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

1.1 Product identifier
- Product name: Sodium lignosulfonate
- N° CAS:  
  Generic 68131-31-7
  Specific 8061-51-6
- Product code: ARBO S01L

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

More applications, visit our website: http://tembec.com/en/produits/produits-chimiques

1.3 Details regarding the supplier of safety data sheet
- Manufacturer: Tembec – Chemical Products Group
  33, chemin Kipawa, Temiscaming, Québec, Canada J0Z 3R0

- Contact Information:
  Customer Service
  Tél: (819) 627-4252
  E-mail: chemical.customerservice1@tembec.com

1.4 Emergency Contact
819-627-3200 (Tembec) or 888-963-7474 (Groupe Hénault)

2. IDENTIFICATION OF DANGERS

2.1 Classification of the substance or mixture
None

2.2 Labelling elements
None

2.3 Other dangers
The product may be delivered at a temperature between 40°C and 80°C
Contains sulphites that may cause an allergic reaction in sensitive subjects.

3. COMPOSITION / INFORMATION ABOUT CONSTITUENTS

Mixtures
Quantity of sodium hydroxide residual < 0.5%
CAS No.: 1310-73-2  CE No.: 215-185-5  Appendix 1: 011-002-00-6  Classification: H314/H290

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4. **FIRST AID**

4.1 **Description of First Aid**
- **Contact with the eyes**: Rinse the eyes immediately during several minutes in running water, widening the eyelids. Consult a physician if the symptoms persist.
- **Inhalation**: Not applicable.
- **Ingestion**: Rinse the mouth abundantly and drink water in proportion to the quantity ingested. Do not make the subject vomit. Consult a physician.
- **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**
Not applicable

4.3 **Indication of immediate medical care and particular treatments required**
None

5. **FIRE-FIGHTING METHODS**

5.1 **Means of extinction**
Aqueous solution: non-combustible as such. All extinguishing agents are authorised.

5.2 **Particular dangers resulting from the substance or mixture**
See 10.6

5.3 **Recommendations for fire brigade**
None

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

6.1 **Individual precautions, personal protection equipment and emergency procedures**
Use of personal protection equipment (eyeglasses, gloves, protective clothing) obligatory

6.2 **Precautions for environmental protection**
The material being biodegradable and fermentable, a large quantity evacuated in the drains may cause a saturation of the system or a durable reduction of dissolved oxygen in the receiving liquid vein. Avoid uncontrolled dumping of large quantities in watercourses, wastewaters, surface waters. Protect zone involved from rainwater and surface runoff.

6.3 **Confinement and cleaning methods and equipment**
Suck or retain the spilled product if possible by maintaining a tank; immobilise with any bulky absorbent such as sawdust, sand, peat.
Collect mechanically the major part of the spilled product and eliminate it or recycle it depending on usage and the form of collection authorised. Wash and rinse the area abundantly with water while avoiding discharge into the sewers.

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 personal protection equipment (eyeglasses, gloves, protective clothing) recommended. Apply usual precautions during operations of pumping and transfer for preventing leaks and heating.

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Follow the usual rules of rinsing and draining of pipes, sleeves and containers.
Stay within the loading limits of machinery for handling heavy loads.
Do not use at temperatures higher than 200°C.

7.2 **Conditions of safe storage, including incompatibilities if any**
Store shielded from the light in a fresh(cool) and dry place
7.3 **Particular types of end use**
None

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>Sodium hydroxide</td>
<td>2mg/m3</td>
<td></td>
</tr>
</tbody>
</table>

8.2 **Control of exposure:**
- Respiratory protection: None
- Protection of hands: Chemical and thermal protection gloves
- Protection of eyes: Protective eyeglasses or masks
- Protection of skin: Protective clothing

9. **PHYSICAL AND CHEMICAL PROPERTIES**
9.1 **Information on essential physical and chemical properties**
- Appearance: Viscous liquid
- Colour: Brown/Black
- Odour: Light odor
- pH: 6.5 to 9.0 at 25°C
- Viscosity at 25°C: ≤ 1500 cps
- Characteristic temperatures: Thermal decomposition at 220°C
- Solubility in water: Completely at 20°C
- Vapour pressure: None
- Density at 25°C: ≤ 1.229

9.2 **Other information**
Possible Crystallization as soon as T < 5°C. Reversible Crystallization.
Fermentable, thickens progressively during extended storage, 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

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10.5 **Incompatible materials**
None

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

11. **TOXICOLOGICAL INFORMATION**
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. 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: None
-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.
-Packaging: Approved mode of treatment, after rinsing and drying.

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**

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No evaluation of chemical safety necessary.

16. OTHER INFORMATION
The lignosulfonate is a natural polymer. It is exempted from registration under REACH Regulation No. 1907/2006.

Disclaimer:

"The products/blends are delivered in compliance with the specifications and characteristics contained in the safety data sheet, sent by email prior to the delivery. A copy of said document is provided to the client, the user or the intermediary upon delivery.

Tembec shall in no event be held liable for any personal or property damage that could be suffered by the client, the user or the intermediary or any of their staff or any person to whom the product or blend could be transmitted, as a result of the use that could be made thereof, after the signature of the delivery slip.

The client, the user or the intermediary who accepts delivery of the product or blend undertakes to provide the safety data sheet and the specification sheet to any person who would need to handle said product or blend."

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