SAFETY DATA SHEET

SECTION 1
PRODUCT NAME: DEXTRAN SULPHATE POWDER
GENERIC DESCRIPTION: Dextran Sulphate Powder.
SUPPLIED BY: Dextran Products Limited.
FORMULA: (C₆H₉O₅ SO₃Na)n+1
RECOMMENDED USE: Laboratory Chemicals
USES ADVISED AGAINST: No Information available

Details of the supplier of the safety data sheet:
Company: Dextran Products
Address: 421 Comstock Rd
Location: Scarborough, Ontario
Postal code: M1L 2H5

Emergency Telephone Number: 416-755-2231

SECTION 2
HAZARDOUS IDENTIFICATION
Not a dangerous substance or mixture according to the
Globally Harmonized System (GHS)

CLASSIFICATION:
Classification under 2012 OSHA Hazard Communication
(29 CFR 1910.1200)

LABEL ELEMENTS:
Not required

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC): None identified

SECTION 3
COMPONENTS:
Dextran Sulphate Sodium Salt
CAS-No: 9042-14-2

SECTION 4
INSTRUCTIONS
EYES:
Flush eyes with large amounts of water for at least
15 minutes. Hold the eyelids apart to ensure rinsing
of the entire surface of the eye and lids with water.
Obtain immediate medical attention.
Wipe off and flush with water.

SKIN:
INHALATION: Remove victim from further exposure and restore breathing, if required.

INGESTION: Do not take internally, Rinse mouth with large amounts of water. Seek medical help.

MOST IMPORTANT SYMPTOMS/EFFECTS: No information available.

NOTES TO PHYSICIAN: Treat symptomatically.

SECTION 5
FLAMMABILITY: Not available.
EXTINGUISHING MEDIA: Water spray, CO₂, Dry Chemical or Foam
SPECIAL PROCEDURES: Self contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals.

FLASH POINT: Not applicable.
AUTO IGNITION TEMPERATURE: Not available.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.
HAZARDOUS COMBUSTION PRODUCTS: None known.

EXPLOSION DATA
MAX. PRES. OUTPUT: Unknown
MAX. PRES. RISE RATE: Unknown
DEFLAGRATION INDEX: Unknown

DISCHARGE
SENSITIVITY TO IMPACT: Not applicable.
RATE OF BURNING: Not available.

UNSUITABLE EXTINGUISHING MEDIA: No information available

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: Keep product and empty container away from heat and sources of ignition.

HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide (CO) Carbon Dioxide (CO₂)

PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS:
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA
<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>0</td>
<td>N/A</td>
</tr>
</tbody>
</table>

SECTION 6
PERSONAL PRECAUTIONS
ACCIDENTAL RELEASE MEASURES
Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.
ENVIRONMENTAL PRECAUTIONS: Should not be released into the environment. See Section 12 for additional ecological information.

LEAK/SPILL: Use absorbent material to collect and contain for salvage or disposal according to local laws.

SECTION 7
HANDLING PROCEDURES AND EQUIPMENT:
Maintain good personal hygiene, any gross amount of chemical should be removed from the skin as soon as possible, especially before eating or smoking. Wear personal protective equipment. Ensure ventilation. Avoid contact with skin, eye, and clothing.

STORAGE NEEDS: Store in a cool dry place away from heat and ignition sources.

SECTION 8
EXPOSURE CONTROLS/PERSONAL PROTECTION
GLOVES/TYPE: Butyl rubber gloves.
RESPIRATOR/TYPE: In the absence of proper environmental controls, an approved dust mask is recommended.
EYE/TYPE: Chemical safety goggles.
FOOTWEAR/TYPE: Safety boots.
CLOTHING/TYPE: Normal protective overalls.
OTHER/TYPE: Safety Showers and Eye Wash Stations.
ENGINEERING CONTROLS: Electrical and mechanical equipment should be explosion and dust proof. Exhaust equipment is recommended over the work area with make up air to balance air exhausted.

EYE/ PROTECTION:
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection in 29 CFR 1910.133 or European standard EN166.

RESPIRATORY PROTECTION:
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European standard EN 149. Use a NIOSH/MSHA or European standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

SECTION 9
PHYSICAL STATE:
ODOR: Slight phenolic smell.
BOILING POINT: Not applicable.
FREEZING POINT: Not applicable.
pH: 5.0 – 7.5 (1% in DW).
SPECIFIC GRAVITY: Not available.
SOLUBILITY IN WATER: Fully soluble at low concentrations, will dissolve at higher concentrations with warming.

