

MATERIAL SAFETY DATA SHEET

Date Prepared	Revision	Prepared By
20JAN2005	ORIGINAL	JHH

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name:	S400 Tissue Simulant
CAS Number:	None
Manufacturer:	The Howland Company, Inc. 4540 Atwater Court, Suite 107 Buford GA 30518 www.thehowlandcompany.com
Emergency Telephone Number:	404-455-3850
Telephone Number for Information:	678-546-5680

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS	% COMP	OSHA PEL	ACGIH TLV
Sucrose	---	54.3	---	---
Water	007732-18-5	45.3	---	---
Hydroxyethylcellulose	9004-62-0	0.3		
Dowicil 75	051229-78-8	0.1	---	---

SECTION 3 - HAZARDS IDENTIFICATION

Routes of Entry:	Eyes:	Yes
	Ingestion:	Yes
	Inhalation:	Yes
	Skin:	Yes
Health Hazards - Acute:	Eyes:	None
	Ingestion:	None
	Inhalation:	None
	Skin:	None
Health Hazards - Chronic:	None	
Signs and Symptoms of Exposure:	None	
Medical Conditions Generally Aggravated by Exposure:	None	
Effects of Overexposure:	None	

SECTION 4 - FIRST AID MEASURES

First Aid and Emergency Procedures:	Eyes:	Flush with water
	Ingestion:	None
	Inhalation:	Treat symptomatically if breathing is not normal
	Skin:	Wash with water

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point (Method Used):	N/A (N/A = Not Applicable)	
Flammable Limits:	Upper Explosive Limit:	N/A
	Lower Explosive Limit:	N/A
Extinguishing Media:	Water, foam, or carbon dioxide	
Special Fire Fighting Procedures:	N/A	
Unusual Fire and Explosion Hazards:	N/A	
NFPA Hazard Code: (4=extreme/severe; 3=high/serious; 2=moderate; 1=slight; 0=minimum)	Health:	0
	Flammability:	0
	Reactivity:	0

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures:	Wash with warm water and sweep up or shovel into DOT approved containers. Follow all state and local requirements for non-hazardous waste disposal.
---------------------------	---

SECTION 7 - HANDLING AND STORAGE

Handling and Storage Requirements:	Keep containers tightly sealed to limit exposure to air. Avoid storage temperatures above 90 °F for prolonged periods or discoloration and/or caramelization may occur.
------------------------------------	---

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection:	N/A	
Ventilation:	Local:	N/A
	Mechanical:	N/A
	Special:	N/A
	Other:	N/A
Protective Gloves:	N/A	
Eye Protection:	N/A	
Other Protective Clothing or Equipment:	N/A	
Work/Hygienic Practices:	Follow good laboratory housekeeping procedures.	

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

Appearance and Odor:	Clear, colorless to slight amber colored liquid. Odorless.
Boiling Point:	°F
Evaporation Rate (Butyl Acetate = 1):	N/A
Melting Point:	N/A
Specific Gravity (Water = 1):	
Solubility in Water:	100% soluble
Vapor Density (Air = 1):	N/A
Vapor Pressure (mmHg):	N/A

SECTION 10 - STABILITY & REACTIVITY

Stability:	Stable
Conditions to Avoid:	N/A
Incompatibility (Materials to Avoid):	Not reactive
Hazardous Decomposition or Byproducts:	None
Hazardous Polymerization:	Will not occur

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicity Hazard Rating:	Not currently listed under SARA Title
OSHA Hazardous/Non-hazardous:	Non-hazardous

SECTION 12 - ECOLOGICAL INFORMATION

Material is not known to cause significant adverse environmental impact.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Methods:	Mix with water and dispose to sanitary sewers or solid disposal dump. Comply with all applicable local, state and federal regulations for waste disposal.
-------------------------	---

SECTION 14 - TRANSPORT INFORMATION

DOT:	Not restricted
IATA:	Not restricted
HMIS Labeling:	Exempt

SECTION 15 - REGULATORY INFORMATION

SARA Title III Classification:	Not currently listed as toxic chemical under 40 CFR Section 372.65.
--------------------------------	---

SECTION 16 - OTHER INFORMATION

N/A

For more information contact:

Jim Howland, Technical Staff
The Howland Company, Inc.
4540 Atwater Court, Suite 107
Buford, Georgia 30518

The information and recommendations contained in this Material Safety Data Sheet 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 federal or state laws.