

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

- Trade name BRICORR 75

1.2 Relevant identified uses of the substance or mixture and uses advised against**Uses of the Substance / Mixture**

- Iron sulphide dissolver

Uses advised against

- Aerosol

Remarks

- For professional and industrial installation and use only.

1.3 Details of the supplier of the safety data sheet**Distributed By**

Silver Fern Chemical, Inc.
2226 Queen Anne Avenue North
Seattle WA 98109, USA
Customer Service: 1-866-282-3384; info@silverfernchemical.com

1.4 Emergency telephone

Infotrac : 800-535-5053
Outside USA & Canada: 352-323-3500

SECTION 2: Hazards identification

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects.

2.1 Classification of the substance or mixture**HCS 2012 (29 CFR 1910.1200)**

Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 3	H331: Toxic if inhaled.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Reproductive toxicity, Category 2	H361: Suspected of damaging fertility or the unborn child.

2.2 Label elements**HCS 2012 (29 CFR 1910.1200)****Pictogram****Signal Word**

- Danger

Hazard Statements

- H302 Harmful if swallowed.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H331 Toxic if inhaled.
- H361 Suspected of damaging fertility or the unborn child.

Precautionary Statements**Prevention**

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
- P264 Wash 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.
- P272 Contaminated work clothing must not be allowed out of the workplace.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

- P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.
- P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
- P308 + P313 IF exposed or concerned: Get medical advice/ attention.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
- P363 Wash contaminated clothing before reuse.

Storage

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.

Disposal

- P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards which do not result in classification

- H400: Very toxic to aquatic life.
- H411: Toxic to aquatic life with long lasting effects.
- Possible damage to liver following repeated or prolonged exposure by ingestion.

SECTION 3: Composition/information on ingredients**3.1 Substance**

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- Not applicable, this product is a mixture.

3.2 Mixture

- Chemical nature TETRAKIS(HYDROXYMETHYL)PHOSPHONIUM SULFATE
Aqueous solution

Hazardous Ingredients and Impurities

Chemical name	Identification number CAS-No.	Concentration [%]
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	75

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

- Plan first aid action before beginning work with this product.
- First responder needs to protect himself.
- In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- Show this material safety data sheet to the doctor in attendance.
- Place affected apparel in a sealed bag for subsequent decontamination.

In case of inhalation

- Move to fresh air.
- Keep at rest.
- Consult a physician.

In case of skin contact

- Take off contaminated clothing and shoes immediately.
- Wash off with soap and plenty of water.
- Wash immediately and thoroughly for a prolonged period (at least 15 minutes).
- Get medical attention if irritation develops and persists.

In case of eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Get immediate medical advice/ attention.

In case of ingestion

- Do not induce vomiting without medical advice.
- If victim is conscious:
- Rinse mouth with water.
- Keep at rest.
- Do not leave the victim unattended.
- Vomiting may occur spontaneously
- Risk of product entering the lungs on vomiting after ingestion.
- Lay victim on side.
- Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms

- Lachrymation
- Ingestion may provoke the following symptoms:
- Nausea
- Liver disorders

Effects

- Skin contact may aggravate existing skin disease

4.3 Indication of any immediate medical attention and special treatment needed**Notes to physician**

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.
- Treat symptomatically.
- There is no specific antidote available.

SECTION 5: Firefighting measures**Flash point**

Not applicable (aqueous liquid).

Flammability class: Will burn

Autoignition temperature

No data available

Flammability / Explosive limit

No data available

5.1 Extinguishing media**Suitable extinguishing media**

- All extinguishing agents can be used.
- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

- Harmful or toxic vapors are released.
- Do not allow run-off from fire fighting to enter drains or water courses.
- Container may explode if heated.
- Hazardous decomposition products formed under fire conditions.
- Phosphorus trihydride (phosphine)
- Carbon oxides
- Sulfur oxides
- Oxides of phosphorus

5.3 Advice for firefighters**Special protective equipment for fire-fighters**

- Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.
- In the event of fire, wear self-contained breathing apparatus.
- Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
- Wear full protective clothing and self-contained breathing apparatus.
- Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Further information

- Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
- Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

- Do not breathe spray.
- Avoid contact with the skin and the eyes.
- Use personal protective equipment.
- Ensure adequate ventilation.
- Evacuate personnel to safe areas.

