CleanTech

Safety Data Sheet

ISSUE DATE: March 2015 **REVISION DATE:** October 2015 **VERSION: 1**

1. IDENTIFICATION

PRODUCT IDENTIFIER

PRODUCT NAME MAXIMUM

OTHER MEANS OF IDENTIFICATION

Product Code HCS-107

Recommended Uses and Uses Advised Against Pot and pan dish soap. Consult your Service Representative for specific use directions. Do not mix with anything but water. Use only in an approved dispenser. Remove detergent container cover. Place container open end down in dispenser. Carefully lift container, when empty, from dispenser. Turn upright, and use cover from new container. If product contacts hands, wash off immediately.

SDS-SUPPLIER INFORMATION

SUPPLIER ADDRESS EMULSO
2750 Kenmore Avenue
Tonawanda, NY 14150

EMERGENCY TELEPHONE NUMBER

COMPANY PHONE NUMBER (716) 854-2889
COMPANY FAX NUMBER (716) 854-2809

24-HOUR EMERGENCY TELEPHONE (ACCOUNT #8686)

NORTH AMERICA 1-800-633-8253
INTERNATIONAL PERS 1-801-629-0667

2. HAZARDS IDENTIFICATION

CLASSIFICATION (GHS-US)

Skin Corrosion 1B H314
Carc. 1A H350

Full text of H-phrases: See section 16

SIGNAL WORD Danger

HAZARD STATEMENTS

HAZARD STATEMENTS May cause cancer

PRECAUTIONARY STATEMENTS

PREVENTION Obtain special instructions before use.

	Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
RESPONSE	Immediately call a poison center/doctor. Specific treatment (see section 4). Wash contaminated clothing before reuse.
IF SWALLOWED	Rinse mouth. Do NOT induce vomiting
IF IN EYES	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN/HAIR	Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED	Remove person to fresh air and keep comfortable for breathing.
IF EXPOSED/CONCERNED	Get medical advice/attention.
STORAGE	Store locked up.
DISPOSAL	Dispose of contents/container to according to local, state, and federal regulations.
OTHER HAZARDS	No additional information available.
UNKNOWN ACUTE TOXICITY	Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE Not applicable.

CHEMICAL NAME	CAS NUMBER	WEIGHT - %	CLASSIFICATION (GHS-US)
Monoethanolamine	141-43-5	10-14	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1B, H314
Ethanol	64-17-5	2.6-3	Flam. Liq. 2, H225 Carc. 1A, H350

Full text of H-phrases: See section 16

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

DESCRIPTION OF FIRST AID MEASURES

GENERAL ADVICE Provide this SDS to medical personnel for treatment.

EYE CONTACT	Immediately flush eye with copious amounts of cool, running water. Remove contact lenses if applicable, and continue flushing for at least 15 minutes, holding eyelids apart to ensure thorough rinsing of the entire eye. GET IMMEDIATE MEDICAL ATTENTION.
SKIN CONTACT	Immediately flush skin with copious amounts of cool, running water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician, immediately. Wash clothing before re-use.
INHALATION	Move victim to fresh air and keep at rest position. If qualified give oxygen or artificial respiration as needed.
INGESTION	DO NOT induce vomiting. Give large amounts of water if victim is conscious. Never give anything by mouth to an unconscious person. Seek medical attention immediately.
PROTECTION OF FIRST AIDERS	DO NOT use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration. With the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE & DELAYED

MAIN SYMPTOMS	Skin/eye burns. Corrosive to mouth and throat. Ingestion can cause severe and rapid burning of mouth, throat and digestive tract. Mucous membrane irritant.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECCESARY

NOTES TO PHYSICIAN	If ingested, probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA	The material is not combustible. Use extinguishing media appropriate for surrounding fire. Use water spray or fog, foam, dry chemical, carbon dioxide, alcohol foam, if product is involved. Use of water spray when fighting fire may be inefficient.
SPECIFIC HAZARDS ARISING FROM CHEMICAL	No additional information available.

EXPLOSION DATA

SENSITIVITY TO MECHANICAL IMPACT	None.
SENSITIVITY TO STATIC DISCHARGE	None.

PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS

Wet product is slippery. Avoid physical contract with wet material; highly caustic. Wear self-contained positive pressurized breathing apparatus MSHA/NIOSH approved or equivalent to maintain TLV.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

NON-EMERGENCY PERSONNEL	Ensure adequate ventilation. Avoid contact with skin, eyes, and clothing. Use personal protective equipment. Avoid breathing dust, fume, gas, mist, vapors, and spray. Wash face, hands and any exposed skin thoroughly after handling.
EMERGENCY RESPONDERS	Do not attempt to take action without suitable protective equipment.
ENVIRONMENTAL PRECAUTIONS	Avoid release to the environment.

METHODS AND MATERIALS FOR CONTAMINATION AND CLEAN-UP

CONTAMINATION AND CLEAN-UP	Prevent further leakage or spillage if safe to do so. Sweep up solids, soak up if liquified. Transfer to appropriate waste container. Neutralize residue with mild acid and flush with water. Dispose of in accordance with local, state, and federal regulations.
REFERENCE TO OTHER SECTIONS	For further information refer to section 13.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

PROTECTIVE MEASURES	Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Wash thoroughly after work using soap and water. Do not eat, drink or smoke when using this product. Always use personal protective equipment.

