

SAFETY DATA SHEET

Version 16.0
Revision date 08-12-2024
Issue date 15-04-2019

SECTION 1: Chemical and company identification

a. Product name	SSEIF-L (Lignin/cellulose)
Product code	-
Recommended use of the chemical and restriction on use	For industrial use, no other uses are advised.
c. Company	Lignum Inc.
Address	17F, EXPO Tower, 1, Expo-ro, Yuseong-gu, Daejeon, Republic of Korea
Telephone	+82-10-2304-0154
Fax	+82-504-216-6844
Email	ceo@lignum.co.kr
Emergency phone	

Section 2: Hazard identification

a. GHS classification	
Physical hazards	Not a dangerous substance according to GHS.
Health hazard	Not a dangerous substance according to GHS.
Environmental hazards	Not a dangerous substance according to GHS.
b. GHS-Labeling element	
Pictograms	None
Signal words	None
Hazard statement	None
Precautionary statements	
Prevention	
P210:	Avoid heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking
P243:	Take precautionary measures against static discharge.
P260:	Do not breathe dust/fumes/gas/mist/vapors/spray.
P264:	Wash face, hands, and any exposed skin thoroughly after handling.
P280:	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.
Response	
P304+340:	IF INHALED: Remove the person to fresh air and keep comfortable for breathing.
P333+P313:	If skin irritation or a rash occurs: Get medical advice/attention.
P305+351+338:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P337 + P313:	If eye irritation persists: Get medical advice/attention.
P363:	Wash contaminated clothing before reuse.
Storage	
P403 + P233	Store in a well-ventilated place, and keep the container/bag tightly closed.
P405	Store locked up
Disposal	

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P501:

Dispose of contents/containers in accordance with local, regional, national, and/or international regulations.

c. Other hazards that do not result in classification

None known

d. Supplemental information

none

SECTION 3: Composition and information on ingredient

a. Substance or mixture

mixture

b. Chemical name

CAS number

KE no.

EC / List no.

Concentration (%)

Lignin/cellulose

9005-53-2

KE-21978

232-682-2

90-99.9

Water

7732-18-5

Less than 10%

c. Composition comments

K-REACH Inventory (South Korea): Listed
EU-REACH Inventory (European Union): Listed

d. Other information

The product contains no substance which at their given concentration, are considered to be hazardous to health.

Section 4: First aid measures

a. In case of eye contact

Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

b. In case of skin contact

Wash exposed skin with soap and water. Get medical attention if irritation is persistent or severe or in case of a suspected allergic reaction. Wash contaminated clothing before reuse.

c. In case of inhaled

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if health effects persist or are severe.

d. In case of swallowed

If the material has been swallowed and the exposed person is conscious, rinse the mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if adverse health effects persist or are severe.

e. Most important acute symptoms and effects

Nuisance dust.

f. Most important delayed symptoms and effects

Nuisance dust.

g. Note to physician

Provide general supportive measures and treat symptomatically.

Section 5: Firefighting measures

a. Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

b. Specific hazards arising from the chemicals

May form combustible dust concentrations in air (during processing, including drying). Maintain housekeeping to minimize dust accumulation.

c. Special firefighting procedures

In case of fire and /or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

d. Protection of fire-fighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

e. Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

Section 6. Accidental release measures

a. Personal Precautions,

Avoid generation of dust. Ensure adequate ventilation.

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Protective Equipment, Emergency Procedures

- | | |
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| b. Environmental Precautions | Avoid discharge into drains, water courses, or onto the ground. |
| c. Methods and materials for containment and cleaning up | Sweep up and place in an appropriate closed container. |

Section 7. Handling and storage

a. Handling

Use with adequate ventilation. Wash after handling. No smoking is allowed in areas of storage or use. Avoid generating dust as dust may form explosive concentrations with air. There is a risk of dust explosion in dust-raising operations, such as drying. Workers should wash their hands and face before eating, drinking, and smoking. Keep containers tightly closed when not in use. Empty containers may contain product residues. All containers should be properly cleaned before reuse.

b. Storage

Store in a cool, dry, ventilated area away from any sources of humidity, heat, sparks, flames, ignition, and out of direct sunlight. Maintain container labeling. Keep containers securely closed. Protect the storage containers from physical damage. Store away from food and drink.