MELTING POINT/RANGE: No data available.
FLASH POINT: No data available.
EVAPORATION RATE: Negligible.

Dextran Sulphate Powder
FLAMMABILITY (solid, gas): No information available.
FLAMMABILITY or EXPLOSIVE LIMITS:
  UPPER: No data available
  LOWER: No data available
VAPOR PRESSURE: Negligible.
VAPOR DENSITY: No information available.
RELATIVE DENSITY: No information available.
SOLUBILITY: Soluble in water.
PARTITION COEFFICIENT: n-octanol/water: No data available.
AUTOIGNITION TEMPERATURE: No information available.
DECOMPOSITION TEMPERATURE: No information available.
VISCOSITY: No information available.

SECTION 10
CHEMICAL STABILITY: Stable.
COMPATIBILITY WITH OTHER SUBSTANCES:
Mixing with any other chemical should be avoided or discussed first with supplier.

REACTIVITY CONDITIONS:
Avoid excessive heat, open flames and all ignition sources.

HAZARDOUS POLYMERIZATION:
Not available.
HAZARDOUS PRODUCTS OF DECOMPOSITION:
None known.

REACTIVE HAZARD:
None known.

INCOMPATIBLE MATERIALS:
Strong oxidizing agents.

SECTION 11
ROUTE OF ENTRY
  SKIN CONTACT: Little known effect.
  SKIN ABSORPTION: Little known effect.
  EYE CONTACT: Can cause irritation.
  INHALATION: Can cause irritation to lungs.
  INGESTION: May cause irritation.

EFFECTS OF ACUTE EXPOSURE:
None known.

EFFECTS OF CHRONIC EXPOSURE:
None known.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:
Lung or breathing problems may be aggravated.

LD 50 OF MATERIAL:
Not available.
CARCINOGENICITY:
Not available.
REPRODUCTIVE EFFECTS:
Not available.
ENVIRONMENTAL TOXICITY:
Not available.

CARCINOGENICITY: The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dextran Sulphate 9042-14-2</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td></td>
</tr>
</tbody>
</table>

Dextran Sulphate Powder
SECTION 12
TOXICITY:
No data available

ECOLOGICAL INFORMATION
PERSISTENCE & DEGRADABILITY: No data available
BIOACCUMULATIVE POTENTIAL: No data available
MOBILITY IN SOIL: No data available
PBT and vPvB ASSESSMENT: No data available
OTHER ADVERSE EFFECTS: No data available

SECTION 13
WASTE DISPOSAL:
All local, provincial and federal regulations concerning health and pollution must be reviewed to determine the approved disposal procedures.

DISPOSAL CONSIDERATION
CONTAMINATED PACKAGING: Dispose of as unused product.

SECTION 14
BASIC SHIPPING INFO:
Not dangerous goods.
Not regulated for transport by IATA.

TRANSPORT INFORMATION

SECTION 15
WHMIS CLASSIFICATION:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

REGULATORY INFORMATION

INTERNATIONAL INVENTORIES:

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IESC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dextran Sulphate</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>TBD</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-09626</td>
</tr>
</tbody>
</table>

Legend:
X-Listed
E- Indicates a substance that is the subject of a section 5(e) Consent order under TSCA.
F- Indicates a substance that is the subject of a Section 5(1) Rule under TSCA.
N- Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P- Indicates a commenced PMN substance.
R- Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S- Indicates a substance that is identified in a proposed or final Significant New Use Rule.
T- Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU- Indicates a substance exempt from reporting under the Inventory Update Rule, i.e Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).
Y1- Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2- Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concerns reactants that comprises one of the eligibility criteria for the exemption rule.
U.S. FEDERAL REGULATIONS:

TSCA 12(b) Not applicable
SARA 313 Not applicable

SARA 311/312 Hazardous Categorization
Acute Health Hazard: No
Chronic Health Hazard: No
Fire Hazard: No
Sudden Release of Pressure Hazard: No
Reactive Hazard: No

CLEAN WATER ACT: No
CLEAN AIR ACT: No

OSHA: Occupational Safety and Health Administration: Not Applicable

CERCLA: Not Applicable

U.S. DEPARTMENT of TRANSPORTATION:

Reportable Quantity (RQ): N
DOT Marine Pollutant: N
DOT Severe Marine Pollutant: N

WHMIS Hazard Class: Non-controlled

SECTION 16 OTHER INFORMATION
EMERGENCY TELEPHONE NUMBER: 416-755-2231
PREPARED BY: Dextran Products
DATE: June 7, 2019

These data are offered in good faith as typical values and not as a product specification. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user must review these recommendations in the specific context of the intended use and determine whether they are appropriate.