

## SAFETY DATA SHEET

### 1. Identification

GHS product identifier	AE-2A
MSDS Number	AE423
Version #	05
Issue date	01-27-2011
CAS #	68002-97-1
Product use	Intermediate for manufacture of detergents.
Recommended Restrictions	Not available.
Synonym(s)	Ethoxylated C10-16 Alcohol
Manufacturer	P&G Chemicals Asia 238-A Thompson Road #21-01/10 Novena Square Tower A Singapore 307684 (65) 6824 5728 (day phone) PGChemMSDS.IM@pg.com CHEMTREC: +1-703-527-3887 Quality or Service Issues: 1-800-477-8899 or +1-513-626-6882

### 2. Hazards identification

GHS classification		
Physical hazards	Explosives	Classification not possible
	Flammable gases	Not applicable
	Flammable aerosols	Not applicable
	Oxidizing gases	Not applicable
	Gases under pressure	Not applicable
	Flammable liquids	Not classified
	Flammable solids	Not applicable
	Self-reactive substances and mixtures	Classification not possible
	Pyrophoric liquids	Classification not possible
	Pyrophoric solids	Not applicable
	Self-heating substances and mixtures	Classification not possible
	Substances and mixtures which, in contact with water, emit flammable gases	Classification not possible
	Oxidizing liquids	Classification not possible
	Oxidizing solids	Not applicable
	Organic peroxides	Classification not possible
	Corrosive to metals	Classification not possible
Health hazards	Acute toxicity, oral	Not classified
	Acute toxicity, dermal	Classification not possible
	Acute toxicity, inhalation	Not applicable
	Skin corrosion/irritation	Classification not possible
	Serious eye damage/eye irritation	Category 1
	Sensitization, respiratory	Classification not possible
	Sensitization, skin	Classification not possible
	Germ cell mutagenicity	Classification not possible
	Carcinogenicity	Classification not possible
	Reproductive toxicity	Classification not possible
	Specific target organ toxicity, single exposure	Classification not possible

	Specific target organ toxicity, repeated exposure	Classification not possible
	Aspiration hazard	Classification not possible
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Classification not possible
	Hazardous to the ozone layer	Not classified

GHS label elements

Signal word

Danger



Hazard statement

Causes serious eye damage. Very toxic to aquatic life.

Precautionary statement

Prevention

Wear eye/face protection. Avoid release to the environment. Not applicable.

Response

Collect spillage. IF exposed or concerned: Get medical advice/attention. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Storage

Store in accordance with local/regional/national/international regulation.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

### 3. Composition/information on ingredients

Components	CAS #	Percent
ALCOHOLS, C10-16, ETHOXYLATED	68002-97-1	100
Additional components	CAS #	Percent
ETHYLENE OXIDE	75-21-8	< 10 ppm

### 4. First aid measures

First aid procedures

Inhalation

If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Skin

Rinse skin with water/shower. Get medical attention if irritation develops or persists. Call a POISON CENTER or doctor/physician if you feel unwell.

Eye

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops or persists. Call a physician or poison control center immediately.

Ingestion

Rinse mouth. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Notes to physician

In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed. Not applicable.

General advice

In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 5. Fire-fighting measures

Suitable extinguishing media

Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Specific hazards arising from the chemical

Not available.

Protective equipment and precautions for firefighters

In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out. Water runoff can cause environmental damage.

## 6. Accidental release measures

Personal precautions	Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods for containment	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Collect spillage. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.
Methods for cleaning up	<p>Large Spills: Prevent product from entering drains. Do not allow material to contaminate ground water system. Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water.</p> <p>Never return spills in original containers for re-use.</p>

## 7. Handling and storage

Handling	Do not get this material in contact with eyes. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains. Use care in handling/storage.
Storage	Keep container tightly closed. Keep out of the reach of children. Use care in handling/storage. Nitrogen blanket recommended for large tanks (capacity 1000 m3 or higher). Storage temperatures: 50 °C maximum. Unsuitable containers: copper, zinc, aluminum, copper alloy, zinc alloy, aluminum alloy.

## 8. Exposure controls / personal protection

### Control parameters

US. ACGIH Threshold Limit Values

Additional components	Type	Value
ETHYLENE OXIDE (75-21-8)	TWA	1.0000 ppm

### Personal protective equipment

Hand protection	Not normally needed.
General	Eye wash fountain is recommended.
Eye/face protection	Wear eye/face protection. Wear chemical protective equipment that is specifically recommended by the manufacturer.
Skin protection	Wear suitable protective clothing. Wear protective gloves. No special protective equipment required.
Respiratory protection	No personal respiratory protective equipment normally required.

## 9. Physical and chemical properties

### Appearance

Liquid.