- Only qualified personnel equipped with suitable protective equipment may intervene.

6.2 Environmental precautions

- Do not allow uncontrolled discharge of product into the environment.
- Contain the spilled material by diking.

- Do not let product enter drains.
- Do not flush into surface water or sanitary sewer system.

- Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies

6.3 Methods and materials for containment and cleaning up**Recovery**

- Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
- Keep in suitable, closed containers for disposal.
- Never return spills in original containers for re-use.

Decontamination / cleaning

- Wash nonrecoverable remainder with large amounts of water.
- Recover the cleaning water for subsequent disposal.
- Decontaminate tools, equipment and personal protective equipment in a segregated area.

Disposal

- Dispose of contents/ container to an approved waste disposal plant.
- Dispose of in accordance with local regulations.

6.4 Reference to other sections

- For personal protection see section 8.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

- Provide adequate ventilation.

- This product must only be handled by skilled operators.
- Avoid exposure - obtain special instructions before use.
- Use only with adequate ventilation/personal protection.
- For personal protection see section 8.
- Avoid the formation or spread of mists in the atmosphere.
- Avoid formation of aerosol.
- Avoid inhalation, ingestion and contact with skin and eyes.
- Do not mix with incompatible materials (See list, section 10).

Hygiene measures

- Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this materials:
- 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- 3) Wash exposed skin promptly to remove accidental splashes or contact with material.

7.2 Conditions for safe storage, including any incompatibilities**Technical measures/Storage conditions**

- Prevent unauthorized access.
- Keep container tightly closed in a dry and well-ventilated place.
- Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
- Keep away from open flames, hot surfaces and sources of ignition.
- Keep away from incompatible materials to be indicated by the manufacturer
- Keep container tightly closed.
- Keep away from: Strong acids, Strong bases, Strong oxidizing agents, Strong reducing agents.

Packaging material**Suitable material**

- Polyethylene or polypropylene drums.
- high density
- Stainless steel

Unsuitable material

- Ordinary steel.

Requirements for storage rooms and vessels

- No decomposition if stored and applied as directed.

7.3 Specific end use(s)

- no data available

SECTION 8: Exposure controls/personal protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

8.1 Control parameters**Components with workplace occupational exposure limits**

Components	Value type	Value	Basis
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	TWA	2 mg/m ³	American Conference of Governmental Industrial Hygienists
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	TWA	0.43 mg/m ³	Solvay Acceptable Exposure Limit

8.2 Exposure controls

Control measures

Engineering measures

- Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures :
- Avoid splashes.
- Effective exhaust ventilation system
- Facilities and equipment easily cleanable.
- Separate rooms are required for washing, showering and changing clothes.

Individual protection measures

Respiratory protection

- When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.
- Use a respirator with an approved filter if a risk assessment indicates this is necessary.

Hand protection

- Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
- Gloves must be inspected prior to use.
- Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection

- Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.
- Eye contact should be prevented through the use of:
 - Tightly fitting safety goggles
 - In case of contact through splashing:
 - Wear face-shield and protective suit.

Skin and body protection

- Wear suitable protective clothing, gloves and eye/face protection.
- Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
- Remove and wash contaminated apparel.

Hygiene measures

- Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this materials:
 - 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
 - 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
 - 3) Wash exposed skin promptly to remove accidental splashes or contact with material.

Protective measures

- Always have on hand a first-aid kit, together with proper instructions.
- Ensure that eye flushing systems and safety showers are located close to the working place.

- The protective equipment must be selected in accordance with current local standards and in cooperation with the supplier of the protective equipment.
- Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use.