CONDITIONS FOR SAFE STORAGE (INCLUDING ANY INCOMPATIBILITIES)

STORAGE CONDITIONS	Store locked up. Keep container in well-ventilated area. Keep container tightly closed when not in operation. Store away from incompatible materials. Keep out of the reach of children.
SPECIFIC END USE(S)	Pot and pan dish soap. Consult your Service Representative for specific use directions. Do not mix with anything but water. Use only in an approved dispenser. Remove detergent container cover. Place container open end down in dispenser. Carefully lift container, when empty, from dispenser. Turn upright, and use cover from new container. If product contacts hands, wash off immediately.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

MAXIMUM

ACGIH	Not applicable.	
OSHA	Not applicable	

Ethanol (64-17-5)

ACGIH	ACGIH STEL (ppm)	1000 ppm
ACGIH	Remark (ACGIH)	URT irr

OSHA	OSHA PEL (TWA) (mg/m³)	1900 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

Monoethanolamine (141-43-5)

ACGIH	ACGIH TWA (ppm)	3 ppm
ACGIH	ACGIH STEL (ppm)	6 ppm
ACGIH	Remark (ACGIH)	Eye & skin irr
OSHA	OSHA PEL (TWA) (mg/m³)	6 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	3 ppm

EXPOSURE CONTROLS

No additional information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Solid
COLOR	Pink
ODOR	There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odour(s): Alcohol odour Pleasant odour Characteristic odour Mild odour Unpleasant odour Ammonia odour Smell of fish No data available on odour Odourless
ODOR THRESHOLD	No data available.

PROPERTY	VALUES
pH	7.8
MELTING POINT/FREEZING POINT	No data available.
BOILING POINT/BOILING RANGE	No data available.
FLASH POINT	> 250 °F
RELATIVE EVAPORATION RATE (butyl acetate=1)	No data available.
FLAMMABILITY (SOLID, GAS)	No data available.
VAPOR PRESSURE	No data available.
RELATIVE DENSITY	No data available.
RELATIVE VAPOR DENSITY AT 20 °C	No data available.
WATER SOLUBILITY	Water: Solubility in water of component(s) of the mixture: < 0.1 g/100ml; 0.044 g/100ml; 44.45 g/100ml
LOG POW	No data available.
LOG KOW	No data available.
AUTOIGNITION TEMPERATURE	No data available.
DECOMPOSITION TEMPERATURE	No data available.
VISCOSITY	No data available.
VISCOSITY, KINEMATIC	No data available.
VISCOSITY, DYNAMIC	No data available.
EXPLOSION LIMITS	No data available.
EXPLOSIVE PROPERTIES	No data available.
OXIDIZING PROPERTIES	No data available.

OTHER INFORMATION

No additional information available.

10. STABILITY AND REACTIVITY

REACTIVITY	The material is not combustible. Use extinguishing media appropriate for surrounding fire. Use water spray or fog, foam, dry chemical, carbon dioxide, alcohol foam, if product is involved. Use of water spray when fighting fire may be inefficient.
CHEMICAL STABILITY	Stable under normal conditions.
POSSIBILITY OF HAZARDOUS REACTIONS	No dangerous reactions known under normal conditions of use.
CONDITIONS TO AVOID	Strong oxidants.
INCOMPATIBLE MATERIALS	Strong oxidants.
HAZARDOUS DECOMPOSITION PRODUCTS	Oxides of sulfur and nitrogen.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects.

ACUTE TOXICITY Not classified.

Ethanol (64-17-5)

LD50 oral rat	10740 mg/kg body weight (Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LD50 dermal rabbit	> 16000 mg/kg (Rabbit; Literature study)
ATE US (oral)	10740.000 mg/kg body weight

Monoethanolamine (141-43-5)

ATE US (oral)	500.000 mg/kg body weight
ATE US (dermal)	1100.000 mg/kg body weight
ATE US (dust, mist)	1.500 mg/l/4h

SKIN CORROSION/IRRITATION	Causes severe skin burns and eye damage. pH: 7.8
SERIOUS EYE DAMAGE/IRRITATION	Not classified. pH: 7.8
RESPIRATORY OR SKIN SENSITIZATION	Not classified.
GERM CELL MUTAGENICITY	Not classified.
CARCINOGENICITY	May cause cancer.

Ethanol (64-17-5)

IARC group	1 - Carcinogenic to humans

REPRODUCTIVE TOXICITY	Not classified.
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)	Not classified.
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE)	Not classified.
ASPIRATION HAZARD	Not classified.

