

**1 - Product and Company Identification**

**Product name:** Cublen K 60 – US  
**Product type/usage/industry:** Aqueous solution of an organophosphonic acid  
**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)

Skin Corrosion/Irritation	Category 1B	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.
- 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.
- P321: Specific treatment (see First Aid on this label).
- 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>
2809-21-4	1-hydroxyethylidene-1, 1-diphosphonic acid	50 - 100%
13598-36-2	Phosphonic acid	1 - 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. Call a POISON CENTER or doctor/physician.
- Ingestion:** Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician.

### 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<sub>x</sub>, PO<sub>x</sub> 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.

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

**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
None				

**9 - Physical and Chemical Properties**

<b>Form and Appearance:</b>	Clear, colorless to yellow liquid	<b>Odor:</b>	Characteristic
<b>pH:</b>	< 2 @ 1%	<b>Odor Threshold:</b>	N/D
<b>Boiling Point:</b>	~ 219°F (104°C)	<b>Melting/Freezing point:</b>	< -13°F (-25°C)
<b>Vapor Pressure:</b>	N/D	<b>Vapor Density (Air=1):</b>	N/A
<b>Flash Point:</b>	N/A	<b>Evaporation Rate:</b>	< 0.01
<b>UEL:</b>	N/A	<b>LEL:</b>	N/A
<b>Viscosity:</b>	~35 cSt @ 25°C	<b>Solubility in Water:</b>	Fully miscible
<b>Octanol/Water Partition Coefficient:</b>	N/D	<b>Specific Gravity/ Bulk Density:</b>	~1.45 @ 20°C
<b>Auto-ignition temperature:</b>	N/D	<b>Decomposition Temperature:</b>	N/D
<b>Volatile content:</b>	N/D	<b>VOC Data:</b>	N/D

**10 - Stability and Reactivity**

<b>Chemical Stability:</b>	Product is stable under ordinary conditions of use and storage.
<b>Hazardous Polymerization:</b>	Will not occur.
<b>Conditions to Avoid:</b>	Extreme temperatures.
<b>Incompatible Materials:</b>	Oxidizers, alkaline materials.
<b>Hazardous Decomposition Products:</b>	Extremely high temperatures and fire conditions may produce CO <sub>x</sub> and PO <sub>x</sub> .

**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	>2400 mg/kg	H303: May be harmful if swallowed
Dermal	LD50	Rat	>7940 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	Not sensitizing	-

**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:
Rainbow trout	LC50	96h	>386 mg/l	-
Daphnia magna	EC50	48h	>527 mg/l	-
Algae	EC50	72h	>3 mg/l	Algae growth inhibition is due to the ability of the product to complex materials and not to toxicity per se.

**Environmental Fate**

**Persistence/Degradability:** This product is inherently biodegradable.  
> 33% in 28d

**COD/BOD5:** NDA

**Bioaccumulation Potential:** This product is not expected to bioaccumulate.

**Mobility in Soil:** Low.

**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.  
(hydroxyethan-diphosphonic 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.  
(hydroxyethan-diphosphonic 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.  
(hydroxyethan-diphosphonic 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	None	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.  
None.

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	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes

**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:** May 1, 2015

**Date of last revision:** May 13, 2015