## SECTION 1. IDENTIFICATION

| | | |
|---|---|---|
| Product name | : | AE01 |
| Product code | : | V2542, V2648 |
| CAS-No. | : | 68439-50-9 |
| Synonyms | : | Alcohols, C12-14, ethoxylated |

**Manufacturer or supplier's details**

| | | |
|---|---|---|
| Manufacturer/Supplier | : | **Shell CAPSA**<br>Av. Roque Saenz Peña 788<br>Buenos Aires, 1383<br>Argentina |
| Telephone | : | (+54 11) 4130-2168 |
| Telefax | : | (+54 11) 4130-2180 |
| Contact for Safety Data Sheet | : | |
| Emergency telephone number | : | Locais: (+11 15) 4970-7391 / 4970-7390 / 5062-6601 / 4973-7368; Internacionais: (+54 911) 4970-7391 / 4970-7390 / 5062/6601 / 4973-7 |

**Recommended use of the chemical and restrictions on use**

| | | |
|---|---|---|
| Recommended use | : | Use in detergent manufacture. |
| Restrictions on use | : | This product must not be used in applications other than the above without first seeking the advice of the supplier.<br>This product must not be used in applications other than those listed in Section 1 without first seeking the advice of the supplier. |

## SECTION 2. HAZARDS IDENTIFICATION

**GHS Classification**

| | | |
|---|---|---|
| Short-term (acute) aquatic hazard | : | Category 1 |
| Long-term (chronic) aquatic hazard | : | Category 2 |

**GHS label elements**

Hazard pictograms :

Signal word : Warning

Hazard statements : PHYSICAL HAZARDS:
Not classified as a physical hazard under GHS criteria.
HEALTH HAZARDS:
Not classified as a health hazard under GHS criteria.
ENVIRONMENTAL HAZARDS:
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P273 Avoid release to the environment.
**Response:**
P391 Collect spillage.
**Storage:**
No precautionary phrases.
**Disposal:**
P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards which do not result in classification**

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

**Hazardous components**

| Chemical name | CAS-No. | Classification | Concentration (% w/w) |
|---|---|---|---|
| C12-14 Alcohol ethoxylate | 68439-50-9 | Aquatic Acute1; H400<br>Aquatic Chronic2; H411 | 100 |

For explanation of abbreviations see section 16.

## SECTION 4. FIRST-AID MEASURES

General advice : Not expected to be a health hazard when used under normal conditions.

If inhaled : No treatment necessary under normal conditions of use.
If symptoms persist, obtain medical advice.

In case of skin contact : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.
If persistent irritation occurs, obtain medical attention.

| | | |
|---|---|---|
| In case of eye contact | : | Flush eye with copious quantities of water.<br>Remove contact lenses, if present and easy to do. Continue rinsing.<br>If persistent irritation occurs, obtain medical attention. |
| If swallowed | : | In general no treatment is necessary unless large quantities are swallowed, however, get medical advice. |
| Most important symptoms and effects, both acute and delayed | : | Not considered to be an inhalation hazard under normal conditions of use.<br>Possible respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing.<br>No specific hazards under normal use conditions.<br>Skin irritation signs and symptoms may include a burning sensation, redness, or swelling.<br>No specific hazards under normal use conditions.<br>Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.<br>No specific hazards under normal use conditions.<br>Ingestion may result in nausea, vomiting and/or diarrhoea.<br>Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance. |
| Protection of first-aiders | : | When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings. |
| Notes to physician | : | Call a doctor or poison control center for guidance.<br>Treat symptomatically. |

## SECTION 5. FIRE-FIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. |
| Unsuitable extinguishing media | : | None |
| Specific hazards during fire-fighting | : | Carbon monoxide may be evolved if incomplete combustion occurs. |
| Specific extinguishing methods | : | Standard procedure for chemical fires.<br>Clear fire area of all non-emergency personnel.<br>Keep adjacent containers cool by spraying with water. |
| Special protective equipment for firefighters | : | Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469). |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Observe all relevant local and international regulations.<br>Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.<br>Local authorities should be advised if significant spillages cannot be contained.<br>Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.<br>Stay upwind and keep out of low areas.<br>Be ready for fire or possible exposure. |
| Environmental precautions | : | Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.<br>Use appropriate containment to avoid environmental contamination.<br>Ventilate contaminated area thoroughly. |
| Methods and materials for containment and cleaning up | : | For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely<br>For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. |
| Additional advice | : | For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet.<br>For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet. |

