

1 - Product and Company Identification

Product name: Cublen R 50
Product type/usage/industry: Aqueous solution of an aminophosphonic acids
Manufacturer/Supplier Information: Zschimmer and Schwarz, Inc.
70 GA Hwy. 22 W
Milledgeville, GA 31061
Phone: (478) 454-1942
Emergency contact: **Company:** (478) 454-1942
CHEMTREC (24HR): (800) 424-9300

2 – Hazards Identification

Classification of the substance or mixture: Classification of this substance/mixture is based on **29 CFR 1910.1200/HazCom 2012 (GHS-US)**

Acute Toxicity (Oral)	Category 4	H302	Harmful if swallowed
Skin Corrosion/Irritation	Category 1A	H314	Causes severe skin burns and eye damage
Corrosive to Metals	Category 1	H290	May be corrosive to metals

Labelling:

Signal Word:

DANGER!!

Hazard Symbols:



Precautionary Statements:

- P234: Keep only in original container.
- P260: Do not breathe mist/spray.
- P264: Wash thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+361+353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P363: Wash contaminated clothing before reuse.
- P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+351+338: 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/doctor.
- P390: Absorb spillage to prevent material damage.
- P405: Store locked up.
- P406: Store in a corrosive resistant container with a resistant inner liner.
- P501: Dispose of contents/container in accordance with local, state, and federal regulations.

Key to Hazard Categories:

1=Severe Hazard 2=Serious Hazard 3=Moderate Hazard 4=Slight Hazard 5=Minimal Hazard

3 – Composition/Information on Ingredients

<u>CAS Number</u>	<u>Material or component</u>	<u>Avg % weight</u>
5995-42-6 and 32422-02-9	Reaction mass of [[(2-hydroxyethyl)imino]bis(methylene)] bisphosphonic acid and phosphonic acid, P-[(tetrahydro-2- hydroxy-2-oxido-4H-1,4,2-oxazaphosphorin-4-yl)methyl-	45 – 55%
13598-36-2	Phosphorous acid	2.5 – 5%
7647-01-0	Hydrochloric acid	2.5 – 5%

This is not intended to be a complete compositional disclosure. Information provided pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200/ HazCom 2012). See Section 8 for Exposure Limits, if any.

4 - First Aid Measures

Eyes:	Rinse cautiously with water for several (15) minutes. Remove contact lenses if present and easy to do – continue rinsing. Get immediate medical advice/attention.
Skin:	Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Get immediate medical advice/attention.
Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
Ingestion:	Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician immediately

5 - Firefighting Measures

Extinguishing Media:	Water spray, dry chemical, alcohol foam, or carbon dioxide.
Unsuitable Extinguishing Media:	None known.
Special Protective Equipment for Firefighters:	Self-contained breathing apparatus and protective clothing when fighting any chemical fire.
Unusual Fire & Explosion Hazards:	In case of fire, containers may explode from internal pressure. Cool with water. May emit toxic fumes of CO _x , NO _x , PO _x and phosphine under fire conditions.

6 - Accidental Release Measures

Personal precautions:	Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep people away from and upwind of spill/leak. Ensure adequate ventilation, especially in confined areas. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection.
Environmental precautions:	P273: Avoid release to the environment Limit leakage with earth or sand. Do not discharge into the drains/surface water/groundwater. Dispose of absorbed material in accordance with local, state and federal regulations.
Methods for Containment/Cleaning Up:	Use neutralizing agent. Take up with absorbent material (e.g. vermiculite, general purpose binder). Dispose of absorbed material in accordance with local, state, and federal regulations.

7 - Handling and Storage

Handling:	P261: Avoid breathing mists/vapors of product P262: Do not get in eyes, on skin, or on clothing P264: Wash thoroughly after handling P280: Wear protective gloves/protective clothing/eye protection/face protection
Storage:	P402+404: Store in a dry place. Store in a closed container P403+233: Store in a well ventilated place. Keep container tightly closed. Protect from frost.

Special Packaging Requirements: P406: Store in a corrosive resistant container with a resistant inner liner. Do not store in light metal containers. Do not use iron, steel, copper or copper alloys in receptacles.

Incompatible Materials or Fire/Explosion Protection: Oxidizers, alkaline materials, light metals.

8 - Exposure Controls/Personal Protection

Personal Protective Equipment (PPE):

Hand Protection: Use impervious gloves.

Eye Protection: Wear safety glasses with side shields or full face shield.

Skin Protection: Wear protective clothing.

Respiratory Protection: Recommended if ventilation is limited.

Engineering Measures/Controls:

Ventilation: Ensure adequate ventilation to maintain product at acceptable airborne levels.

Other measures: Eye-wash station.

