

## Safety Data Sheet

### Section 1. Identification

**Product name** : ZnBrite™ KA 502 REPLENISHER  
**Product code** : 425266  
**Uses advised against** : Consumer, private households, general public  
**Product type** : Liquid.  
**Validation date** : 1/23/2014.

Manufacturer - Supplier	Telephone no.:	Fax no.	Emergency phone:
Enthone Inc 350 Frontage Road West Haven, CT 06516	Tel: (203) 934-8611	Fax:(203) 799-8179	DOMESTIC NORTH AMERICA 800-424-9300 INTERNATIONAL, CALL +1 703-527-3887 (collect calls accepted)
Cookson Enthone Chemistry Trading (Shanghai) Co., Ltd. Rm 201, No.388 of Muhua North Road, Fengxian District, Shanghai	Tel: 86-21-6390 0600	Fax: 86-21-50912810	Tel: 0532-8388 9090 (24- hour)
Enthone Chemistry A Division of Cookson Singapore Pte Ltd 26 Tuas West Road Singapore 638382	Tel: (65) 6861 1773	Fax: (65) 68611145	Tel: (65) 6861 1773
ENTHONE SDN. BHD. Lot 34 & 36 Lorong IKS Juru 7 Taman Perindustrian Ringan Juru 14100 Simpang Ampat Seberang Perai Selatan Penang, Malaysia	Tel: 60 - 4 507 7787	Fax: 60 4 507 0621	Tel: 60 4 507 7787
Enthone Korea 1Ra 310, Sihwa Industrial Complex, 1247-9, Jungwang-Dong, Siheung-Si, Gyeonggi-Do, Korea	Tel: 82-31-432-4100	82-31-433-1478	Tel: 82-31-432-4100
Enthone Inc. Taiwan Branch 2F, B Building, No. 10, Lu-Shing Street, Luchu Hsiang, 338 Taoyuan, Taiwan	Tel: 03-312-0280	Fax: 03-312-0380	Tel: 886-937408981
Alent Japan Company - Enthone 480-28 Higashitoyoda, Hiratsuka, Kanagawa 254-0082, Japan	Tel: 81-463-51-4330	Fax: 81-463-55-2588	Tel: 81-(0)463-51-4330
Enthone India A Division of Cookson India Pte. Ltd Developed Plot no 16, North Phase, SIDCO Industrial estate, Ambattur, Chennai - 600098.	Tel: 91-44-26252666	Fax: 91-44-26258627	Tel: 91-44-26252666

### Section 2. Hazards identification

**Classification of the substance or mixture** : Not regulated.

**GHS label elements**

**Signal word** : Not applicable

**Hazard statements** : No known significant effects or critical hazards.

*Continued on next page*

## Section 2. Hazards identification

### Precautionary statements

- Prevention** : Read label before use. Do not breathe dust or mist. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
- Response** : No special measures required.
- Storage** : No special measures required.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Other hazards which do not result in classification** : Not available.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	%	CAS number
TSRN 489909-5102-P-PC	1-10	
Organic surfactant	1-10	-
Carboxylic acid Salt	1-10	-
surfactant	1-10	-
Proprietary Surfactant.	1-10	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Inhalation** : Get medical attention if symptoms occur. If it is suspected that mists are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Move exposed person to fresh air. Loosen tight clothing such as a collar, tie, belt or waistband. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Ingestion** : Get medical attention if symptoms occur. Get medical attention if symptoms appear. Move exposed person to fresh air. Wash out mouth with water. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.
- Skin contact** : Get medical attention if symptoms occur. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact** : Get medical attention if irritation occurs. Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

### Over-exposure signs/symptoms

See section 11 for more detailed information on health effects and symptoms.

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

## Section 4. First aid measures

- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that mists are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.

- Not suitable** : None known.

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides  
metal oxide/oxides

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

- Remark** : Not available.

## Section 6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see section 8).

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

- Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## Section 7. Handling and storage

- Precautions for safe handling** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protective equipment (see section 8). Use only with adequate ventilation. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Be sure area is equipped with all necessary emergency equipment including fire extinguishers, and spill response materials. Empty containers retain product residue and can be hazardous. Do not reuse product

## Section 7. Handling and storage

container.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

Ingredient name	Exposure limits
TSRN 489909-5102-P-PC	<b>ACGIH TLV (United States).</b> TWA: 20 ppm Form: Skin

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

**Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

**Eye protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Avoid contact with eyes. Use safety eyewear designed to protect against splash of liquids.

**Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Avoid contact with skin and clothing. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

## Section 9. Physical and chemical properties

<b>Physical state</b>	: Liquid.
<b>Color</b>	: Brown. [Light]
<b>Odor</b>	: Mild.
<b>Odor threshold</b>	: Not available.
<b>pH</b>	: Not available.
<b>Melting point</b>	: Not available.
<b>Boiling point</b>	: 100°C (212°F)
<b>Flash point</b>	: Not available.
<b>Burning time</b>	: Not applicable.
<b>Burning rate</b>	: Not applicable.
<b>Evaporation rate</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Not available.
<b>Lower and upper explosive (flammable) limits</b>	: Not available.
<b>Vapor pressure</b>	: Not available.
<b>Vapor density</b>	: Not available.
<b>Relative density</b>	: 1.03 to 1.05
<b>Solubility</b>	: Easily soluble in the following materials: cold water and hot water.
<b>Octanol/water partition coefficient</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Viscosity</b>	: Not available.