SECTION 9: Physical and chemical properties

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

9.1 Information on basic physical and chemical properties

<u>Appearance</u>	<u>Form:</u> Aqueous solution
	<u>Physical state:</u> liquid
	<u>Color:</u> colorless to pale yellow
<u>Odor</u>	characteristic
<u>Odor Threshold</u>	No data available
<u>Molecular weight</u>	406.3 g/mol
<u>pH</u>	3.0 - 6.0 (68 °F (20 °C))
<u>Melting point/freezing point</u>	<u>Freezing point:</u> < -4 °F (< -20 °C)
<u>Initial boiling point and boiling range</u>	<u>Boiling point/boiling range:</u> 227.3 °F (108.5 °C) (759.81 mmHg (1,013 hPa))
<u>Flash point</u>	Not applicable (aqueous liquid). Flammability class: Will burn
<u>Evaporation rate (Butylacetate = 1)</u>	No data available
<u>Flammability (liquids)</u>	The product is not flammable.
<u>Flammability / Explosive limit</u>	No data available
<u>Autoignition temperature</u>	No data available
<u>Vapor pressure</u>	< 0.000002 mmHg (< 0.0000026 hPa) (77 °F (25 °C)) Test results are based on the dry product.
<u>Vapor density</u>	No data available
<u>Density</u>	1.37 - 1.41 g/cm ³ (68 °F (20 °C))
<u>Relative density</u>	1.39 (68 °F (20 °C))
<u>Solubility</u>	<u>Water solubility:</u> completely miscible <u>Solubility in other solvents:</u> Methanol : soluble

N-Methylpyrrolidone : soluble

Isopropanol : soluble

Acetone : insoluble

Tetrahydrofuran : insoluble

Partition coefficient: n-octanol/water

log Pow: -9.8
Structure-activity relationship (SAR), estimated

Decomposition temperature

> 320 °F (160 °C)

Viscosity

Viscosity, kinematic : 32 mm²/s (77 °F (25 °C))

Explosive properties

No data available

Oxidizing properties

Not considered as oxidizing.

9.2 Other information

Non Volatiles by Weight

ca. 75 %

SECTION 10: Stability and reactivity

10.1 Reactivity

- Stable at normal ambient temperature and pressure.

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

- No decomposition if used as directed.

polymerization

- Hazardous polymerization does not occur.

10.4 Conditions to avoid

- No dangerous reaction known under conditions of normal use.
- > 160°C
- Decomposes on heating.

10.5 Incompatible materials

- Strong bases
- Strong reducing agents.
- Strong acids
- Strong oxidizing agents
- Ammonia
- Ammonium salts
- Amines

10.6 Hazardous decomposition products

Hazardous decomposition products

- Oxides of phosphorus
- Sulfur oxides
- Hydrogen
- Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
- Phosphine

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity****Acute oral toxicity**

LD50 : 575 mg/kg - Rat , for males and females
Harmful if swallowed.
Unpublished internal reports

Acute inhalation toxicity

LC50 - 4 h (dust/mist) 0.591 mg/l - Rat , for males and females
Toxic by inhalation.
Published data

Acute dermal toxicity

LD50 > 2,000 mg/kg - Rat , for males and females
Not classified as harmful by contact with skin
Unpublished internal reports

Acute toxicity (other routes of administration)

No data available

Skin corrosion/irritation

Rabbit
No skin irritation
Method: OECD Test Guideline 404
Unpublished internal reports

Serious eye damage/eye irritation

Risk of serious damage to eyes.
Method: OECD Test Guideline 405
Extremely irritating to rabbits on ocular application.
Unpublished internal reports

Respiratory or skin sensitization

Magnusson and Kligman method - Guinea pig
May cause sensitization by skin contact.
Unpublished internal reports

Mutagenicity**Genotoxicity in vitro**

Mutagenicity (Salmonella typhimurium - reverse mutation assay)
with and without metabolic activation
negative
Unpublished internal reports

Mutagenicity (in vitro mammalian cytogenetic test)
Strain: CHO
with and without metabolic activation
positive
Unpublished internal reports

