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## NATIONAL FIBER

A DIVISION OF MACGREGOR BAY CORPORATION

# MATERIAL SAFETY DATA SHEET

EFFECTIVE DATE: October 1, 2005

## Nu-Wool® Cellulose Insulation (aka Wallseal®)

### CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Nu-Wool® (aka Wallseal®)	LICENCED MANUFACTURER:	National Fiber
Chemical Formula:	$(C_{11}H_{15}O_5)-Na_2SO_4 \cdot H_3BO_3$		50 Depot Street
Chemical Name/Synonyms:	Cellulose Insulation		Belchertown, MA 01007
Chemical Family:	Cellulose Treated With Inorganic Salts		413-283-8747
CAS Registry Number:	Not Established	<b>EMERGENCY PHONE NUMBER:</b>	
TSCA Inventory Number:	Not Listed		National Fiber: 800-282-7711

Nu-Wool® and Wallseal® are registered trademarks of Nu-Wool® Co., Inc.

### COMPOSITION/INFORMATION ON INGREDIENTS OSHA HAZARDS

Nu-Wool® cellulose insulation contains over 80 percent by weight newsprint processed into cellulose fiber, CAS No. 65996-61-4. This product contains less than 20 percent by weight boric acid ( $H_3BO_3$ ), CAS No. 10043-35-3. Boric acid is added for purposes of superior fire resistance and insecticide properties within the insulation. Board Defense® (disodium octaborate tetrahydrate), CAS No. 12280-03-4 and EPA Reg. No. 44757-20, is a fungicide added for enhanced mold resistance. A small quantity of distillate mineral oil, CAS No. 6471-88-4, is added to the product for dust suppression and enhanced bonding of the fire retardant. Regarding information on the chronic and ecological toxicity of this product, we have reviewed the available medical and toxicological literature for 100% boric acid. Boric acid is hazardous under the OSHA Hazard Communication Standard based on animal chronic toxicity studies. **This product is not considered hazardous under the criteria of Federal OSHA Hazard Communication Standard 29CFR 1910.1220.**

### HAZARD IDENTIFICATION

#### EMERGENCY OVERVIEW:

Nu-Wool® cellulose insulation is a gray, odorless cellulosic fiber insulation material. The product is not flammable, combustible, or explosive, and it presents no unusual hazard if involved in a fire. Nu-Wool® cellulose insulation presents little or no hazard (to humans) and has low acute oral and even lower dermal toxicities. Care should be taken to minimize the amount of Nu-Wool® cellulose insulation released to the environment to avoid ecological effects.

#### POTENTIAL ECOLOGICAL EFFECTS:

Large amounts of Nu-Wool® cellulose insulation can be harmful to boron-sensitive plants and other ecological systems.

#### POTENTIAL HEALTH EFFECTS:

**Routes of Exposure:** Inhalation is the most significant route of exposure in occupational and other settings. Dermal exposure is not usually a concern because Nu-Wool® cellulose insulation is not absorbed through intact skin.

**Inhalation:** Occasional mild irritation of nose and throat may occur from inhalation of Nu-Wool® cellulose insulation dusts at levels greater than 10 mg/m<sup>3</sup>.

**Eye Contact:** Nu-Wool® cellulose insulation is non-irritating to eyes in normal industrial use.

**Skin Contact:** Nu-Wool® cellulose insulation does not cause irritation to intact skin

**Ingestion:** Nu-Wool® cellulose insulation is not intended for ingestion. Nu-Wool® cellulose insulation has a relatively low acute toxicity. Small amounts (e.g. 3 teaspoonfuls) swallowed accidentally are not likely to cause effects; swallowing amounts larger than that may cause gastrointestinal symptoms.

**Cancer:** Nu-Wool® cellulose insulation is not considered a carcinogen.

**Signs and Symptoms of Exposure:** Symptoms of accidental over-exposure to borate products have been associated with ingestion or by absorption through large areas of damaged skin. These may include nausea, vomiting, and diarrhea, with delayed effects of skin redness and peeling.