Exposure Limits/Guidelines:

Material	CAS #	BASIS	TYPE	VALUE
Hydrochloric acid	7647-01-0	ACGIH	TLV	2 ppm
		OSHA	TWA	5 ppm

9 - Physical and Chemical Properties

Form and Appearance:	Clear, yellowish liquid	Odor:	Characteristic
pH:	< 2 @ 1%	Odor Threshold:	N/D
Boiling Point:	> 212°F (100°C)	Melting/Freezing point:	< 32°F (0°C)
Vapor Pressure:	N/D	Vapor Density (Air=1):	N/D
Flash Point:	N/A	Evaporation Rate:	N/D
UEL:	N/A	LEL:	N/A
Viscosity:	N/D	Solubility in Water:	Fully miscible
Octanol/Water Partition Coefficient:	N/D	Specific Gravity/ Bulk Density:	~1.28 @ 20°C
Auto-ignition temperature:	N/D	Decomposition Temperature:	N/D
Volatile content:	N/D	VOC Data:	N/D

10 - Stability and Reactivity

Chemical Stability: Product is stable under ordinary conditions of use and storage.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Extreme temperatures.

Incompatible Materials: Oxidizers, alkaline materials, various metals.

Hazardous Decomposition Products: Extremely high temperatures and fire conditions may produce CO_x, NO_x, and PO_x.

11 - Toxicological Information

Acute Data:

Principle Routes of Exposure: Eye contact, skin contact, ingestion, inhalation (mist).

Acute Toxicity

Route of exposure:	Test type:	Species:	Results:	Comments:
Oral	LD50	Rat	500 – 1000 mg/kg	H302: Harmful if swallowed
Dermal	LD50	Rat	>2000 mg/kg	-

Irritation and Corrosion

Target organ:	Species:	Results:	Comments:
Eyes	Rabbit	Severely irritating	Irreversible eye damage possible
Skin	Rabbit	Severe irritation	Skin burns possible

Sensitization

Target organ:	Species:	Results:	Comments:
Skin	Human	No effects known	-

Specific Target Organ Toxicity – Single Exposure

Target organ:	Species:	Results:	Comments:
None			-

Chronic Data:

Carcinogenicity

IARC	NTP	ACGIH	OSHA
No	No	No	No

Mutagenicity: NDA

Reproductive Effects: NDA

Target Organ Effects: NDA

12 - Ecological Information

Acute Aquatic Toxicity

Species:	Test type:	Exposure time:	Results:	Comments:
Cyprinodon variegatus	LC50	96h	>600 mg/l	-
Acartia tonsa	EC50	48h	~128 mg/l	-

Environmental Fate

Persistence/Degradability: Eliminability: ~ 34% in 28d

COD/BOD5: NDA

Bioaccumulation Potential: NDA

Mobility in Soil: NDA

Other Adverse Effects: NDA

13 - Disposal Considerations

Product: Dispose of absorbed material/content and/or container in accordance with local, state, federal and/or international regulations.

Packaging: NDA

14 - Transport Regulations

US DOT Regulations (Land Transport):

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (aminophosphonic acid)

Hazard Class: 8 **UN Number:** UN3265

Packing Group: III **Label Required:** CORROSIVE

Other Information: -

IATA/ICAO Regulations (Air Transport):

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (aminophosphonic acid)

Hazard Class: 8 **UN Number:** UN3265

Packing Group: III **Label Required:** CORROSIVE

Other Information: -

IMDG/IMO Regulations (Maritime Transport):

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (aminophosphonic acid)

Hazard Class: 8 **UN Number:** UN3265

Packing Group: III **Label Required:** CORROSIVE

EMS Number: F-A, S-B **Segregation Groups:** Acids

Marine Pollutant (Y/N): N

Other Information: -

15 - Regulatory Information

Domestic Regulations

Components requiring notification

SARA 302 (TPQ)	SARA 304 (RQ)	SARA 313	CERCLA (RQ)	CAA 112(b) HAPS	CAA 112(r)
None	None	None	Hydrochloric acid – 7647-01-0 (5000 lbs)	None	None

SARA 311/312 Hazard Categorization:

Acute Health Hazard

State Information

California Proposition 65: May contain the following components known to the State of California to cause cancer, birth defects, or other reproductive harm.

None.

**State Right to Know/
Hazardous Substance List
Information:**

The following chemicals are present on one or more Right to Know/Hazardous Substance Lists for the states of MA, MN, NJ, PA and RI.

Hydrochloric acid (7647-01-0)

This is not an exhaustive list. For information on listings in other states, please consult that state's RTK/HSL.

Chemical Inventories

United States (TSCA)	EUROPE (EINECS/ELINCS/NLP)	Australia (AICS)	Philippines (PICCS)	Canada		Korea (ECL)	Japan (ENCS/ISHL)	China (IECSC)	New Zealand (NZIoC)
				DSL	NDSL				
Yes	Yes	No	No	Yes	No	No	NDA	No	NDA

16 - Additional Information

Key to Abbreviations:

NDA - No data available N/D - Not determined N/A - Not applicable N/E - Not established

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Date of Issue: December 26, 2014

Date of last revision: June 3, 2016