SAFETY DATA SHEET

SECTION 1
PRODUCT NAME: Preserved DEXTRAN LIQUID.
GENERIC DESCRIPTION: Preserved Dextrans Liquid.
SUPPLIED BY: Dextran Products Limited.
FORMULA: \((\text{C}_6\text{H}_{10}\text{O}_5)^{n+1}\)
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
Scarborough, Ontario
M1L 2H5

SECTION 2
POTENTIAL HEALTH EFFECTS:

HAZARDOUS IDENTIFICATION
Material is stabilized with Glutaraldehyde and Spectrum RX 9100.

CLASSIFICATION:
Classification under 2012 OSHA Hazard Communication (29 CFR 1910.1200)
Not required

LABEL ELEMENTS:

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC): None identified

SECTION 3
COMPONENTS:

COMPOSITION
Dextran, Water, Glutaraldehyde, and Spectrum RX9100 as preservatives.

CAS-No: 9004-54-0

SECTION 4
INSTRUCTIONS EYES:

FIRST-AID MEASURES
Flush eyes with large amounts of water for at least 15 minutes. Hold the eyelids apart to ensure rinsing.
SKIN:
Wipe off and flush with water.

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:
FIRE-FIGHTING MEASURES
Care should be taken since material contains carbohydrates.
Water spray, CO₂, Dry Chemical or Foam

EXTINGUISHING MEDIA:
Self contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals.

SPECIAL PROCEDURES:
Not applicable.

FLASH POINT:
Not available.

AUTO IGNITION TEMPERATURE:
Not regulated.

T.D.G. FLAM. CLASS:
UNUSUAL FIRE AND EXPLOSION HAZARDS:
None known.

HAZARDOUS COMBUSTION PRODUCTS:
None known.

EXPLOSION DATA
MAX. PRES. OUTPUT:
This liquid may form an explosive mixture under the right conditions since it contains carbohydrates

MAX. PRES. RISE RATE:
Not available

DEFLAGRATION INDEX:
Not available

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: None known.

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.

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

Preserved Dextran Liquid
SECTION 6  ACCIDENTAL RELEASE MEASURES  
PERSONAL PRECAUTIONS: 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 AND STORAGE  
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 AND CHEMICAL PROPERTIES  
PHYSICAL STATE: Cream coloured liquid.
ODOR: Slight phenolic smell.
BOILING POINT: 100°C.
FREEZING POINT: 0°C.
pH: 4.0 – 8.0
SPECIFIC GRAVITY: 1.0 to 1.2.
SOLUBILITY IN WATER: Complete.
MELTING POINT/RANGE: No data 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
STABILITY AND REACTIVITY
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
TOXICOLOGICAL INFORMATION
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>
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<tbody>
<tr>
<td>Dextran</td>
<td>9004-54-0</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

Preserved Dextran Liquid
SECTION 12
TOXICITY:
ECOLOGICAL INFORMATION
No data available

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

CONTAMINATED PACKAGING:
Dispose of as unused product.

SECTION 14
BASIC SHIPPING INFO:
TRANSPORT INFORMATION
Not dangerous goods.

SECTION 15
WHMIS CLASSIFICATION:
REGULATORY INFORMATION
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 regulation.

INTERNATIONAL INVENTORIES:

<table>
<thead>
<tr>
<th>Component: 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>IECSC</th>
<th>KECL</th>
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<tbody>
<tr>
<td>Dextran</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>232-677-5</td>
<td>TBD</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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</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(f) 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.

Preserved Dextran Liquid
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

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**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.