## Section 10. Stability and reactivity

<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: No specific data.
<b>Incompatibility with various substances</b>	: Reactive with oxidizing agents.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
<b>Hazardous polymerization</b>	: Under normal conditions of storage and use, hazardous polymerization will not occur.

## Section 11. Toxicological information

<b>Routes of entry</b>	: Dermal contact. Eye contact. Inhalation. Ingestion.
<b><u>Potential health effects</u></b>	
<b>Inhalation</b>	: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Ingestion</b>	: May cause irritation.
<b>Skin</b>	: May cause skin irritation.
<b>Eyes</b>	: May cause eye irritation.
<b><u>Numerical measures of toxicity</u></b>	
<b><u>Acute toxicity estimates</u></b>	

## Section 11. Toxicological information

Route		ATE value		
Oral		32367.9 mg/kg		
Dermal		56309.2 mg/kg		

  

Product/ingredient name	Result	Species	Dose	Exposure
TSRN 489909-5102-P-PC Organic surfactant	LD50 Oral	Rat	>2000 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>10000 mg/kg	-
Carboxylic acid Salt surfactant	LD50 Oral	Rat	4070 mg/kg	-
	LD50 Oral	Rat	3800 mg/kg	-
	LD50 Dermal	Rabbit	4000 mg/kg	-
Proprietary Surfactant.	LD50 Oral	Rat	1750 mg/kg	-
	LD50 Oral	Rat	1750 mg/kg	-
	LD50 Oral	Rat	1750 mg/kg	-

**Additional information:**

## Section 12. Ecological information

**Ecotoxicity** : Not available.

**Aquatic and terrestrial toxicity**

Product/ingredient name	Test	Result		
TSRN 489909-5102-P-PC Organic surfactant	-	EC50 >100 mg/l	Daphnia	48 hours
	-	Acute EC50 >100 mg/L	Daphnia	48 hours
	-	Acute LC50 >100 mg/L	Fish	96 hours
Carboxylic acid Salt	-	Acute LC50 484000 to 558000 ug/L	Fish - Fathead minnow - Pimephales promelas - 33 days	96 hours
	-	Fresh water		

**Conclusion/Summary** : Not available.

**Persistence/degradability**

Product/ingredient name	Test	Result
Not available.		

**Conclusion/Summary** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis
Not available.		

**Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Carboxylic acid Salt	-2.27	-	low

**Mobility** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG* Label	Additional information
DOT Classification	Not regulated.	-	-	-	-
IMDG Class	Not regulated.	-	-	-	-
IATA-DGR Class	Not regulated.	-	-	-	-
UN Class	Not regulated.	-	-	-	-

PG\* : Packing group

## Section 15. Regulatory information

### China

[List of Toxic Chemicals Severely Restricted for Importing & Exporting by China](#)

None of the components are listed.

### Korea

#### a. Regulation according to ISHA

ISHA Article 37 : None of the components are listed.

ISHA Article 38 : None of the components are listed.

#### b. Regulation according to TCCA

TCCA Toxic chemicals : Not applicable

TCCA Observational chemicals : None of the components are listed.

TCCA Article 32 (Banned) : None of the components are listed.

TCCA Article 32 (Restricted) : None of the components are listed.

#### c. Dangerous Materials Control Act : Not available.

### Europe

**Safety, health and environmental regulations specific for the product** : No known specific national and/or regional regulations applicable to this product (including its ingredients).

### Japan

### Poisonous and Deleterious Substances

#### **Ingredient name**

None of the components are listed.

#### **Status**

### ISHL

Continued on next page

## Section 15. Regulatory information

ISHL Class :

Working Conditions Act;  
Health and Safety Act :

ISHL Prevention of  
Tetraalkyl Lead Poisoning : Not listed

ISHL Harmful Substances  
Subject to Obtaining  
Permission for  
Manufacturing : Not listed

ISHL Harmful Substances,  
Prohibited for  
Manufacturing : Not listed

ISHL Chemicals requiring  
notification : Not listed

ISHL Dangerous  
Substances : Not listed

List of Specially Controlled  
Industrial Waste : Not listed

Pollutant Release and  
Transfer Registers (PRTR) : Not listed

Fire Service Law -  
Obstructive materials : Not listed

### Taiwan

List of chemicals reputed to  
be a "threat of imminent  
danger" : This product contains substances considered to be a "Threat of imminent danger":  
Isopropyl alcohol, Aldehyde., ethylene oxide, 1,4-dioxane, propylene oxide.

### International lists

China inventory (IECSC) : All components are listed or exempted.

Korea inventory (KECI) : All components are listed or exempted.

United States TSCA : **TSCA 5(a)2 proposed significant new use rules:** No products were found.  
**TSCA 5(a)2 final significant new use rules:** No products were found.  
**TSCA 12(b) one-time export:** No products were found.  
**TSCA 12(b) annual export notification:** No products were found.

United States inventory  
(TSCA 8b) : All components are listed or exempted.

## Section 16. Other information

### History

Validation date : 1/23/2014.  
Supersedes Date : 3/27/2013.  
Prepared by : T. Valverde  
(203)-799-4940  
Enthone Inc  
350 Frontage Road  
West Haven, CT 06516  
Phone: (203) 934-8611  
Fax: (203) 799-8179  
www.enthone.com

Continued on next page



## **Section 16. Other information**

### **Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

4.1b1161