## SECTION 7. HANDLING AND STORAGE

| | | |
|---|---|---|
| General Precautions | : | Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet.<br>Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.<br>Ensure that all local regulations regarding handling and storage facilities are followed. |

| | | |
|---|---|---|
| Advice on safe handling | : | Avoid contact with skin, eyes and clothing.<br>Do not empty into drains. |
| Avoidance of contact | : | Copper.<br>Copper alloys.<br>Strong oxidising agents.<br>Aluminum |
| Product Transfer | : | Keep containers closed when not in use. Refer to guidance under Handling section. |

**Storage**

| | | |
|---|---|---|
| Conditions for safe storage | : | Refer to section 15 for any additional specific legislation covering the packaging and storage of this product. |
| Other data | : | Tanks should be fitted with heating coils in areas where the ambient temperatures are below the recommended product handling temperatures. Heating coil skin temperatures should not exceed 100 °C.<br>Bulk storage tanks should be diked (bunded).<br>Vapours from tanks should not be released to atmosphere.<br>Breathing losses during storage should be controlled by a suitable vapour treatment system.<br>Nitrogen blanket recommended for large tanks (capacity 100 m3 or higher).<br>Insulation (lagging) will minimize heat loss in areas of low ambient temperature.<br>Tanks should be fitted with heating coils in areas where ambient conditions can result in handling temperatures below the freezing point/pour point of the product. |
| Packaging material | : | Suitable material: Stainless steel., Epoxy resins, Polyester.<br>Unsuitable material: Aluminum, Copper., Copper alloys. |
| Container Advice | : | Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers. |
| Specific use(s) | : | Not applicable<br><br>Ensure that all local regulations regarding handling and storage facilities are followed. |

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

Contains no components with occupational exposure limit values.

**Biological occupational exposure limits**

No biological limit allocated.

**Monitoring Methods**

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.
Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.
National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/
Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/
Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/
Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA) , Germany http://www.dguv.de/inhalt/index.jsp
L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

**Engineering measures** : Adequate ventilation to control airborne concentrations.
Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
Eye washes and showers for emergency use.
The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances.
Appropriate measures include:

General Information
Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned.
Practice good housekeeping.
Define procedures for safe handling and maintenance of controls.
Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.
Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.
Drain down system prior to equipment break-in or maintenance.
Retain drain downs in sealed storage pending disposal or subsequent recycle.

**Personal protective equipment**

Respiratory protection : If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation.
Check with respiratory protective equipment suppliers.

Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.
Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.
If air-filtering respirators are suitable for conditions of use:
Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65°C (149°F)].

Hand protection
Remarks : Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. When prolonged or frequent repeated contact occurs. Nitrile rubber gloves. Incidental contact/Splash protection: PVC or neoprene rubber gloves. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Eye protection : If material is handled such that it could be splashed into eyes, protective eyewear is recommended.

Skin and body protection : Skin protection is not ordinarily required beyond standard work clothes.
It is good practice to wear chemical resistant gloves.

Thermal hazards : Not applicable

Protective measures : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

**Environmental exposure controls**

| | | |
|---|---|---|
| General advice | : | Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.<br>Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.<br>Information on accidental release measures are to be found in section 6. |

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | Clear to slightly hazy liquid. |
| Colour | : | clear |
| Odour | : | Data not available |
| Odour Threshold | : | Data not available |
| pH | : | 6 - 7.5 |
| Melting / freezing point | : | Data not available |
| Boiling point/boiling range | : | Data not available |
| Flash point | : | > 135 °C / > 275 °F |
| Evaporation rate | : | Data not available |
| Flammability | | |
| Flammability (solid, gas) | : | Not applicable |
| Lower explosion limit and upper explosion limit / flammability limit | | |
| Upper explosion limit | : | Data not available |
| Lower explosion limit | : | Data not available |
| Vapour pressure | : | Data not available (50 °C / 122 °F) |
| Relative vapour density | : | Data not available |
| Relative density | : | Data not available |
| Density | : | Data not available |
| Solubility(ies) | | |
| Water solubility | : | Data not available |
| Partition coefficient: n-octanol/water | : | Data not available |
| Auto-ignition temperature | : | Data not available |

| | | |
|---|---|---|
| Decomposition temperature | : | Data not available |
| Viscosity | | |
| Viscosity, kinematic | : | Data not available |
| Explosive properties | : | Not classified |
| Oxidizing properties | : | Not applicable |
| Surface tension | : | Data not available |
| Conductivity | : | Electrical conductivity: > 10,000 pS/m<br><br>A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid, This material is not expected to be a static accumulator. |
| Molecular weight | : | Data not available |
| Particle characteristics | | |
| Particle size | : | Data not available |

