SAFETY DATA SHEET

1. Identification

Product Identifier	**Economy Solid Dish**	
Other means of identification		
Product code	CU-5245-S	
Recommended use	Solid dish detergent.	
Recommended restrictions	Use as directed	
Manufacturer information		
Company name	Chemical Universe, Inc.	
Address	1133 Saline St. North Kansas City, MO 64116	
Telephone	(816) 471-3602	
Fax	(816) 474-3302	
Emergency phone number	PERS	(800) 633-8253
	24-hour Emergency	(800) 633-8253

2. Hazard(s) Identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Serious eye damage	Category 1
	Skin corrosion	Category 1A
Environmental hazards	Not classified.	
OSHA defined hazards	None.	
Label elements		

Signal word	**DANGER**
Hazard statement	Harmful if swallowed. Causes severe skin burns and eye damage. May corrode metals
Precautionary statement	
Prevention	Wash hands and exposed skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Do not breathe dust or mists. Wear protective gloves/protective clothing/eye protection/face protection.
Response	**IF SWALLOWED**: Immediately call a POISON CENTER/doctor/medical professional. Specific treatment: See section 4 on the Safety Data Sheet. Rinse mouth. Do NOT induce vomiting. **IF ON SKIN** (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. **IF INHALED**: Remove person to fresh air and keep comfortable for breathing. Keep victim under observation to aid if respiratory distress occurs. **IF IN EYES**: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse eyes liberally for a minimum of 7 minutes where practicable
Storage	Store locked up.
Disposal	Dispose of contents/containers in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)	None.
Supplemental information	None.

3. Composition/information on ingredients

Mixture Component(s)		
Chemical name	**CAS number**	**%**
Sodium hydroxide	1310-73-2	20-30
Other components below reportable levels		70-80

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Neutralize burns with vinegar. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
Eye contact	Rinse with water for at least 15 minutes. Remove contact lenses if present and easy to do so. Immediately call a physician or transport to hospital.
Ingestion	Rinse mouth. Get medical attention immediately. Do not induce vomiting.
Most important symptoms/effects, acute and delayed	Can cause serious eye damage. Can cause burning sensation in affected areas. Sodium hydroxide is extremely destructive to mucous membranes. See section 8 for personal protection equipment.
Indication of immediate medical attention and special treatment needed	Provide general support measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse. Use with extreme caution.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO_2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed. This product is easily dissolved in water and will create a strong alkaline solution. It may be corrosive to aluminum and transition metals
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protecting clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors or mists. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up	This product is fully miscible in water. Large spills: Place the material in containers using a broom or shovel. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Small spills: Sweep up and put into containers. Clean surface thoroughly with water and dilute acidic (vinegar) solution to remove residual contamination. Never return spills to original container for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into surface drainage paths and other areas not consistent with package labeling.

7. Handling and storage

Precautions for safe handling	Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store away from incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Sodium hydroxide	PEL	2 mg/m^3

US ACGIH Threshold Limit Values

Components	Type	Value
Sodium hydroxide	STEL	2 mg/m^3

Biological limit values	No information.
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels to an acceptable level. It is recommended that users of this product perform a risk assessment to determine the appropriate personal protective equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection	Avoid contact with eyes. Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Neoprene and nitrile rubber are industry-accepted barrier materials
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using do not smoke or use chewing tobacco. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or

smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance	
Physical State	Solid
Color	Pink
Odor	Aromatic.
Odor threshold	Not available.
pH	13-14 (*as 10% solution*)
Melting/freezing point	Not available.
Initial boiling point and boiling range	Not available
Flash point	Not applicable.
Evaporation rate	Not available.
Flammability	Not available.
Flammability Limits	
Upper	Not available.
Lower	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity (water=1)	Not available.
Solubility in water	Soluble. > 1,100 g/l
Partition coefficient (n-octanol/water)	Not applicable
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	This product is stable and non-reactive under normal conditions of use.
Chemical stability	Material is stable under normal conditions. Store in a cool dark place.
Possibility of hazardous reactions	Hazardous polymerization does not occur
Conditions to avoid	Avoid storage in elevated temperatures.
Incompatible materials	Bases, amines, alkaline and ferrous metals.
Hazardous decomposition products	Hydrogen and chlorine gases. In case of fire see section 5.

