



NUKON® Insulation
Material Safety Data Sheet

no: MSDS 05
date: 01-22-07
revision: 7
page: 1 of 5

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Product Name and Description:

NUKON Insulation is a removable, reusable insulation product comprised of fibrous glass wool, fiber glass cloth, fiber glass scrim and woven Nomex velcro-type fasteners. NUKON is primarily used inside containment areas of nuclear power plants and facilities to control heat loss from piping and equipment.

I. COMPONENT DATA

A. HAZARDOUS INGREDIENTS

FABRIC: Not Applicable (N/A)
INSULATION: Not Applicable (N/A)
FASTENERS: Not Applicable (N/A)
OTHER:

II. PHYSICAL DATA

Boiling Point (Degrees F):	N/A
Melting Point (Degrees F):	1300
Vapor Pressure (mmHg @ 20 C):	N/A
Percent Volatile by Volume:	N/A
Specific Gravity (Water = 1):	2.5
Vapor Density (Air - 1):	N/A
Solubility in Water:	Insoluble
Evaporation Rate (Ethyl ether - 1):	N/A

APPEARANCE AND ODOR: White to tan woven fabric cover over a yellow fiberglass wool insulation; there is a faint resin odor.



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III. FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A
Flammability Limits: N/A
LEL: N/A
UEL: N/A
Auto Ignition Temp (F): N/A
Extinguishing Media: Water, foam, or dry chemical
Special Fire Fighting Instructions: N/A
Unusual Fire and Explosion Hazards: N/A

IV. REACTIVITY DATA

Stability (Conditions to Avoid): These materials are stable

Incompatibility (Materials to Avoid): None

Irritating Decomposition Products:

- a. The fibrous glass wool insulation has an organic binder (about 3% by weight). About 1/3 of this binder, which is a phenolic resin, will decompose when first exposed to temperatures above 400° F. The gasses released are very small quantities of carbon monoxide, carbon dioxide and ammonia.
- b. The woven fiberglass fabric and scrim have organic finishes that decompose totally when first exposed to temperatures above about 400° F. These finishes consist primarily of acetates and acrylics. The decomposition products will consist of small quantities of acetic acid, carbon dioxide and methyl methacrylate.

These off gasses may be irritating, depending on quantity of NUKON material added, the size of the containment, the quantity of ventilation, and the quantity of containment air cooling. These gasses may become dissolved in condensing water on the containment air coolers and hence may be removed from the air even without ventilation.

Hazardous Polymerization: None



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V. HEALTH HAZARD DATA

Primary Route(s) of Entry Respiratory
Health Hazards (Acute and Chronic) (See Below)

INHALATION: See Ingestion Below

SKIN CONTACT: Direct contact with fibrous glass can cause mechanical irritation and transitory dermatitis. There is no chronic health hazard.

EYE CONTACT: Direct contact with fibers will cause mechanical irritation.

INGESTION: Acute: Not likely to occur
Chronic: N/A

Signs and Symptoms of Exposure: N/A

Medical Conditions Generally Aggravated by Exposure: N/A

<u>EXPOSURE LIMITS:</u>	<u>THREAD & FABRIC</u>
Hazardous Ingredients	Dust
OSHA PEL (mg/Cu m)	5
AGCIH TLV (mg/Cu m)	10
Other Recommended (Source)	3 X 10 ⁶ fibers/CU m (NIOSH)

<u>CARCINOGENICITY:</u>	<u>THREAD & FABRIC</u>
Hazardous Ingredients	Fibrous glass
NTP Listed	No
IARC Listed	No
OSHA Regulated	No

VI. EMERGENCY AND FIRST-AID PROCEDURES

INHALATION: Move to fresh air area.

SKIN: Flush with ample water, followed by washing with mild soap to remove accumulated fibers.

EYES: Flush with flowing water for 15 minutes.



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VII. SPECIAL HANDLING INFORMATION

VENTILATION AND HVAC: During the first heating of new NUKON blankets, ventilation should be provided, if possible, to remove off gassing products. An alternative is to maintain full operation of all containment air coolers during this period. If there is concern about these gasses, the NUKON blankets should first be heated on hot plates operated continuously at least 50°F above the intended service temperature for at least 6 hours.

RESPIRATORY PROTECTION: If airborne dust or fibers exceed TLU, or if upper respiratory irritation occurs, use a respirator designed for nuisance type dusts.

PROTECTIVE CLOTHING: Not recommended for normal use. Long sleeves and gloves may be necessary for certain workers who experience skin irritation or dermatitis.

EYE PROTECTION: Not recommended for normal use. Eye glasses are recommended for workers who experience irritation.

WORK/HYGENIC PRACTICES: Normal work procedures should be adequate other than those noted above. Shower at end of work day, wash clothes separately and wipe out washer at end of cycle.

VIII. SPILL, LEAK AND DISPOSAL PROCEDURES

ACTION TO TAKE FOR SPILLS: Dust or loose fibers may be vacuumed or swept with aid of a dust suppressant.

WASTE DISPOSAL METHOD: Dispose of according to local, state and federal laws for an inert solid waste.

EPA HAZARDOUS WASTE NUMBER: This material is not regulated under the "RCRA" hazardous waste regulations.



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IX. SPECIAL PRECAUTIONS/ADDITIONAL INFORMATION

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: If airborne dust or fibers exceed TLU values, or if upper respiratory irritation occurs, use a respirator designed for nuisance type dusts.

HAZARDOUS MATERIAL PROPER SHIPPING NAME: Not regulated by DOT.

FREIGHT CLASS: Class 200.

HAZARD CLASS: Non hazardous.

UN IDENTIFICATION NUMBER: None

ADDITIONAL INFORMATION: Test and Analysis Report on NUKON Insulation Blankets and their Thermal Decomposition Product Gasses at the Calvert Cliffs 1 and Salem 1 Plants.



Gregg Hunter
Technical Services Manager