLA:

Component(s)	*CASRN*	*RQ (lbs)*	*Product RQ (lbs)*
Ferric Sulfate	10028-22-5	1000	2500

Pennsylvania Worker and Community Right-To-Know Act:

The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	*CASRN*	
Ferric Sulfate	*10028-22-5*	*E (Iron Salts)*

California Proposition 65 Information:

WARNING: This product may contain the following chemical(s) known to the State of California to cause cancer, birth defects, or other reproductive harm:
None

SECTION 16: OTHER INFORMATION

NFPA and HMIS Ratings:

NFPA:

Health	3
Fire Hazard	0
Reactivity	0

HMIS:

Health	3
Flammability	0
Reactivity	0
PPE Code	**D**

This SDS was prepared in accordance with the following:
U.S. Code of Federal Regulations 29 CFR 1910.1200

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 guide 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.