11. Toxicological information

Information on likely routes of exposure	
Ingestion	Do not ingest. May be harmful if swallowed.
Inhalation	Do not inhale. May cause damage to the upper respiratory tract.
Skin contact	Can cause severe skin burns.
Eye contact	Can cause serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics	Coughing, wheezing, shortness of breath.
Acute toxicity	Harmful if swallowed.

Product Economy Solid Dish (CAS mixture)		
Exposure Classification	**Route and Species**	**LD_{50} /LC_{50}**
Acute	*Oral*, rat	1,900 mg/kg (estimated)
Acute	*Dermal,* rabbit	> 12,400 mg/kg (literature)
*Estimates for product may be based on additional component data not shown		

Skin corrosion/irritation	Causes severe skin burns.
Serious eye damage/ irritation	Causes serious eye damage.
Respiratory sensitization	Not considered a respiratory sensitizer.
Skin sensitization	Not considered a skin sensitizer.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not considered a carcinogen.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not Listed.
Reproductive toxicity	No data available.
Specific target organ toxicity – single exposure	No data available.
Specific target organ toxicity – repeated exposure	No data available.
Aspiration hazard	No data available.

12. Ecological information

Ecotoxicity		
Product Economy Solid Dish (CAS mixture)		
Aquatic Receptor	**Species**	**Test Thresholds**
Fish	Fathead minnow	LC_{50} = 110 mg/L estimated
Crustacea	Daphnia Magna	EC_{50} = 145 mg/L estimated
*Estimates for product may be based on additional component data not shown		

Persistence and degradability	No data available. Chemicals of this class are not expected to be persistent in an open, aerobic environment
Bio-accumulative potential	Bio-accumulative potential is very low.
Mobility in soil	No data available. Ionic elements in aqueous solutions are expected to demonstrate high mobility in saturated or semi-saturated low-clay soils
Other adverse effects	No known ecological damage caused by this product. In higher concentrations this product will significantly alter pH of aqueous systems and negatively affect organisms within that system

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company. As packaged, this product is not believed to meet criteria defining RCRA hazardous wastes when disposed. (40 CFR Part 261, Subpart C). In ionic

solution it may meet criteria defining a D002 (corrosive) hazardous waste. Before selecting disposal method, ensure that the waste materials have been properly assessed and, as necessary, tested to confirm regulatory status.

Waste from residues/unused product	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner. (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may contain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1823
UN proper shipping name	Sodium hydroxide, solid
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packaging group	II
Marine pollutant	No
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not intended to be transported in bulk.

DOT Label

15. Regulatory information

US federal regulations .

SARA 302 Extremely hazardous substance Not listed.

SARA 304 Emergency release notification Not listed.

SARA 311/312 Hazard Categories

Immediate Hazard - Yes

Delayed Hazard – No

Fire Hazard – No

Pressure Hazard – No

Reactivity Hazard – No

SARA 313 (TRI reporting) Not listed

California Proposition 65	**California Safe Drinking Water and Toxic Enforcement Act of 1986** This product is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would be subject to threshold determination and Safe Harbor notification (1/2019)

16. Other information, including date of preparation or last revision

Issue date	6/9/2016
Revision date	8/27/2019
Version #	2
HMIS® ratings	Health: 3 Flammability: 0 Physical hazard: 1

NFPA ratings	Health: 3 Flammability: 0 Instability: 0

Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, and have been obtained from resources believed to be reliable. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information related only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified by the text.
Revision information	8/27/2019 Amend physical data; Change eye hazard category back to 1 (definition). Add toxicology info (updated). General format update; Refine composition table, amend physical data; Update toxicology thresholds and environmental fate information; Text clarification amendments Sections 5,6,8,9 and 12. PPE recommendation updated; California Proposition 65 notice; HMIS and NFPA pictograms added