



MATERIAL SAFETY DATA SHEET (MSDS)

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MSDS NO.: 2018/03 FIRST ISSUE DATE: 1 January 2018 WHMIS STATUS: Non-controlled

1. PRODUCT IDENTIFICATION

PRODUCT: RDC 20
CHEMICAL FAMILY: Lignosulphonate Blend
PRODUCT USE: Road / Soil Dust Suppression
NIOSH NUMBER: Not a listed product
CAS NUMBER: Mixture / Blended
HAZCHEM CODE: Not a listed product
UN No.: Not a listed product

2. COMPOSITION

According to the Workplace Hazardous Materials Information System (WHMIS), this product should be not considered a controlled product; however, this MSDS contains valuable information important to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users/handlers of this product.

Non-Toxic, Non-Corrosive, Xi (Potential Irritant).

ELEMENT	CONCENTRATION	CAS NUMBER
Ash Content @ 7500°C	35.0	
Al as Al ₂ O ₃ (%)	0.02	1344-28-1
Fe as Fe ₂ O ₃ (%)	0.04	1309-37-1
Na as Na (%)	11.02	7440-23-5
Mg as MgO (%)	0.05	1309-42-8
Chlorides (%)	0.1	
Cr, K, Cd and Zn (%)	All below 0.01	
Reducing Substances (%)	2.0	
The FTIR spectrum of Modified Lignosulfonate will produce characteristic sulfonate bands at 1210-1220 cm ⁻¹ ; 1034 cm ⁻¹ and 647 cm ⁻¹		

**Concentration shown as a range is to protect confidentiality.*

3. HAZARD IDENTIFICATION

MAIN HAZARD: None.
FLAMMABILITY: Not flammable.
CHEMICAL HAZARD: None.
BIOLOGICAL HAZARD: None, if spilled in concentrate, recover as much as possible for re-use and wash away remaining product with abundant clean water.
REPRODUCTIVE HAZARD: Repeated or prolonged ingestion can produce target organ damage.

HEALTH -EYES:	Can cause irritation if it comes into contact with eyes.
HEALTH -SKIN:	Prolonged direct contact with concentrated product can cause skin irritation.
HEALTH -INGESTION:	Not expected to be a route of exposure.
HEALTH -INHALATION:	May cause irritation of nasal tract in concentrated form.
CARCINOGENICITY:	Not determined but unlikely.
MUTAGENICITY:	Not determined but unlikely.
NEUROTOXICITY:	Not determined but unlikely.

4. FIRST AID MEASURES

PRODUCT IN EYE:	Remove contact lenses. Hold eyelids apart. Immediately flush eyes with plenty of low-pressure water.
PRODUCT ON SKIN:	Wash thoroughly with soap and water. Remove contaminated clothing. Thoroughly wash clothing before reuse.
PRODUCT INGESTED:	Do not induce vomiting, rinse mouth with large amount of water. Seek medical attention if large amount was ingested and symptoms develop and persist.
PRODUCT INHALED:	Exposure to mist may cause irritation to throat. Remove to fresh air. If symptoms develop and persist, seek medical attention.

5. FIRE FIGHTING MEASURES

HAZARD IDENTIFICATION:	Non-Combustible / Non-Flammable.
FLASH POINT:	None below 750°C.
AUTO IGNITION TEMP.:	Not Applicable.
EXTINGUISHING MEDIA:	Not Applicable.
FLAMMABLE LIMITS:	Not applicable to liquid form.
PROTECTIVE CLOTHING:	Not Applicable.
HAZARDOUS DECOMPOSITION:	No risks of explosion of the product in presence of mechanical impact. No risks of explosion of the product in presence of static discharge.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:	Wear coveralls, rubber gloves and safety goggles when handling the product.
ENVIRONMENTAL PRECAUTIONS:	Avoid dispersal of spilled concentrated material and runoff to waterways, drains and sewers. Mop up concentrated product and dilute remaining spilled product with abundant water.
SMALL SPILLS:	Stop leak if possible. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. Dispose of appropriately according to regulations.
LARGE SPILLS:	Stop leak if possible. Prevent concentrated product entry into sewers, waterways, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of

via a licensed waste disposal contractor. Wash away remaining product with abundant clean water.

7. HANDLING AND STORAGE

SUITABLE MATERIAL: Do not store in unlabelled containers or tanks. Use appropriate containment to avoid environmental contamination. Use plastic or plastic lined steel drums, mini-bulks or tanks.

