



PT. CITRA TRININDO INDONESIA

Contractor, Mechanical, Electrical, Fabrication, Chemical General Trading

JL. Raya Cikarang Cibarusah No. 12 Telaga Pasir Raya, Bekasi, Jawa Barat 17330

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Safety Data Sheet

1. IDENTIFICATION

Product Identifier

Product Name P841 SCALE INHIBITORS

Other means of identification

SDS # PROLIX

Product Code P841

UN/ID No

Recommended use of the chemical and restrictions on use

Recommended Use Cooling tower treatment.

Details of the supplier of the safety data sheet

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2. HAZARDS IDENTIFICATION

Appearance Clear amber liquid **Physical State** Liquid **Odor** Benzotriazole odor

Classification

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

Hazards Not Otherwise Classified (HNOC)

May be harmful if swallowed

Signal Word

Danger

Hazard Statements

Causes severe skin burns and eye damage

Precautionary Statements - Prevention

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

Wash face, hands and any exposed skin thoroughly after handling

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

Precautionary Statements - Response

Immediately call a poison center or doctor/physician

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



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Immediately call a poison center or doctor/physician

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

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a poison center or doctor/physician

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Potassium hydroxide	1310-58-3	10-20
Sodium Molybdate	10102-40-6	5-15

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

General Advice

If exposed or concerned: Get medical advice/attention.

Eye Contact

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

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediately call a poison center or doctor/physician.

Inhalation

Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediately call a poison center or doctor/physician.



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Ingestion

Drink plenty of water. Do not induce vomiting without medical advice. Immediately call a poison center or doctor/physician.

Most important symptoms and effects

Symptoms

Causes severe skin burns and eye damage. Nausea and vomiting with gastrointestinal disorder.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Corrosive material.

Hazardous Combustion Products Toxic gases may be formed by fire. Carbon dioxide (CO₂).

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions

Use personal protection recommended in Section 8.

Environmental Precautions

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up



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Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Dilute small spills or leaks with plenty of water. Contain and collect with an inert absorbent and place into an appropriate container for disposal. Spill area may be slippery.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Keep containers closed when not in use. Follow all product label instructions. Use only as directed. Do not breathe vapors. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when handling this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Store away from incompatible materials. Store locked up.

Incompatible Materials Acids. Acid products. Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m ³	(vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³
Sodium Molybdate 10102-40-6	TWA: 0.5 mg/m ³ Mo respirable fraction	TWA: 5 mg/m ³ Mo (vacated) TWA: 5 mg/m ³ Mo	IDLH: 1000 mg/m ³ Mo

Appropriate engineering controls



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Engineering Controls

Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Chemical goggles or full face shield. Refer to 29 CFR 1910.133 for eye and face protection regulations.

Skin and Body Protection

Impervious rubber gloves. Refer to 29 CFR 1910.138 for appropriate skin and body protection.

Respiratory Protection

Ensure adequate ventilation, especially in confined areas. In case of inadequate ventilation wear respiratory protection. Refer to 29 CFR 1910.134 for respiratory protection requirements.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash face, hands and any exposed skin thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State

Liquid

Appearance

Clear amber liquid

Odor

Benzotriazole odor

Color

Clear amber

Odor Threshold

Not

determined

Property

Values

Remarks • Method

pH

13.0

Melting Point/Freezing Point

Not applicable

Boiling Point/Boiling Range

100 °C / 212 °F

Flash Point

None

Per CPSC Flame Extension Test

Evaporation Rate

1

@ 20°C (Water = 1)

Flammability (Solid, Gas)

Liquid-Not applicable

Upper Flammability Limits

Not determined

Lower Flammability Limit

Not determined

Vapor Pressure

17.2 mmHg

Vapor Density

Heavier than air

(Air=1)

Specific Gravity

0.97

(Water = 1)



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Water Solubility	Completely soluble
Solubility in other solvents	Not determined
Partition Coefficient	Not determined
Auto-ignition Temperature	Not determined
Decomposition Temperature	Not determined
Kinematic Viscosity	Not determined
Dynamic Viscosity	Not determined
Explosive Properties	Not determined
Oxidizing Properties	Not determined

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to Avoid

Keep out of reach of children. See Sec. 7 Handling & Storage.

Incompatible Materials

Acids. Acid products. Oxidizing agents.

Hazardous Decomposition Products

Toxic gases may be formed by fire. Carbon dioxide (CO₂).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Causes severe eye damage.
Skin Contact	Causes severe skin burns.
Inhalation	Avoid breathing vapors or mists.
Ingestion	May be harmful if swallowed.

Component Information



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Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Potassium hydroxide 1310-58-3	= 284 mg/kg (Rat)	-	-
1-Hydroxyethylidene-1,1-diphosphonic acid 2809-21-4	= 2400 mg/kg (Rat)	> 7940 mg/kg (Rabbit)	-

Information on physical, chemical and toxicological effects

Symptoms

Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity

Not classifiable as a human carcinogen.

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Potassium hydroxide 1310-58-3		80: 96 h Gambusia affinis mg/L LC50 static		
1-Hydroxyethylidene-1,1-diphosphonic acid 2809-21-4		868: 96 h Lepomis macrochirus mg/L LC50 static 360: 96 h Oncorhynchus		527: 48 h Daphnia magna mg/L EC50



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		mykiss mg/L LC50 static		
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Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Potassium hydroxide	0.65
1310-58-3	0.83
1-Hydroxyethylidene-1,1-diphosphonic acid 2809-21-4	3.49

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Potassium hydroxide 1310-58-3	Toxic Corrosive

14. TRANSPORT INFORMATION



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Note

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances. Based on package size, product may be eligible for limited quantity exception.

DOT

UN/ID No P814
Proper Shipping Name Potassium hydroxide, solution
Hazard Class 8
Packing Group II

IATA

UN/ID No P814
Proper Shipping Name Potassium hydroxide, solution
Hazard Class 8
Packing Group II

IMDG

UN/ID No P814
Proper Shipping Name Potassium hydroxide, solution
Hazard Class 8
Packing Group II

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Potassium hydroxide	Present	X		Present		Present	X	Present	X	X
Sodium Molybdate						Present	X		X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances **IECSC** - China Inventory of Existing Chemical Substances **KECL** - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations



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CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SA RA RQ	Reportable Quantity (RQ)
Potassium hydroxide 1310-58-3	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

SARA 313

Not determined

CWA (Clean Water Act)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous
Potassium hydroxide 1310-58-3	1000 lb	80: 96 h Gambusia affinis mg/L LC50 static		X

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Potassium hydroxide 1310-58-3	X	X	X

16. OTHER INFORMATION

NFPA	Health Hazards	Flammability	Instability	Special Hazards
	Not determined	Not determined	Not determined	Not determined
HMIS	Health Hazards	Flammability	Physical Hazards	Personal Protection
	2	0	0	Not determined



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End of Safety Data Sheet