	<p>UDS test Strain: Hepatocyte (primary culture) negative Unpublished internal reports</p> <p>Mouse lymphoma test / TK with and without metabolic activation positive Unpublished internal reports</p>
Genotoxicity in vivo	<p>Rodent dominant Lethal test - Rat negative Unpublished internal reports</p> <p>In vivo micronucleus test - Mouse negative Unpublished internal reports</p> <p>Product is not considered to be genotoxic</p>
<u>Carcinogenicity</u>	<p>Rat Oral exposure Animal testing did not show any carcinogenic effects. Published data</p> <p>Mouse Oral exposure Animal testing did not show any carcinogenic effects. Published data</p>

This product does not contain any ingredient designated as probable or suspected human carcinogens by:

NTP
IARC
OSHA

Toxicity for reproduction and development

Toxicity to reproduction / fertility Fertility study 2 generations - Rat, Oral exposure
no impairment of fertility has been observed, Unpublished internal reports

Developmental Toxicity/Teratogenicity Rat, Oral exposure
General Toxicity Maternal NOEL: 15 mg/kg
Teratogenicity NOEL:30mg/kg
Unpublished internal reports

Rabbit, Oral exposure
General Toxicity Maternal NOEL: 18 mg/kg
Teratogenicity NOEL:18mg/kg
Effects on development were observed, May cause harm to the unborn child.,
Unpublished internal reports

STOT

STOT-single exposure The substance or mixture is not classified as specific target organ toxicant, single exposure according to GHS criteria.

STOT-repeated exposure The substance or mixture is not classified as specific target organ toxicant, repeated exposure according to GHS criteria.

Oral exposure 90 Days - Rat , for males and females
 NOEL: 1 mg/kg
 Liver toxicity
 Unpublished internal reports

Neurological effects

Screening biochemistry test kit for cholinesterase activity inhibition, The product does not induce inhibition

Experience with human exposure

No data available

Aspiration toxicity

No data available

SECTION 12: Ecological information**12.1 Toxicity****Aquatic Compartment****Acute toxicity to fish**

LC50 - 96 h : 119 mg/l - Oncorhynchus mykiss (rainbow trout)
 Unpublished internal reports

LC50 - 96 h : 93 mg/l - Lepomis macrochirus (Bluegill sunfish)
 Unpublished internal reports

Acute toxicity to daphnia and other aquatic invertebrates

EC50 - 48 h : 19.4 mg/l - Daphnia magna (Water flea)
 Unpublished internal reports

Toxicity to aquatic plants

EC50 - 96 h : 0.2 mg/l - Pseudokirchneriella subcapitata (microalgae)
 Unpublished internal reports

Toxicity to microorganisms

EC50 - 3 h : 24 mg/l - activated sludge
 Unpublished internal reports

Chronic toxicity to fish

NOEC: 0.83 mg/l - 32 d - Pimephales promelas (fathead minnow)
 flow-through test
 Method: OECD Test Guideline 210
 Harmful to fish with long lasting effects.
 Unpublished internal reports

Chronic toxicity to daphnia and other aquatic invertebrates

NOEC: 0.032 mg/l - 21 d - Daphnia magna (Water flea)
 Reproduction Test
 Method: OECD Test Guideline 202
 Unpublished internal reports

12.2 Persistence and degradability**Abiotic degradation****Stability in water**

DT50: Half-life value: 131 d (25 °C)
 anaerobic
 pH: 5.0
 Method: according to a standardized method
 Unpublished internal reports

DT50: Half-life value: 72 d (25 °C)
 anaerobic
 pH: 7.0

Method: according to a standardized method
Unpublished internal reports

DT50: Half-life value: 7 d (25 °C)
anaerobic
pH: 9.0
Method: according to a standardized method
Unpublished internal reports