12. ECOLOGICAL INFORMATION

TOXICITY

Ethanol (64-17-5)

LC50 fish 1	14200 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 1	9300 mg/l (48 h; Daphnia magna)
LC50 fish 2	13000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	10800 mg/l (24 h; Daphnia magna)
Threshold limit other aquatic organisms 1	65 mg/l (72 h; Protozoa)
Threshold limit algae 1	1450 mg/l (192 h; Microcystis aeruginosa; Growth rate)
Threshold limit algae 2	5000 mg/l (168 h; Scenedesmus quadricauda; Growth rate)

Monoethanolamine (141-43-5)

LC50 fish 1	150 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Pure substance)
EC50 Daphnia 1	140 mg/l (Daphnia magna; Pure substance)
LC50 fish 2	329.16 mg/l (96 h; Lepomis macrochirus; Pure substance)
TLM fish 1	100 - 1000,96 h; Pisces; Pure substance
TLM other aquatic organisms 1	100 - 1000,96 h; Pure substance

PERSISTENCE AND DEGRADIBILITY

Ethanol (64-17-5)

Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.8 - 0.967 g O_2/g substance
Chemical oxygen demand (COD)	1.70 g O_2/g substance
ThOD	2.10 g O_2/g substance
BOD (% of ThOD)	0.43 % ThOD

Monoethanolamine (141-43-5)

Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0.80 g O_2/g substance
Chemical oxygen demand (COD)	1.34 g O_2/g substance
ThOD	2.49 g O_2/g substance
BOD (% of ThOD)	0.32 % ThOD

BIOACCUMULATIVE POTENTIAL

Ethanol (64-17-5)

BCF fish 1	1 (72 h; Cyprinus carpio)
Log Pow	-0.31 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4)

Monoethanolamine (141-43-5)

Log Pow	-1.91
Bioaccumulative potential	Bioaccumulation: not applicable

MOBILITY IN SOIL

Ethanol (64-17-5)

Surface tension	0.022 N/m (20 °C)

OTHER ADVERSE EFFECTS

EFFECT ON THE GLOBAL WARMING No known ecological damage caused by this product.

13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

Dispose of contents/container according to local, state, and federal regulations.

14. TRANSPORT INFORMATION

DOT

TRANSPORT DOCUMENT DESCRIPTION	UN2491 Ethanolamine solutions, 8, III
UN-NO.	UN2491
PROPER SHIPPING NAME	Ethanolamine solutions
TRANSPORT HAZARD CLASS(ES)	8 - Class 8 - Corrosive material 49 CFR 173.136 8 – Corrosive
HAZARD LABELS	
PACKAGING GROUP	III - Minor Danger
PACKAGING NON BULK (49 CFR 173.xxx)	203
PACKAGING BULK (49 CFR 173.xxx)	241
SPECIAL PROVISIONS (49 CRF 172.102)	IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T4 - 2.65 178.274(d)(2) Normal 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
PACKAGING EXCEPTIONS (49 CFR 173.xxx)	154
QUANTITY LIMITATIONS PASSENGER AIRCRAFT/RAIL (49 CFR 173.27)	5 L
QUANTITY LMITATIONS CARGO AIRCRAFT ONLY (49 CFR 175.75)	60 L
VESSEL STOWAGE LOCATION	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.
VESSEL STOWAGE OTHER	52 - Stow ‘‘separated from’’ acids.
OTHER INFORMATION	No supplementary information available.

ADR

No additional information available.

IMDG (TRANSPORTATION BY SEA)

UN-NO.	UN2491
PROPER SHIPPING NAME	Ethanolamine solution
CLASS	8 – Corrosive substances
PACKAGING GROUP	III – Substances presenting low danger.

IATA (AIR TRANSPORT)

UN-NO.	UN2491
PROPER SHIPPING NAME	Ethanolamine solution
CLASS	8 – Corrosives
PACKAGING GROUP	III – Minor damage

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

MAXIMUM

Not listed on the United States TSCA (Toxic Substances Control Act) inventory.

ETHANOL (64-17-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory.

MONOETHANOLAMINE (141-43-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory.

INTERNATIONAL REGULATIONS

CANADA

No additional information available.

EU-REGULATIONS

No additional information available.

CLASSIFICATION ACCORDING TO REGULATION (EC) NO. 1272/2008 [CLP]

No additional information available.

CLASSIFICATION ACCORDING TO DIRECTIVE 67/548/EEC [DSD] OR 1999/45/EC [DPD]

Not classified.

NATIONAL REGULATIONS

ETHANOL (64-17-5)

Listed on IARC (International Agency for Research on Cancer)

U.S. STATE REGULATIONS

ETHANOL (64-17-5)

U.S. - New Jersey - Right to Know Hazardous Substance List

MONOETHANOLAMINE (141-43-5)

U.S. - New Jersey - Right to Know Hazardous Substance List

16. OTHER INFORMATION

FULL TEXT OF H-PHRASES:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Carc. 1A	Carcinogenicity Category 1A
Flam. Liq. 2	Flammable liquids Category 2
Skin Corr. 1B	Skin corrosion/irritation Category 1B
H225	Highly flammable liquid and vapor
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H332	Harmful if inhaled
H350	May cause cancer

DISCLAIMER

The information provided in this Safety Data Sheet is correct to the best of our knowledge at the date of its publication. 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 relates 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 in the text.

END OF SAFETY DATA SHEET