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Reactivity | : | Stable at normal ambient temperature and pressure.<br>May oxidise in the presence of air. |
| Chemical stability | : | Stable under normal conditions. |
| Possibility of hazardous reactions | : | None known. |
| Conditions to avoid | : | Extremes of temperature and direct sunlight.<br>Product cannot ignite due to static electricity. |
| Incompatible materials | : | Copper.<br>Copper alloys.<br>Strong oxidising agents.<br>Aluminum |
| Hazardous decomposition products | : | None expected under normal use conditions. |

## SECTION 11. TOXICOLOGICAL INFORMATION

| | | |
|---|---|---|
| Basis for assessment | : | Information given is based on product testing, and/or similar products, and/or components.<br>Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s). |
| Information on likely routes of exposure | : | Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion. |

**Acute toxicity**

**Components:**

**C12-14 Alcohol ethoxylate:**

Acute oral toxicity : LD50 (Rat): > 5000 mg/kg
Remarks: Low toxicity
Based on available data, the classification criteria are not met.

Acute inhalation toxicity : Remarks: Not expected to be a hazard.

Acute dermal toxicity : LD50: > 5000 mg/kg
Remarks: Low toxicity
Based on available data, the classification criteria are not met.

**Skin corrosion/irritation**

**Components:**

**C12-14 Alcohol ethoxylate:**
Remarks: Not irritating to skin.

**Serious eye damage/eye irritation**

**Components:**

**C12-14 Alcohol ethoxylate:**
Remarks: Not irritating to eye.

**Respiratory or skin sensitisation**

**Components:**

**C12-14 Alcohol ethoxylate:**
Remarks: Not a sensitiser.
Based on available data, the classification criteria are not met.

**Germ cell mutagenicity**

**Components:**

**C12-14 Alcohol ethoxylate:**

Genotoxicity in vitro : Remarks: Non mutagenic

Genotoxicity in vivo : Remarks: Non mutagenic

**Carcinogenicity**

**Components:**

**C12-14 Alcohol ethoxylate:**
Remarks: Not a carcinogen.
Based on available data, the classification criteria are not met.

| Material | GHS/CLP Carcinogenicity Classification |
|---|---|
| C12-14 Alcohol ethoxylate | No carcinogenicity classification. |

**Reproductive toxicity**

**STOT - single exposure**

**Components:**
**C12-14 Alcohol ethoxylate:**
Remarks: Based on available data, the classification criteria are not met.

**STOT - repeated exposure**

**Components:**
**C12-14 Alcohol ethoxylate:**
Remarks: Based on available data, the classification criteria are not met.

**Aspiration toxicity**

**Components:**
**C12-14 Alcohol ethoxylate:**
Not an aspiration hazard.

**Further information**

**Components:**
**C12-14 Alcohol ethoxylate:**
Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

## SECTION 12. ECOLOGICAL INFORMATION

| | | |
|---|---|---|
| Basis for assessment | : | Incomplete ecotoxicological data are available for this product. The information given below is based partly on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s). |

**Ecotoxicity**

**Components:**
**C12-14 Alcohol ethoxylate:**

| | | |
|---|---|---|
| Toxicity to fish (Acute toxicity) | : | Remarks: Very toxic.<br>LC/EC/IC50 < 1 mg/l<br>Data estimated using read-across from similar substances |
| Toxicity to crustacean (Acute toxicity) | : | Remarks: Very toxic.<br>LC/EC/IC50 < 1 mg/l<br>Data estimated using read-across from similar substances |
| Toxicity to algae/aquatic plants (Acute toxicity) | : | Remarks: Very toxic.<br>LC/EC/IC50 < 1 mg/l |

Data estimated using read-across from similar substances

M-Factor (Acute aquatic toxicity) : 10

Toxicity to fish (Chronic toxicity) : Remarks: NOEC/NOEL expected to be > 0.1 - <= 1.0 mg/l
Data estimated using read-across from similar substances

Toxicity to crustacean(Chronic toxicity) : Remarks: NOEC/NOEL expected to be > 0.01 - <= 0.1 mg/l
Data estimated using read-across from similar substances

Toxicity to bacteria : Remarks: LL/EL/IL50 > 100 mg/l
Practically non toxic:
Based on available data, the classification criteria are not met.