Other Physicochemical reactions

Product is easily oxidizable in aqueous media in dilute solutions

Physical- and photo-chemical elimination

No data available

Biodegradation

Biodegradability

Ultimate aerobic biodegradability
Method: Simulation study
70 % - 21 Days
Readily biodegradable.
US EPA FIFRA, Subdivision N, § 162-4

anaerobic
Method: Simulation study
60 % - 30 Days
US EPA FIFRA, Subdivision N, § 162-3

Degradability assessment

The product is considered to be rapidly degradable in the environment

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water

Not potentially bioaccumulable
Structure-activity relationship (SAR)

Bioconcentration factor (BCF)

No data available

12.4 Mobility in soil

Adsorption potential (Koc)

Log Koc: 2.2
Moderately mobile in soils
Unpublished internal reports

Known distribution to environmental compartments

Ultimate destination of the product: Water

12.5 Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).
This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

Ecotoxicity assessment

Short-term (acute) aquatic hazard

According to the available data on the components
Very toxic to aquatic life.
According to the classification criteria for mixtures.

Long-term (chronic) aquatic hazard According to the available data on the components
Toxic to aquatic life with long lasting effects.
According to the classification criteria for mixtures.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Disposal

- Chemical additions, processing or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

Waste Code

- Environmental Protection Agency
- Hazardous Waste – NO

Advice on cleaning and disposal of packaging

- Take preliminary precautions based on the dangerous properties of the product.
- Empty the packaging completely prior to disposal.
- Empty containers should be taken to an approved waste handling site for recycling or disposal.
- The user's attention is drawn to the possible existence of local regulations regarding disposal.

SECTION 14: Transport information

Transportation status: IMPORTANT! Statements below provide additional data on listed transport classification. The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

DOT

14.1 UN number	UN 2810
14.2 Proper shipping name	TOXIC, LIQUIDS, ORGANIC, N.O.S. (Tetrakis(hydroxymethyl) phosphonium sulphate)
14.3 Transport hazard class	6.1
Label(s)	6.1
14.4 Packing group	III
Packing group	153
ERG No	
14.5 Environmental hazards	YES
Marine pollutant	Marine Pollutant (Tetrakis(hydroxymethyl) phosphonium sulphate)

TDG

14.1 UN number	UN 2810
14.2 Proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S. (Tetrakis(hydroxymethyl) phosphonium

	sulphate)
14.3 Transport hazard class	6.1
Label(s)	6.1
14.4 Packing group	
Packing group	III
ERG No	153
14.5 Environmental hazards	YES
Marine pollutant	Marine Pollutant (Tetrakis(hydroxymethyl) phosphonium sulphate)
<u>NOM</u>	
14.1 UN number	UN 2810
14.2 Proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S. (Tetrakis(hydroxymethyl) phosphonium sulphate)
14.3 Transport hazard class	6.1
Label(s)	6.1
14.4 Packing group	
Packing group	III
ERG No	153
14.5 Environmental hazards	YES
Marine pollutant	
<u>IMDG</u>	
14.1 UN number	UN 2810
14.2 Proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S. (Tetrakis(hydroxymethyl) phosphonium sulphate)
IMDG Code segregation group	Not Relevant
14.3 Transport hazard class	6.1
Label(s)	6.1
14.4 Packing group	
Packing group	III
14.5 Environmental hazards	YES
Marine pollutant	
14.6 Special precautions for user	
EmS	F-A , S-A
For personal protection see section 8.	
14.7 Transport in bulk vessels according to IMO instruments	
No data available	

IATA

14.1 UN number	UN 2810
14.2 Proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S. (Tetrakis(hydroxymethyl) phosphonium sulphate)
14.3 Transport hazard class	6.1
Label(s):	6.1
14.4 Packing group	III
Packing instruction (cargo aircraft)	663
Max net qty / pkg	220.00 L
Packing instruction (passenger aircraft)	655
Max net qty / pkg	60.00 L
14.5 Environmental hazards	YES
14.6 Special precautions for user	
For personal protection see section 8.	

