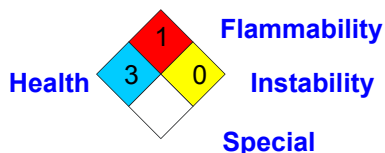


Material Safety Data Sheet

Emergency phone: Alpha Chemtrec #5591
 US & Canada: 800 424-9300
 Mexico: 01 800 022 1400, (55) 5559 1588
 Brasil: 55 11 4353 2700



Health	3
Flammability	1
Physical hazards	0
Personal protection	

1. Product and company identification

Product name : ALPHA® 2110 SAPONIFIER CLEANER
Product code : 116381
Material uses : Specialty assembly materials for the electronics industries
Manufacturer :

Alpha
 109 Corporate Blvd.
 South Plainfield, NJ 07080

Toll Free: (800) 367-5460
 Main Phone: (908) 791-3000
 Fax: (908) 791-3090
 www.alpha.alent.com

ALPHA METALS MEXICO SA DE CV
 Avenida Nafta No. 800,
 Parque Industrial Stiva Aeropuerto
 Apodaca, Nuevo León, C.P. 66600
 Mexico
 www.alpha.alent.com
 Customer Service: (814) 946-1611

Cookson Electronics Brasil Ltda
 Av.: José Odorizzi, No. 650
 São Bernardo do Campo
 São Paulo, CEP098100 000
 Brasil
 Phone: 55 11 4353 2500
 Fax: 55 11 4353 2521
 www.alpha.alent.com

Validation date : 3/7/2014. **Supersedes Date** : 3/7/2013.
Prepared by : T. Valverde
 (203)-799-4940

2. Hazards identification

Physical state : Liquid. [Clear.]
Odor : Ammonia. [Slight]
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview : DANGER!
 This product contains material(s) that are absorbed through the skin. Toxic in contact with skin and if swallowed. Corrosive to the eyes, skin, respiratory system and digestive tract. Causes burns. Do not breathe vapor or mist. Do not ingest. Do not get in eyes or on skin or clothing. Contains material that may cause target organ damage, based on animal data. Contains material which may cause birth defects, based on animal data. Avoid exposure during pregnancy. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.
Potential acute health effects
Inhalation : Corrosive to the respiratory system. May cause burns to mouth, throat and stomach. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. The exposed person may need to be kept under medical surveillance for 48 hours. Exposure can cause lung irritation, chest pain and edema, which may be fatal.

2. Hazards identification

- Ingestion** : Toxic if swallowed. Corrosive to the digestive tract. May cause burns to mouth, throat and stomach. Can cause target organ damage. Adverse symptoms may include the following: nausea or vomiting stomach pains Ingestion may cause gastrointestinal irritation and diarrhea.
- Skin** : Corrosive to the skin. Causes burns. Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc. Toxic in contact with skin. This product contains material(s) that are absorbed through the skin. Can cause target organ damage. and symptoms similar to those listed under inhalation or ingestion.
- Eyes** : Corrosive to eyes. Causes burns. Direct contact with the eyes can cause irreversible damage, including blindness.

Potential chronic health effects

- Chronic effects** : Contains material that can cause target organ damage. Adverse symptoms may include the following:
Amines: Other Symptoms include: muscle weakness, circulatory collapse and loss of consciousness or coma. Prolonged exposure may result in skin burns and ulcerations.. Repeated skin exposure can produce local skin destruction or dermatitis.
surfactant: cyanosis, muscle weakness, loss of consciousness or coma and death.
- Target organs** : Contains material which may cause damage to the following organs: blood, kidneys, the nervous system, liver, mucous membranes, heart, gastrointestinal tract, cardiovascular system, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea, testes.
- Carcinogenicity** : Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.
- Mutagenicity** : Not classified.
- Teratogenicity** : Contains material which may cause birth defects, based on animal data.
- Developmental effects** : Not classified.
- Fertility effects** : Not classified.
- California Prop. 65** : **WARNING:** This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.
- Medical conditions aggravated by over-exposure** : Pre-existing skin and digestive disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>% by weight</u>
Amines	-	50-60
Proprietary Glycol	-	30-40
Solvent.	-	1-5
surfactant	-	1-5
surfactant	-	0.1-1.0
surfactant	-	0.1-1.0

Any ingredient not listed in Section 3 is non-regulated or present in the product in concentrations below legal disclosure limits.

4. First aid measures

- Eye contact** : Get medical attention immediately. Chemical burns must be treated promptly by a physician. Check for and remove any contact lenses. Immediately flush eyes with running water for at least 60 minutes, keeping eyelids open. Provide a readily-accessible eyewash facility and quick-drench safety shower.

