I - IDENTIFICATION OF THE PRODUCT AND THE COMPANY

1.- Identification of the product: ALIAL
   Fosetyl-Al 80% WP (w/w)
   Wettable Powder

2.- Chemical group: FUNGICIDE

3.- Company: Cheminova Agro, S.A.
   Paseo de la Castellana, 257 - 5
   28046 Madrid
   Spain

4.- Emergency telephone: 34 91 562 04 20

II - HAZARDS IDENTIFICATION

Classification of the preparation: Not classified

Classification to the environment: Not classified

III - COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>DANGEROUS INGREDIENTS</th>
<th>CAS N°</th>
<th>%</th>
<th>CLASSIFICATION</th>
<th>R PHRASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOSETYL-AL</td>
<td>39148-24-8</td>
<td>80% W/W</td>
<td>XI</td>
<td>R36</td>
</tr>
<tr>
<td>Aluminum Tris(ethyl phosphonate)</td>
<td>C₆H₁₈AlO₉P₃</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum isoproxide</td>
<td>555-31-7</td>
<td>1% W/W</td>
<td>F</td>
<td>R11</td>
</tr>
</tbody>
</table>

IV - FIRST AID MEASURES

Inhalation: Remove victim from exposure area to fresh air immediately. If breathing stops, administer artificial respiration. If victim is in a state of shock, keep at rest and cover with a blanket. Seek medical attention immediately.

Eye contact: Wash eyes thoroughly with water for at least 15 minutes. Remove contact lenses if any. Seek medical attention immediately.

Skin contact: Remove contaminated clothes and launder. Wash skin thoroughly with water and soap (if there are no burns) for 15-20 minutes. Seek medical attention.
**Ingestion:** Do not give anything by mouth. Do Not Induce Vomiting if the product has been swallowed. If victim is unconscious, lay on his/her side with head lower than the rest of the body and knees half-bent to avoid aspiration. Keep victim at rest. Maintain body temperature. Control breathing. Administer artificial respiration if necessary. Seek medical attention immediately. Take victim to the nearest medical facility. Show label or container whenever possible. There is no known antidote. Treat symptomatically.

**V – FIRE FIGHTING MEASURES**

**Suitable extinguishing media:** Carbon Dioxide, dry chemical powder, water sprays, standard foam.

**Special precautions:** Move containers away from fire area if possible. Do not scatter spilled material with high pressure water streams. Dike and collect water and other materials used to fight fire for later disposal.

**Fire and explosion hazard products:** Toxic Carbon, Aluminium and Phosphorus Oxides.

**VI - ACCIDENTAL RELEASE MEASURES**

**Personal precautions:** Keep upwind of fire. Avoid breathing sprays, vapours and dust. Do not use contact lenses. Avoid skin contact. Keep unnecessary people away. Collect material in dry, clean containers for later disposal and/or reclamation.

**Environmental precautions:** Isolate and dyke fire control water to avoid contamination of superficial waters, since product is toxic to aquatic organisms.

**Methods for cleaning up:** Collect spilled material using an absorbing material. Wash contaminated area with water and soap.

**VII - HANDLING AND STORAGE**

**Handling conditions:** Avoid contact with eyes, skin or clothes. Use protective clothes and observe normal precautions for the handling of chemical products. Keep away from sparks, open flame and excessive heat. The product can burn but does not ignite readily.

**Storage conditions:** Store in tightly closed containers in a cool, dry and well-ventilated area. Do not store together with incompatible materials, strong oxidisers or in conditions of excessive heat, or humidity. Keep away from open flame and sparks.

**Specific Uses:** Agricultural fungicide for professional use. Use only on labelled crops. Label instructions must be followed.

**VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure limit values:** Occupational exposure limit value established by the OSHA, NIOSH are TWA = 2 mg/m$^3$.

**Exposure controls:**
- **Control of professional exposure:** Risk evaluation
**Respiratory protection:** Dust-proof breathing apparatus. General ventilation system to reduce air concentration level.

**Hand protection:** PVC or other plastic gloves.

**Eye protection:** Adjustable splash-proof safety goggles or mask which resist dust of chemical products. Avoid using lenses.

**Skin protection:** Appropriate waterproof protective clothing and apron which do not accumulate dust: Long-sleeved overalls with chemical-resistant boots. Change clothes if these are soiled with the product. Wash after handling, especially hands and parts of the body which may have been exposed. Launder clothes separately before reuse. Install safety showers and eye-washing facilities. Do not smoke, eat or drink during handling.

**Environmental exposure controls:** Do not apply immediately after rain or irrigation, when plants are covered with dew or in very dry conditions or high temperatures. Avoid the contamination of waters. Harmful to aquatic organisms. Avoid contamination of water supplies.