Physical state	Liquid.
Color	Clear. to Slightly. Hazy.
Form	Liquid.
Odor	Characteristic.
Odor threshold	Not available.
pH	6 - 7.5
Melting point/Freezing point	Not available.
Boiling point	482 °F (250 °C)
Flash point	>= 300 °F (>= 148.9 °C) Pensky-Martens Closed Cup
Evaporation rate	Not available.
Flammability (Train fire)	Not available.
Flammability limits in air, lower, % by volume	Not available.
Flammability limits in air, upper, % by volume	Not available.
Vapor pressure	<= 0.01 mm Hg

Vapor density	Not available.
Relative density	Not available.
Solubility (H2O)	0 %
Octanol/H2O coeff	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Specific gravity	<= 1
Density	0.96 g/cm3

## 10. Stability and reactivity

Chemical stability	No hazards to be especially mentioned.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Exposure to air.
Materials to avoid	Strong oxidizing substances. Strong acids. Strong bases.
Hazardous decomposition products	Peroxides. Peracids. Burning releases carbon monoxide - carbon dioxide.

## 11. Toxicological information

### Toxicological data

Product	Test Results
ALCOHOLS, C10-16, ETHOXYLATED (68002-97-1)	Acute Oral LD50 Rat: >= 2000 mg/kg Based on compositionally similar material
Additional components	Test Results
ETHYLENE OXIDE (75-21-8)	Acute Inhalation LC50 Dog: 1.8 mg/l 4.00 Hours Acute Inhalation LC50 Guinea pig: 1.5 mg/l 4.00 Hours Acute Inhalation LC50 Mouse: 1.505 mg/l 4.00 Hours Acute Inhalation LC50 Rat: 0.9 mg/l 1.00 Hours Acute Oral LD50 Guinea pig: 270 mg/kg Acute Oral LD50 Mouse: 280 mg/kg Acute Oral LD50 Rat: 72 mg/kg Acute Other LD50 Mouse: 175 mg/kg Acute Other LD50 Rat: 100 mg/kg

Routes of exposure	Eye contact.
Acute effects	Harmful if swallowed.
Carcinogenicity	
ACGIH Carcinogens	
ETHYLENE OXIDE (CAS 75-21-8)	A2 Suspected human carcinogen.
IARC Monographs. Overall Evaluation of Carcinogenicity	
ETHYLENE OXIDE (CAS 75-21-8)	1 Carcinogenic to humans.
Skin corrosion/irritation	Not available.
Serious eye damage/eye irritation	Risk of serious damage to eyes.
Other information	Not available.

## 12. Ecological information

### Ecotoxicological data

Additional components	Test Results
ETHYLENE OXIDE (75-21-8)	LC50 Fathead minnow (Pimephales promelas): 73 - 96 mg/l 96.00 hours
Ecotoxicity	Components of this product are hazardous to aquatic life.
Environmental effects	Harmful to aquatic life.
Persistence / degradability	Not established.
Bioaccumulation	Not established.
Aquatic toxicity	Very toxic to aquatic organisms.

Mobility Not established.  
 Other adverse effects Not established.

### 13. Disposal considerations

Disposal methods Do not allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local/regional/national/international regulations.

### 14. Transport information

#### ADR

UN number 3082  
 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Alcohol C12-C15 poly (1-3) ethoxylate)  
 Hazard class 9  
 Packing group III  
 Environmental hazards  
 Marine pollutant Alcohol C13-C15 poly (1-6) ethoxylate  
 Special precautions IMDG Regulated Marine Pollutant.  
 Labels required 9  
 Hazard ID 90  
 Item M6  
 Transport Category 3

#### IATA

UN number 3082  
 Proper shipping name Environmentally hazardous substance, liquid, n.o.s. (Alcohol C12-C16 poly (1-6) ethoxylate)  
 Hazard class 9  
 Packing group III  
 Environmental hazards  
 Marine pollutant Alcohol C13-C15 poly (1-6) ethoxylate  
 Special precautions IMDG Regulated Marine Pollutant.  
 ERG code 9L

#### IMDG

UN number 3082  
 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Alcohol C12-C16 poly (1-6) ethoxylate)  
 Hazard class 9  
 Subsidiary hazard class •  
 Packing group III  
 EmS No. F-A, S-F  
 Environmental hazards  
 Marine pollutant Alcohol C13-C15 poly (1-6) ethoxylate  
 Special precautions IMDG Regulated Marine Pollutant.

#### RID

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Alcohol C12-C15 poly (1-3) ethoxylate)  
 Hazard class 9  
 UN number 3082  
 Packing group III  
 Marine pollutant Alcohol C13-C15 poly (1-6) ethoxylate  
 Labels required 9  
 Item M6  
 Transport Category 3



ADR



IATA



IMDG



RID

## 15. Regulatory information

### Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Switzerland	Switzerland FOPH	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

## 16. Other information

### Disclaimer

The submission of the MSDS may be required by law, but this is not an assertion that the substance is hazardous when used in accordance with proper safety practices and normal handling procedures. Data supplied are for use only in connection with occupational safety and health.

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### Revision date

01-27-2011