PRODUCT: ARBO N18

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY/ FIRM

1.1 Product identifier
- Product name: Sodium lignosulfonate
- Sodium Lignosulfonate n°CAS 8061-51-6
- Product code: ARBO N18

1.2 Identified relevant use of the substance or mixture and types of usage not recommended
The lignosulfonate has been approved as:
- Dispersant for concrete additives
- Plastifying additive for bricks and ceramics
- Tanning agents
- Deflocculant
- Bonding agent for fibreboards
- Binding agent for moulding of pellets, carbon black, fertilizers, activated carbon, foundry moulds
- Dust reduction agent during spraying for non-asphalted roads and dispersion in agricultural domain
For applications, see www.arbo.ca

1.3 Details regarding the supplier of safety data sheet
- Manufacturer:
  TEMBEC AVEBENE SAS
  221 route du Stade-BP10
  40400 TARTAS-FRANCE
- Service to be contacted:
  Sales engineering department
  Phone: (33) 05 58 73 56 19 or 05 57 96 52 80
  Fax: (33) 05 58 73 45 54 or 05 57 96 66 16
  E-mail: avbn.advl@tembec.com / jean-louis.bulliard@tembec.com

1.4 Emergency call numbers
- 112
- ORFILA Poison Control Centre: (33) 01 45 42 59 59

2. IDENTIFICATION OF DANGERS

2.1 Classification of the substance or mixture
According to regulation CLP No. 1272/2008
H315: Causes skin irritation
H319: Causes severe irritation of eyes
According to directive 1999/45/CEE
R38: Irritating to skin
R36: Irritating to eyes

2.2 Labelling elements

2.3 Other dangers
In the divided state, continued inhalation can irritate the respiratory tracts of a subject constantly exposed to a suspension in the air.
Contains sulphites that may cause an allergic reaction in sensitive subjects.
3. **COMPOSITION / INFORMATION ABOUT CONSTITUENTS**

**Mixtures**

Quantity of sodium hydroxide introduced in the process (from 5% to 7%):

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>CE No.</th>
<th>Appendix 1</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1310-73-2</td>
<td>215-185-5</td>
<td>011-002-00-6</td>
<td>H314 R35/41</td>
</tr>
</tbody>
</table>

4. **FIRST AID**

4.1 **Description of First Aid**

- **Contact with the eyes**: In case of contact with the eyes, wash immediately and abundantly with water. Consult an ophthalmologist.
- **Inhalation**: Breath fresh air. Consult a physician.
- **Ingestion**: Rinse the mouth abundantly and drink water. Consult a physician. Do not make the subject vomit.
- **Contact with the skin**: Wash in large quantities of water. Consult a physician in case of extended contact.

4.2 **Principal symptoms and effects, acute and latent**

None

4.3 **Indication of immediate medical care and particular treatments required**

None

5. **FIRE-FIGHTING METHODS**

5.1 **Means of extinction**

Water spray

5.2 **Particular dangers resulting from the substance or mixture**

None

5.3 **Recommendations for fire brigade**

In case of fire, provide breathing apparatus for the rescue teams.

6. **MEASURES TO BE TAKEN IN CASE OF ACCIDENTAL SPILLAG**

6.1 **Individual precautions, personal protection equipment and emergency procedures**

Use of gloves, eyeglasses, dust mask and protective clothing obligatory.

6.2 **Precautions for environmental protection**

Avoid releasing the dust. Avoid discharge into water bodies and sewers.

6.3 **Confinement and cleaning methods and equipment**

Suck or contain by maintaining the product in dry form, if possible. Wash and rinse the area abundantly with water while avoiding discharge into the sewers. Collect mechanically the major part of the spilled product and eliminate it or recycle it depending on usage and the form of collection authorised.

6.4 **References to other sections**

For the elimination of wastes, refer to section 13.

7. **HANDLING AND STORAGE**

7.1 **Precautions to be taken for handling the product without danger**

Use of gloves, eyeglasses, dust mask and protective clothing obligatory.

7.2 **Conditions of safe storage, including incompatibilities if any**

Normal precautions during operations of transfer, for avoiding dust.

Risk of caking: Store in a dry, sheltered places.

7.3 **Particular types of end use**

In case of dissolution, avoid keeping the solutions in containers made of aluminium or aluminium alloys.
8. CONTROL OF EXPOSURE / PERSONAL PROTECTION

8.1 Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>VME</th>
<th>VLCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total dust</td>
<td>10mg/m³</td>
<td></td>
</tr>
<tr>
<td>Alveolar dust</td>
<td>5mg/m³</td>
<td></td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>2mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

8.2 Control of exposure:
- Respiratory protection: Dust mask while handling
- Protection of hands: Protective gloves
- Protection of eyes: Eyeglasses
- Protection of skin: Suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on essential physical and chemical properties

- Appearance: Powder
- Colour: Light yellow to dark brown
- Odour: Burnt smell
- pH: from 8.5 to 9.5 at 25°C
- Median grain size: 80/90µm
- Temperature of auto-inflammation: 207°C
- Characteristic temperatures: Thermal decomposition at 207°C
- Solubility in water: Up to 1,000g/l
- Dispersion in water: 100% miscible
- Vapour pressure: None
- Density when tamped: 0.6/0.8

9.2 Other information
- Fermentable, biodegradable

10. STABILITY AND REACTIVITY

10.1 Reactivity
- None

10.2 Chemical stability
- Stable under normal ambient conditions

10.3 Possibility of dangerous reactions
- None

10.4 Conditions to be avoided
- None

10.5 Incompatible materials
- Aluminium and its alloys

10.6 Dangerous decomposition products
- CO, CO2, SO2, NOx, NH3 in case of confined combustion and critical heating

11. TOXICOLOGICAL INFORMATIONS

11.1 Information on toxicological effects
- No known toxicity.
12. ECOLOGICAL INFORMATION

12.1 Toxicity
Aquatic toxicity for fish: LC50 > 100mg/litre
Toxicity for bacteria: TTC test > 5ml/litre
COD: 710kg/T
BOD: 140kg/T

12.2 Persistence and degradability
Product is biodegradable and fermentable: Affects the level of dissolved oxygen in receiving water streams in case of accidental dispersion in natural environment. Avoid massive localised discharges; can be eliminated by incineration under controlled conditions.

12.3 Potential for bioaccumulation
No data available.

12.4 Mobility in the ground
No data available.

12.5 Results of PBT and vPvB evaluations
No data available.

12.6 Other harmful effects
None

13. CONSIDERATIONS RELATING TO ELIMINATION

13.1 Method of wastes treatment
Classification of wastes: H8
-Product: Collected mechanically or sucked into an absorbent substrate. Depending on the approved mode of treatment for recycling and elimination, it may be eliminated by combustion but through a suitably equipped furnace or sucked through a smoke collection and sulphur removal system.

14. INFORMATION RELATING TO TRANSPORT
No particular regulatory measures with regard to transport of hazardous materials.

15. INFORMATION RELATING TO REGULATIONS

15.1 Regulation/legislation specific to the substance or mixture regarding safety, health and environment
Product for industrial use: Labelling according to regulation CLP No. 1272/2008

15.2 Evaluation of chemical safety
No evaluation of chemical safety necessary.

16. OTHER INFORMATION

Constituents risk phrases:
According to regulation CLP No. 1272/2008: R35: Causes severe burns, R41: Risk of serious damage to eyes
According to directive 1999/45/CEE: H314: Causes severe skin burns and eye damage

Data sheet entirely reviewed for satisfying the REACH regulations.
The lignosulfonate is a natural polymer. It is exempted from registration under REACH Regulation No. 1907/2006