### IX - PHYSICAL AND CHEMICAL PROPERTIES

**Appearance, physical state, colour:** White/light beige powder.

**Odour:** no odour

2 - IMPORTANT HEALTH, SAFETY AND ENVIRONMENTAL INFORMATION

**pH:** (at 1% in water), > 3.2.

**Boiling point:** Not applicable

**Flash point:** Not inflammable > 61°C

**Flammability (Solid or gas):** Not auto-inflammable.

**Explosive properties:** None (on the basis that its ingredients do not present this property).

**Melting Point:** Not applicable. Decomposes without melting.

**Oxidising properties:** None (on the basis that its ingredients do not present this property).

**Vapour pressure (25°C):** <0.013 mPa for technical Fosetyl-Al

**Relative density (20°C):** 0.500-0.550 g/cc (apparent density)

**Partition coefficient: n-Octanol/water:** $K_{ow}$ log P of Fosetyl AI is -2.7 (pH4)

**Solubility in water:** 12% for technical Fosetyl-Al

**Solubility in acetone (20°C):** Insoluble
Viscosity: Not applicable

3 – OTHER INFORMATION

Melting point: Decomposes without melting T>200ºC (Technical Fosetyl-Al)

X - STABILITY AND REACTIVITY

Stability: Stable at normal pressure and temperature. Decomposes in humid and alkaline conditions. Incompatible with acids and alkaline reaction products. Danger of explosion of the technical product with strong oxidisers. Toxic gas are released in contact with acids and in case of fire. Presents no danger of polymerisation.

Conditions and materials to avoid: Humidity, strong oxidisers, alkaline conditions, excessive heat, sparks or open flame. May burn but does not ignite readily. Non-inflammable combustible.

Hazardous decomposition products: Toxic Carbon, Aluminium and Phosphorus Oxides in the case of combustion.

XI - TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA:
- Inhalation: CL50 (rat) =2125 mg/l.
- Dermal: DL50 (rat) =3750 mg/kg
- Oral: DL50 (rat) =6250 mg/kg

Effects of exposure:

Eyes: May cause eye irritation. Prolonged exposure may cause conjunctivitis.
Skin: Not irritant to skin for rats. Not a skin sensitizer for Guinea pigs.
Inhalation: May be harmful if inhaled.
Ingestion: Low toxicity if ingested.

XII - ECOLOGICAL INFORMATION

1.- Ecotoxicity

Aquatic Toxicity: Harmful to aquatic organisms.

Acute:

Toxicity to Fish: LC50 (96 h) rainbow trout: 428 mg/l (Technical Fosetyl-Al)
Toxicity Daphnia: CE50 Daphnia magna ( 48 h.) =189 mg/l (Technical Fosetyl-Al)

2.- Mobility: Not available

3.- Persistence and degradability: In soil, Fosetyl-Al has an extremely short half-life. DT50 in soil (aerobic) is between 20 minutes and 1,5 hours.
Name of the Product: ALIAL 80 WDG

4.- Bioaccumulative potential: Not available

### XIII - DISPOSAL CONSIDERATIONS

The product must be eliminated taking into account that it is a dangerous product, both as regards the substance itself and the container.

Rinse each used empty container three times. Render unusable and store in a suitable location until collection. Pour rinsate in the mixture. Do not contaminate waters with this product or its container.

### XIV - TRANSPORT INFORMATION

**ADR / RID:** Not included

**Maritime Transport (IMDG):**
- **Class:** 9/III
- **UN N°:** 3077
- **IMDG (page):** 9029
- **Labels:** 9

### XV - REGULATORY INFORMATION

**Toxicological Classification:** Not classified

**Classification for the environment:** Not classified

**Danger symbol:** None.

**Security phrases:**
- **S2:** Keep out of the reach of children.
- **S13:** Keep away from food, drink and animal feedingstuffs.
- **S20/21:** When using do not eat, drink or smoke
- **S45:** In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

**SP1:** Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

**TO AVOID RISKS TO MAN AND THE ENVIRONMENT, COMPLY WITH THE INSTRUCTIONS FOR USE**

### XVI - OTHER INFORMATION

**Recommendations concerning training:** Agricultural fungicide. USE RESTRICTED TO FARMERS AND PROFESSIONAL AGRICULTURAL SPRAY APPLICATORS for agricultural crops and cultures.
**Recommendations concerning usage:** This material security data sheet has been issued in accordance with Directive 58/2001/CE, the Royal Decree 255/2003 and Regulation 1907/2006/CE. The data included in this material security data sheet are based on the best of our knowledge and are as accurate as possible. They do not constitute a contractual guarantee of the product’s properties. They must not be altered nor transferred to other products.

**Reason for the revision:** REACH adaptation (Regulation 1907/2006/CE).