4 . First aid measures

- Skin contact** : Get medical attention immediately. In case of contact, immediately flush skin with plenty of water for at least 60 minutes while removing contaminated clothing and shoes. Provide a readily-accessible eyewash facility and quick-drench safety shower. Chemical burns must be treated promptly by a physician. Remove contaminated clothing and shoes. This product contains material(s) that are absorbed through the skin. See inhalation and ingestion. Wear appropriate personal protective equipment. Avoid direct contact with the human body. Wash contaminated clothing before reuse. Clean shoes thoroughly before reuse.
- Inhalation** : Get medical attention immediately. Chemical burns must be treated promptly by a physician. Move exposed person to fresh air. If it is suspected that mists are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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. Move affected person to fresh air. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.
- Ingestion** : Get medical attention immediately. Chemical burns must be treated promptly by a physician. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wear suitable protective clothing, gloves and eye/face protection. If it is suspected that mists are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

5 . Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : 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.
- Hazardous combustion products** : carbon oxides
nitrogen oxides
- 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.

6 . Accidental release measures

- Personal precautions** : 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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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).
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. 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. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
- 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.

7 . Handling and storage

- Handling** : Put on appropriate personal protective equipment (see section 8). 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. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Provide a readily-accessible eyewash facility and quick-drench safety shower. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Always add bases to water and acidic solutions slowly and cautiously. Never add water to bases. The extreme heat generated can cause a violent reaction.
- Storage** : 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. Separate from acids. 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. Provide a readily-accessible eyewash facility and quick-drench safety shower.
Keep container tightly closed. Keep container in a cool, well-ventilated area.

8 . Exposure controls/personal protection

Product name

Amines

Exposure limits

ACGIH TLV (United States, 3/2012).

STEL: 15 mg/m³ 15 minute(s).

STEL: 6 ppm 15 minute(s).

TWA: 7.5 mg/m³ 8 hour(s).

TWA: 3 ppm 8 hour(s).

NIOSH REL (United States, 6/2009).

STEL: 15 mg/m³ 15 minute(s).

STEL: 6 ppm 15 minute(s).

TWA: 8 mg/m³ 10 hour(s).

TWA: 3 ppm 10 hour(s).

OSHA PEL (United States, 6/2010).

TWA: 6 mg/m³ 8 hour(s).

TWA: 3 ppm 8 hour(s).

8 . Exposure controls/personal protection

OSHA PEL 1989 (United States, 3/1989).

STEL: 15 mg/m³ 15 minute(s).

STEL: 6 ppm 15 minute(s).

TWA: 8 mg/m³ 8 hour(s).

TWA: 3 ppm 8 hour(s).

surfactant

ACGIH TLV (United States, 3/2012). Notes: Refers to Appendix A -- Carcinogens. See Notice of Intended changes.

C: 100 mg/m³ Form: Aerosol

OSHA PEL 1989 (United States, 3/1989).

CEIL: 125 mg/m³

CEIL: 50 ppm

Consult local authorities for acceptable exposure limits.

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.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Provide a readily-accessible eyewash facility and quick-drench safety shower. Processes should be designed to minimize airborne and skin exposure to hazardous substances.

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. Take off immediately all contaminated clothing. Contaminated work clothing should not be allowed out of the workplace.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with NIOSH 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. Risk assessments should be completed by a Certified Industrial Hygienist.

Hands : 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. Risk assessments should be completed by a Certified Industrial Hygienist.

Eyes : Avoid contact with eyes. Safety eyewear should be used when there is a likelihood of exposure. Direct contact with the eyes can cause irreversible damage, including blindness. Use safety eyewear designed to protect against splash of liquids.

Skin : Avoid contact with skin and clothing. Wear suitable protective clothing. Body garments used should be based upon the task being performed (e.g., lab coat, chemical resistant protective suit, sleevelets, synthetic apron, gauntlets) to avoid exposed skin surfaces. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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.

9 . Physical and chemical properties

Physical state	: Liquid. [Clear.]
Flash point	: Closed cup: >93°C (>199.4°F) [Pensky-Martens.]
Auto-ignition temperature	: 410°C (770°F)
Flammable limits	: Not available.
Color	: Clear. Blue.
Odor	: Ammonia. [Slight]
pH	: 13.4
Boiling/condensation point	: >35°C (>95°F)
Melting/freezing point	: Not available.
Relative density	: 1
Vapor pressure	: Not available.
Vapor density	: Not available.
Odor threshold	: Not available.
Evaporation rate	: Not available.
VOC	: 920 g/l
Solubility	: Soluble in the following materials: cold water and hot water.