HANDLING: Wear protective gloves, safety glasses and appropriate protective clothing. Observe good housekeeping practices. Keep workplace well ventilated.

STORAGE: Store between 5 and 50°C. Keep container closed when not in use.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS: None.

ENGINEERING CONTROL MEASURES: ISO 9001 material handling standards.

PERSONAL PROTECTION-RESPIRATORY: None required under normal open-air conditions.

PERSONAL PROTECTION-HAND: Impervious gloves.

PERSONAL PROTECTION-EYE: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

PERSONAL PROTECTION-SKIN: Appropriate protective clothing.

OTHER PROTECTION: Avoid contamination of food, beverages, or smoking materials. Wash thoroughly after handling, and before eating, drinking or smoking. Remove contaminated clothing promptly and clean thoroughly before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Reddish Brown Liquid.

ODOUR: Resinous.

pH: 6.5 - 7.6 (as supplied).

BOILING POINT: >120°C.

MELTING POINT: Liquid at STP.

FLASH POINT: Not Applicable.

FLAMMABILITY: Not Flammable.

AUTOFLAMMABILITY: Not Applicable.

EXPLOSIVE PROPERTIES: Not Applicable.

OXIDIZING PROPERTIES: Not Oxidizing.

VAPOUR PRESSURE: Negligible at 20-40°C.

DENSITY: 1.08

SOLUBILITY-WATER: Freely soluble.

SOLUBILITY-SOLVENT: Soluble

SOLUBILITY-COEFFICIENT: 1.

10. STABILITY AND REACTIVITY

HAZARDOUS POLYMERISATION: Will not occur.

STABLE:	Yes.
CONDITION TO AVOID:	Extremes of temperature and pressure.
INCOMPATIBLE MATERIALS:	None known.
HAZARDOUS DECOMPOSITION PRODUCTS:	None expected under normal use conditions.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:	Long-term use of this class of product under industrial conditions indicates the absence of acute effects.
SKIN AND EYE CONTACT:	Not toxic but could be irritant to some individuals.
CHRONIC TOXICITY:	LC50 (inhale –RHT) 5772 mg/l.
CARCINOGENICITY:	Not listed as a carcinogen by NTP, OSHA or IARC.
MUTAGENICITY:	No known significant effects or critical hazards.
NEUROTOXICITY:	No known significant effects or critical hazards.
REPRODUCTIVE HAZARDS:	No known significant effects or critical hazards.

12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY:	Low toxicity (<1000mg/l). A large spill of concentrate into a natural water system could cause short-term toxicity to aquatic life. Once sufficient natural dilution has occurred no long-term effects are expected. The main organic component will tend to bind to soil particles but will naturally decompose over time.
BIODEGRADABILITY:	Possible hazardous short-term degradation is not likely. Product completely biodegradable over time.
BIO-ACCUMULATION:	Not available.
MOBILITY:	Not classified as hazardous.

13. DISPOSAL CONSIDERATION

DISPOSAL METHODS:	Not hazardous. Disposal should be in accordance with applicable provincial and national regulations.
DISPOSAL OF PACKAGING:	Drums (if used) may be cleaned and returned to supplier for re-use.

14. TRANSPORTATION INFORMATION

Not regulated for transport of dangerous goods, UN, IATA, HAZCHEM, ADNR.

15. REGULATORY INFORMATION

EEC HAZARD CLASSIFICATION:	Not listed as hazardous.
RISK PHRASES:	None.
SAFETY PHRASES:	None.
NATIONAL LEGISLATION:	None.

16. OTHER INFORMATION

Further analysis of the product is being conducted continuously. The product is 100% biodegradable and contains no petroleum-based chemicals. It is completely organic and therefore should have no negative effects on the environment and therefore termed as an "Environmentally Friendly" product.

RDC 20 is not applied in concentrated form and potential hazards of the product in "concentrated" form noted in this document are therefore extremely unlikely to occur.

Note:

The information and recommendations provided in this MSDS have been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the MSDS was prepared. No warranty, guaranty or representation is made as to the correctness or sufficiency of the information. The user of this product must decide what safety measures are necessary to safely use this product, either alone or in combination with other products, and determine its environmental regulatory compliance obligations under any applicable provincial and national laws.

**MSDS Prepared by
Associated Risk Management Services**