**Persistence and degradability**

**Components:**
**C12-14 Alcohol ethoxylate:**
Biodegradability : Remarks: Readily biodegradable.

**Bioaccumulative potential**

Partition coefficient: n-octanol/water : Remarks: Data not available

**Components:**
**C12-14 Alcohol ethoxylate:**
Bioaccumulation : Remarks: Bioaccumulation is unlikely to occur due to metabolism and excretion.

**Mobility in soil**

**Components:**
**C12-14 Alcohol ethoxylate:**
Mobility : Remarks: Floats on water.
If the product enters soil, one or more constituents will or may be mobile and may contaminate groundwater.

**Other adverse effects**

No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

Waste from residues : Recover or recycle if possible.
It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.
Do not dispose into the environment, in drains or in water courses.

Waste product should not be allowed to contaminate soil or water.

Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Local regulations may be more stringent than regional or national requirements and must be complied with.

Contaminated packaging : Drain container thoroughly.
After draining, vent in a safe place away from sparks and fire.
Residues may cause an explosion hazard.
Do not puncture, cut, or weld uncleaned drums.
Send to drum recoverer or metal reclaimer.

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

**IATA-DGR**

| | | |
|---|---|---|
| UN/ID No. | : | UN 3082 |
| Proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Alcohol C12-C16 Poly (1-6) Ethoxylate) |
| Class | : | 9 |
| Packing group | : | III |
| Labels | : | 9 |

**IMDG-Code**

| | | |
|---|---|---|
| UN number | : | UN 3082 |
| Proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Alcohol C12-C16 Poly (1-6) Ethoxylate) |
| Class | : | 9 |
| Packing group | : | III |
| Labels | : | 9 |
| Marine pollutant | : | yes |

### Maritime transport in bulk according to IMO instruments

| | | |
|---|---|---|
| Pollution category | : | Y |
| Ship type | : | 2 |
| Product name | : | ALCOHOL (C12-C16) POLY (1-6) ETHOXYLATES |

### Special precautions for user

Remarks : Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

**Additional Information** **:** Transport in bulk according to Annex II of Marpol and the IBC Code
This product may be transported under nitrogen blanketing.
Nitrogen is an odourless and invisible gas. Exposure to nitro-

gen enriched atmospheres displaces available oxygen which may cause asphyxiation or death. Personnel must observe strict safety precautions when involved with a confined space entry.

## SECTION 15. REGULATORY INFORMATION

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

**The components of this product are reported in the following inventories:**

| | | |
|---|---|---|
| AIIC | : | Listed |
| DSL | : | Listed |
| IECSC | : | Listed |
| ENCS | : | Listed |
| KECI | : | Listed |
| NZIoC | : | Listed |
| PICCS | : | Listed |
| NLP | : | Listed |
| TSCA | : | Listed |

## SECTION 16. OTHER INFORMATION

**Full text of H-Statements**

| | |
|---|---|
| H400 | Very toxic to aquatic life. |
| H411 | Toxic to aquatic life with long lasting effects. |

**Full text of other abbreviations**

| | |
|---|---|
| Aquatic Acute | Short-term (acute) aquatic hazard |
| Aquatic Chronic | Long-term (chronic) aquatic hazard |

Abbreviations and Acronyms : The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g. scientific dictionaries) and/or websites.

**Further information**

Training advice : Provide adequate information, instruction and training for operators.

Other information : A vertical bar (|) in the left margin indicates an amendment

| | | |
|---|---|---|
| | | from the previous version. |
| Sources of key data used to compile the Safety Data Sheet | : | The quoted data are from, but not limited to, one or more sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU IUCLID date base, EC 1272 regulation, etc). |

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.