Section 8. Exposure controls and personal protection

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| a. Control parameters | Contains no substances with occupational exposure limit values. |
| b. Engineering measures | Showers, eyewash stations, and ventilation systems. |
| c. Personal protective equipment | |

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dust is desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected before use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

General industrial hygiene practice.

Section 9. Physical and chemical properties

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| a. Appearance and Odor | Brown powder |
| b. Odor | Slight vanilla |
| c. Odor threshold | No data available |

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e. Specific gravity(water=1)	1.47 (23°C)
f. pH	6-8
g. Bulk density	0.3-0.4 g/cm ³
h. Solubility in water	Insoluble
i. Boiling point	No data available
j. Melting/freezing point	No data available
k. Flashing point	No ignitable
l. Lower flammability/explosive limit	No data available
m. Upper flammability/explosive limit	No data available
n. Auto-ignition temperature:	No data available
o. Percent volatile	No data available
p. Vapor pressure	No data available
q. Evaporation rate	No data available
r. Partition coefficient (n-octanol/water)	No data available
s. Viscosity	No data available
t. Decomposition temperature	No data available
u. Molecular weight	4.3×10 ¹² g/mol
v. PAHs	Not detected.

Section 10. Stability and reactivity

a. Reactivity	Stable under normal conditions.
b. Chemical Stability	Stable under recommended storage conditions
c. Possible Hazardous Reactions	The material will not react or polymerize. Dust can react to form explosive mixtures with air in the presence of an ignition source.
d. Conditions to Avoid	Accumulation of dust, dust-raising conditions, static electricity, wet or moist conditions.
e. Incompatible materials	Acids. Strong oxidizing agents
f. Hazardous decomposition products	CO, CO ₂ , sulfur oxides, aldehydes, organic acids, acrid smoke. Decomposition of organic materials such as wood and wood components may produce toxic gases and an oxygen-deficient atmosphere in enclosed or poorly ventilated areas.
g. Thermal decomposition	No data available

Section 11. Toxicological information

a. Information on the likely route of exposure	
Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. It may cause skin irritation.
Eyes	May cause eye irritation.
b. Delayed and immediate effects and chronic effects from short- and long-term exposure	
Acute toxicity	
Oral	No data available

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Inhalation	No data available
Dermal	No data available
Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	No data available
Carcinogenicity	No data available
Germ cell mutagenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available
Signs and Symptoms of Exposure	No data available
c. Numerical measures of toxicity	
Lignin/cellulose	No data available
Calcium sulfate	No data available
d. Additional information	No data available

Section 12. Ecological information

a. Ecotoxicity effects	No data available
b. Elimination information (persistence and degradability)	No data available
c. Bioaccumulative potential	No data available
d. Mobility in soil	No data available
e. Other adverse effects	No data available

Section 13. Disposal consideration

a. Residual waste	Dispose of in accordance with local regulations. Empty bags or containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
b. Contaminated packaging	Dispose of it as an unused product.
c. Local disposal regulations.	Contract with a disposal operator licensed by the Law on Disposal and Cleaning.

Section 14. Transport information

a. IATA	Not dangerous goods
b. IMDG	Not dangerous goods
c. Further information	Not classified as dangerous in the meaning of transport regulations.

Section 15. Regulatory information

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| a. Regulation under the Occupational Safety and Health Act |
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Harmful Substances Required Permission for Manufacture	Not relevant
Harmful Substances Prohibited from Manufacturing	Not relevant
Carcinogenic Substances	Not relevant
Controlled Substances Subject to Environment Monitoring	Not relevant
Controlled Substances Subject to Health Examination	Not relevant
Hazardous substances requiring management	Not relevant

b. Act on the Registration and Evaluation, etc. of Chemical Substances, Chemicals Control Act

Toxic Chemicals	Not relevant
Observational chemicals	Not relevant
Restricted Chemicals	Not relevant
Prohibited Chemicals	Not relevant
Accident Precaution Chemicals	Not relevant

**c. Dangerous Substances
Safety Management Act
Drug Enforcement**

**d. Administration (DEA) (21 CFR
1308.11-15)**

- e. TSCA** All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.
- f. DSL/NDSL** All components of this product are on the Domestic Substance List (DSL), and Non-Domestic Substance List (NDSL) or exempt.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory.

DSL/NDSL- Canadian Domestic Substances List/Non-Domestic Substances List

Section 16. Other information

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Disclaimer:

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