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## MATERIAL SAFETY DATA SHEET

### LIGNO

#### I. PRODUCT IDENTIFICATION

Common Name:	Calcium Lignosulfonate	Chemical Formula:	Amorphous Polymer
Synonyms:	See Above	Chemical Family:	Wood Chemicals
Manufacturer:	Lyman Dust Control, Inc	CAS Numbers:	8061-52-7
Shipping Name - DOT:	Lignin Liquor - Class 55	UN Number:	Excluded
Hazard Class - DOT:	Not Restricted	Physical State:	Liquid
Hazard Class - IATA:	Not Restricted		

**HMIS Rating (0-4)** HEALTH = 0 FIRE = 0 REACTIVITY = 0 SPECIAL = 0

#### II. HAZARDOUS INGREDIENTS

Principle Hazardous Components	Percent	Threshold Limit Value (UNITS)
None Known		

#### III. PHYSICAL DATA

Boiling Point (C):	104C	Specific Gravity (25C):	1.3020 3-4.5
Freezing Point (C):	Minus 2C	pH (3% Soln.):	Not Applicable
Vapor Pressure (mm Hg):	14.2 @ 20C	Bulk Density (g/ml):	100% Soluble
Vapor Density (Air = 1):	1.21 @20C 40	Solubility in Water:	Normal 0.4 (Water)
%Volatiles By Weight:	Minus 44 (Water)	Evaporation Rate:	100% In Water
Appearance and Odor:	Brown Liquid <sup>w</sup> /Slight Odor	Water/Oil Dist Coeff:	

#### IV. HEALTH HAZARD DATA

Threshold Limit Values	OSHA PELV = None Established Minimize contact with eyes, skin, clothing
Carcinogen Listings - NTP!	Not a carcinogen
Primary Route(s) of Entry:	Skin Contact, eye contact
Symptoms of Overexposure:	No effects of overexposure to lignosulfonates are known
Conditions Aggravated by	None Known
Irritancy of Matenat:	None Known
Sensitization of Material:	None Known
Teratogenicity:	None Known
Mutagenicity:	None Known
Reproductive Toxicity:	None Known
Synergistic Substances	None Known
First Aid: Eyes:	Irrigate with potable water
Skin:	Skin should be flushed with clean water
Inhalation:	Not Applicable - aqueous solution
Ingestion:	Give water to dilute and get medical attention
Notes to Physician:	Very low toxicity. LD50>5 g dry matter/kg (rat, oral)

## V. FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used):	Not Applicable	Auto Ignition Temp:	Not Applicable
Flammable Limits in Air, % By Volume		Upper: Not Applicable	Lower: Not Applicable
Extinguishing Media:		None	
Special Fire Fighting Procedures:		None	
Unusual Fire and Explosion Hazards:		None	

## VI. SPILL OR LEAK PROCEDURES

Spill Response:	Mechanically collect and remove spilled material. Area may be washed with water
Neutralizing Chemicals:	None required
Waste Disposal Methods:	Incinerate, bury, or flush to sewer following applicable regulations

## VII. REACTIVITY DATA

Stability:	Stable	Conditions to Avoid:	Contact with strong oxidizing
Incompatibility:		Materials to Avoid	None
Hazardous Polymerization:	Will not occur	Conditions to Avoid:	None
Hazardous Decomposition Products:	Sulfur dioxide, carbon dioxide, and carbon monoxide		

## VIII. CONTROL MEASURES

Ventilation Requirements:	Adequate ventilation for comfort is recommended
Respiratory Protection:	Normally not needed Use NIOSH approved respirator when dusts, mists or vapors are present
Protective Gloves:	Gloves recommended for prolonged exposure
Eye Protection:	Goggles recommended for prolongs exposure
Other Protective Equipment:	Clothing which contacts skin should be changed daily

## IX. SPECIAL PRECAUTIONS

Repair/Maintenance of:	
Contaminated Equipment:	None required
Hygiene in Handling/Storage:	Personal hygiene is strongly encouraged so all clothing items are changed daily
Other:	Normal precautions common to good manufacturing practice should be followed

## X. ADDITIONAL REGULATORY CONCERNS

Lignosulfonates are nontoxic and non-irritating. Government regulations for use of linosulfonates are summarized below:

Agriculture Canada Animal Feeds File No. 832.2B2	21 CFR 176.210 - Defoamers
40 CFR 180.1001 Sections © and (e)	21 CFR 177.1210 - Gaskets
21 CFR 176.120; 176.170; 176.180; 178.3120.3120 Paper	21 CFR 175.105 - Adhesives
21 CFR 173.310 - Boiler Water	21 CFR 573.600 - Animal Feeds
21 CFR 172.715; 182.99 - Pesticides for Food	

The information and recommendations contained herein are offered as a service to our customers but are not intended to relieve the user from its responsibility to investigate and understand pertinent sources of information and to comply with all laws and procedures applicable to the safe handling and use of these materials.