10 . Stability and reactivity

Stability	: The product is stable.
Conditions to avoid	: No specific data.
Incompatibility with various substances	: Extremely reactive or incompatible with oxidizing agents, reducing agents, organic materials, metals, acids. Slightly reactive to reactive with combustible materials, alkalis, moisture. Acetic anhydride
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Other Hazardous decomposition products	: carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂ etc.), Ammonia.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Amines	LC50 Inhalation Vapor	Cat	>2420 mg/m ³	2 hours
	LC50 Inhalation Vapor	Mouse	>2420 mg/m ³	2 hours
	LD50 Dermal	Rabbit	1 mL/kg	-
	LD50 Oral	Rat	1720 mg/kg	-
	LDLo Oral	Mammal	1400 mg/kg	-
Proprietary Glycol	LD50 Dermal	Rabbit	2700 mg/kg	-
	LD50 Oral	Rat	4500 mg/kg	-
Solvent. surfactant	LD50 Oral	Rat	1350 mg/kg	-
	LD50 Dermal	Rabbit	>3000 mg/kg	-
surfactant	LD50 Oral	Rat	2745 mg/kg	-
	LD50 Oral	Rat	4700 mg/kg	-
surfactant	LC50 Inhalation Vapor	Rat	>20 mg/L	1 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	4600 mg/kg	-

Carcinogenicity Classification

11 . Toxicological information

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
surfactant	A4	-	-	-	-	-

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure	Effects
Amines	Positive - Oral	Rat - Female	500 mg/kg During Pregnancy	-	-

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure	Effects
surfactant	-	-	Equivocal	Rat - Female	Oral: 50 g/kg	-	-
	-	-	Equivocal	Rat - Female	Oral: 8580 mg/kg	-	-

Alpha has not conducted specific studies on the toxicity of this product.

12 . Ecological information

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Amines	Acute EC50 80000 ug/L Fresh water Acute LC50 >100000 ug/L Marine water	Algae - Isochrysis galbana Crustaceans - Crangon crangon - Adult	96 hours 48 hours
Proprietary Glycol	Acute LC50 170000 ug/L Fresh water Acute LC50 1300000 ug/L Fresh water	Fish - Carassius auratus - 3.3 g Fish - Lepomis macrochirus - 33 to 75 mm	96 hours 96 hours
surfactant	Acute LC50 6900000 to 8800000 ug/L Fresh water Acute LC50 41000000 ug/L Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate Daphnia - Daphnia magna - Neonate	48 hours 48 hours
surfactant	Acute LC50 8050000 ug/L Fresh water Acute EC50 91 mg/l Acute LC50 36 mg/l	Fish - Pimephales promelas - <=7 days Daphnia Fish	96 hours 48 hours 96 hours

13 . Disposal considerations





Waste disposal

: 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.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG* Label	Additional information
DOT Classification	UN3267	Corrosive liquid, basic, organic, n.o.s. (Amines)	8	III 	ERG# 153
IMDG Class	UN3267	Corrosive liquid, basic, organic, n.o.s. (Amines)	8	III 	-
IATA-DGR Class	UN3267	Corrosive liquid, basic, organic, n.o.s. (Amines)	8	III 	-
UN Class	UN3267	Corrosive liquid, basic, organic, n.o.s. (Amines)	8	III 	-

PG* : Packing group

15 . Regulatory information

United States

HCS Classification

: Toxic material
Corrosive material
Target organ effects

U.S. Federal regulations

: 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.

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	Proprietary Glycol surfactant	-	-
Supplier notification	Proprietary Glycol surfactant	-	-

SARA 302/304/311/312 extremely hazardous substances: No products were found.

California Prop. 65

WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada

WHMIS (Canada)

: Class D-1B: Material causing immediate and serious toxic effects (Toxic).
Class D-2A: Material causing other toxic effects (Very toxic).
Class E: Corrosive material

Canada inventory

: Not determined.

International lists

Continued on next page

16 . Other information

Definition of Terms

ACGIH	American Conference of Governmental Industrial Hygienists
Ceiling	Maximum exposure limit defined by OSHA
CAS	Chemical Abstract Service
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
REL	Recommended Exposure Limit
RTK	Right to Know
SARA	Superfund Amendments and Reauthorization Act
STEL	Short Term Exposure Limit
TLV	ACGIH Threshold Limit Value
TLV-C	ACGIH Threshold Limit Value, Ceiling
TRADE SECRET	Claimed as allowed under 29CFR§1910.1200
TSCA	Toxic Substances Control Act
PPE	Personal Protection Equipment
CEPA	Canadian Environmental Protection Act
DSL	Domestic Substance List
NDSL	Non-Domestic Substance List
NSN	New Substance Notification Rules

Disclaimer

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Additionally, Cookson Electronics assumes no responsibility for injury to the vendee or third persons proximately caused by the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

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