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information**15.1 Notification status**

Inventory Information	Status
United States TSCA Inventory	- All substances listed as active on the TSCA inventory
Canadian Domestic Substances List (DSL)	- Listed on Inventory
Australia Inventory of Chemical Substances (AICS)	- Listed on Inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	- Listed on Inventory
Korea. Korean Existing Chemicals Inventory (KECI)	- Listed on Inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	- Listed on Inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	- Listed on Inventory
Taiwan Chemical Substance Inventory (TCSI)	- Listed on Inventory
New Zealand. Inventory of Chemical Substances	- All components are listed on the NZIOC inventory. The HSNO status of the product has not been assessed.
EU. European Registration, Evaluation, Authorisation and Restriction of Chemical (REACH)	- When purchased from a Solvay legal entity based in the EEA ("European Economic Area"), this product is compliant with the registration provisions

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	of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, and/or registered. When purchased from a legal entity outside of the EEA, please contact your local representative for additional information.
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15.2 Federal Regulations**US. EPA EPCRA SARA Title III****SARA HAZARD DESIGNATION SECTIONS 311/312 (40 CFR 370)**

Acute toxicity (any route of exposure)	Yes
Serious eye damage or eye irritation	Yes
Respiratory or skin sensitization	Yes
Reproductive toxicity	Yes

The categories not mentioned are not relevant for the product.

Section 313 Toxic Chemicals (40 CFR 372.65)

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Section 302 Emergency Planning Extremely Hazardous Substance Threshold Planning Quantity (40 CFR 355)

This material does not contain any components with a section 302 EHS TPQ.

Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355)

Components	CAS-No.	Reportable quantity
Formaldehyde	50-00-0	100 lb

Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355)

Components	CAS-No.	Reportable quantity
Formaldehyde	50-00-0	100 lb

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

Components	CAS-No.	Reportable quantity
Formaldehyde	50-00-0	100 lb

15.3 State Regulations**US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)**

This product can expose you to chemicals including Formaldehyde (CAS # 50-00-0) , which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information**NFPA (National Fire Protection Association) - Classification**

Health	3 serious
Flammability	1 slight
Instability or Reactivity	0 minimal

HMIS (Hazardous Materials Identification System (Paint & Coating)) - Classification

Health	3 serious
Flammability	1 slight
Reactivity	0 minimal
PPE	Determined by User; dependent on local conditions

Further information

- Product evaluated under the US GHS format.

Date Prepared: 11/12/2019

Key or legend to abbreviations and acronyms used in the safety data sheet

- TWA	8-hour, time-weighted average
- SAEL	Solvay Acceptable Exposure Limit
- ACGIH	American Conference of Governmental Industrial Hygienists
- OSHA	Occupational Safety and Health Administration
- NTP	National Toxicology Program
- IARC	International Agency for Research on Cancer
- NIOSH	National Institute for Occupational Safety and Health
- ADR:	European Agreement on International Carriage of Dangerous Goods by Road.
- ADN:	European Agreement on the International Carriage of Dangerous Goods by Inland
Waterways.	
- RID:	European Agreement concerning the International Carriage of Dangerous Goods by Rail.
- IATA:	International Air Transport Association.
- ICAO-TI:	Technical Specification for Safe Transport of Dangerous Goods by Air.
- IMDG:	International Maritime Dangerous Goods.
- TWA:	Time weighted average
- ATE:	Estimated value of acute toxicity
- EC:	European Community number
- CAS:	Chemical Abstracts Service.
- LD50:	Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).
- LC50:	Substance concentration causing 50% (half) death in the test animals group.
- EC50:	Effective Concentration of the substance causing the maximum of 50%.
- PBT:	Persistent, Bioaccumulative and Toxic substance.
- vPvB:	Very Persistent and Very Bioaccumulative.
- SEA:	Classification, labeling, packaging regulation
- DNEL:	Derived No Effect Level
- PNEC:	Predicted No Effect Concentration
- BHOT:	Specific Target Organ Toxicity

Not all acronyms listed above are referenced in this SDS.

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. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.