### FIRST AID MEASURES

**Inhalation:** Nu-Wool® cellulose insulation is not likely to be hazardous by inhalation. Prolonged exposure to dust levels in excess of regulatory limits should always be avoided. If irritation or difficulty breathing occurs, move to fresh air. Seek medical attention if symptoms persist.

**Eye Contact:** Use eye wash fountain or fresh water to cleanse eye for several minutes. If irritation persists for more than 30 minutes, seek medical attention.

**Skin Contact:** Does not normally irritate skin. In case of broken skin, wash area with soap and water.

**Ingestion:** Swallowing less than three teaspoons will cause no harm to healthy adults. If larger amounts are swallowed, give two glasses of water to drink and seek medical attention.

**NOTE TO PHYSICIANS:** Observation only is required for adult ingestion of a few grams of Nu-Wool® cellulose insulation. For ingestion in excess of larger amounts, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Hemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron analyses of urine or blood are only useful for documenting exposure and should not be used to evaluate severity of poisoning or to guide treatment.

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### FIRE FIGHTING MEASURES

**General Hazard:** Nu-Wool® cellulose insulation is not flammable or explosive.

**Extinguishing Media:** Any fire extinguishing media may be used on nearby fires.

**Flammability Classification (29 CFR 1910, 1200):** Non-flammable solid.

**Unusual Fire Hazard:** None. However, material should not be installed where temperatures may exceed 180°F. Adequate clearance should be maintained around non IC rated recessed lights, chimneys, and other heat producing equipment as specified in the National Fire Prevention Code.

### ACCIDENTAL RELEASE MEASURES

**General:** Nu-Wool® cellulose insulation contains water-soluble inorganic salts that may cause damage to trees or vegetation by root absorption.

**Spills:** Vacuum, shovel or sweep up Nu-Wool® cellulose insulation and place in containers for disposal in accordance with applicable local regulations.

No personal protective equipment is needed to clean up spills

Nu-Wool® cellulose insulation is a non-hazardous waste when spilled or disposed of, as defined in the Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 261).

### HANDLING AND STORAGE

**Storage Temperature:** Ambient

**Storage Pressure:** Atmospheric

**Special Sensitivity:** None known

**General:** No special handling precautions are required, but dry, indoor storage is recommended. To maintain package integrity, bags should be handled on a "first-in first-out" basis. Good housekeeping procedures should be followed to minimize dust generation and accumulation.

### TRANSPORTATION INFORMATION

Nu-Wool® cellulose insulation may be shipped normally as a non-hazardous material.

### EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Use local exhaust ventilation to keep airborne concentrations of Nu-Wool® cellulose insulation dust below permissible exposure levels.

**Personal Protection:** Where airborne concentrations are expected to exceed exposure limits, NIOSH/MSHA certified respirators must be used. Eye goggles and gloves are not required for normal industrial exposures, but may be warranted if environment is excessively dusty.

**Occupational Exposure Limits:** Nu-Wool® cellulose insulation is listed/regulated by OSHA, Cal OSHA and ACGIH as "Particulate Not Otherwise Classified" or "Nuisance Dust".

OSHA: PEL*	15 mg/m <sup>3</sup> total dust and 5 mg/m <sup>3</sup> respirable dust
ACGIH: TLV**	10 mg/m <sup>3</sup>
Cal OSHA: PEL*	10 mg/m <sup>3</sup>

\*PEL="Permissible Exposure Limit"

\*\*TLV-"Threshold Limit Value"

### PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Gray, odorless fiber	<b>Boiling Point:</b>	Not Applicable
<b>Specific Gravity:</b>	0.7 compressed	<b>Melting Point:</b>	Not Applicable
<b>Vapor Pressure:</b>	Negligible @ 20°C	<b>Flash Point:</b>	Not Applicable
<b>Solubility in Water:</b>	Fiber is not soluble; Chemical additive is soluble at the rate of 4.7% @ 20° C.	<b>pH:</b>	7.4 (2.0% solution @ 25°C)
		<b>Viscosity:</b>	Not Applicable

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For more information contact National Fiber: 800-282-7711, [www.nationalfiber.com](http://www.nationalfiber.com)