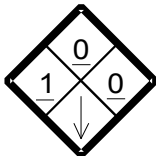
Knauf Insulation GmbH

Health Hazard	1
Fire Hazard	0
Physical Hazard	0
Personal Protection	B

HMIS RATING

MATERIAL SAFETY DATA SHEET



NFPA RATING

SECTION I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product: Fiber Glass Insulation **MSDS Number:** 1004

Trade Designations: 1000° Pipe Insulation*, Acoustical/IB Board, Acoustical Board Smooth, Air Duct Board (Type M, Type AGM, Eclipse™), Amber Blanket Insulation, Basement Wall Insulation, Black Acoustical Board, Black Blanket Insulation, Black Diffuser Board, Commercial Building Insulation, Duct Liner E•M, Duct Wrap (Unfaced & Faced), Elevated Temperature (ET) Batt*, Elevated Temperature (ET) Blanket*, Elevated Temperature (ET) Board*, Elevated Temperature (ET) Panel*, Equipment Liner M, Fabrication Board*, Flexible Duct Material, Foil Faced Residential Insulation, FSK Faced Residential Insulation, Hull Board*, Insulation Board*, KFR/ET Range Insulation*, KN Series Insulation, Kraft Faced Residential Insulation, KwikFlex™, Redi-Klad™ 1000° Pipe Insulation*, Manufactured Housing Duct Board, Manufactured Housing Insulation, Metal Building Insulation, Pipe & Tank Insulation*, Rigid Plenum Liner, Unfaced Residential Insulation, Sill Sealer, Wall and Ceiling Liner M, Wall Insulation (* See Section VIII)

Manufacturer: Knauf Insulation GmbH **Date Issued:** January 20, 2014

Address: One Knauf Drive **Product Stewardship Support Line:** 317-398-4434, X8512

Shelbyville, IN 46176-1496 **24 hr Emergency (Chemtrec) Phone:** 800-424-9300

SECTION II - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	%	TLV	PEL
Fibrous Glass	65997-17-3	83-97	1 fiber/cc	1 fiber /cc
Urea extended phenol formaldehyde resin	25104-55-6	3-17	None	None
Formaldehyde*	50-00-0	<0.1	C0.3 ppm	0.75 ppm

Key: TLV = ACGIH, 8 hr. time weighted average (TWA); PEL = OSHA permissible exposure limit.

TLV and PEL limits are for respirable fibers length <5um, diameter >3um, aspect ratio <5:1.

* Formaldehyde: TLV = ACGIH Ceiling Limit for workshift; PEL = OSHA permissible exposure limit.

SECTION III - HAZARDS IDENTIFICATION

Emergency Overview:

OSHA regulations do not require protection as long as the exposure to fiber glass wool does not exceed 1 fiber/cubic centimeter (f/cc) TWA (8 hour time weighted average). Fiber Glass wool exposure in the home, commercial buildings, and manufacturing facilities are generally found to be less than 1 f/cc. Installers and fabricators should be aware of their exposure levels and take appropriate actions if needed per recommended work practices. Guidance on typical fiber exposures for various applications can be obtained from the North American Insulation Manufacturers Association, www.NAIMA.org. Knauf STRONGLY recommends following all safe work practices while working with and/or installing fiber glass wool products.

SECTION III - HAZARDS IDENTIFICATION

HMIS Rating: **Health:** 1 **Fire:** 0 **Physical Hazard:** 0 **Protection:** B

Primary Routes of Entry: Via respirable fibers to the lungs and respiratory system and airborne fibers to the skin and eyes.

Primary Target Organs: Lungs, respiratory system, skin and eyes.

Potential Health Effects:

Acute: Mechanical irritation of the skin, eyes and upper respiratory system.

Chronic: Results from the most recent cohort and nested case-control epidemiological studies of U.S. workers exposed to glass wool have not provided evidence of an association between exposure to fibers and risk for respiratory cancer or mesothelioma.

Skin Contact: There are confirmed reports of contact dermatitis.

Eye Contact: A mechanical irritant which can cause moderate to severe eye irritation.

Ingestion: Non-hazardous when ingested. Potentially a mild Irritant to the GI tract if excessive quantity is ingested.

Medical Conditions Aggravated by Exposure: Pre-existing chronic upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Skin disease such as dermatitis

Biosolubility: All Knauf Insulation products covered by this MSDS are independently certified by EUCEB tobe manufactured using biosoluble glass formulations and thus exempt from labeling under NTP or California Prop 65 requirements.

SECTION IV - FIRST AID MEASURES

Inhalation: Remove to fresh air. Drink water to clear throat and blow nose to evacuate dust. If coughing and irritation develop, call a physician.

Eye Contact: Flush with large amounts of water until irritation subsides, as least 15 minutes. See a physician if irritation persists.

Skin Contact: Normal good personal hygiene practices. Wash with mild soap and warm water after each exposure.

Ingestion: Emergency procedures not normally required. May be a temporary irritant to the GI system.

SECTION V - FIREFIGHTING MEASURES

NFPA Rating: **Health:** 1 **Fire:** 0 **Reactivity:** 0 **Other:** 0

Extinguishing Method: Use water, foam, dry chemical or carbon dioxide.

Special Firefighting Procedures: Wear self contained breathing apparatus and protective clothing. Dense smoke may limit visibility in enclosed areas.

Fire or explosion Hazards: Resin, paper or plastic facings will burn causing dense acrid smoke.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Clean-up Procedures: Pick up or shovel material into waste container taking care to minimize dust and fiber generation. Vacuum clean-up is preferred. If sweeping is required use a dust suppressant.

Personal Precautions: If dusty conditions exist, wear a face mask approved for use with dusts such as 3M 8210, N95 or equivalent.

Environmental Precautions: This product is not regulated under RCRA Hazardous Waste Regulations. May be disposed in landfill. Comply with federal, state and local regulations.

SECTION VII - HANDLING AND STORAGE

Storage Requirements: Store in dry area. Keep area clean. Vacuum clean dust. Use a dust suppressant if sweeping is necessary.

Special Sensitivity or Incompatibility: Hydrofluoric acid will react with and dissolve glass.

Handling Precautions: Assure proper respiratory protection if dust potential exceeds PEL/TLV.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

*** Heat-Up Precautions:** During initial heat-up of high temperature insulation products to temperatures above 350°F, an acrid odor and smoke may be given off. Adequate ventilation should be provided to protect against harmful fumes. In confined spaces, occupants should wear self-contained breathing apparatus during this period.

Engineering Controls: Maintain sufficient mechanical or natural ventilation to assure fiber concentrations remain below PEL/TLV. Use local exhaust if necessary. Power equipment should be equipped with properly designed dust collection devices.

Respiratory Protection: When over PEL/TLV wear an approved respirator such as 3M 8210, N95 or equivalent, to protect against respirable glass wool fibers. Concentrations of fibers that exceed the recommendations of the mask manufacturer will need a higher level of respiratory protection, such as a half mask respirator with appropriate dust filters.

Eye Protection: Wear safety glasses with side shields, goggles or face shield when handing, installing or fabricating to protect eyes against dust and fibers.

Skin Protection (clothing): Long-sleeved, loose fitting clothes and head covering are recommended. Wash work clothes separately from other clothing, towels and linens to prevent fiber migration. Rinse washer thoroughly.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Yellow or black fibrous product, slight phenol formaldehyde odor. Some products have vinyl, kraft paper, foil or glass cloth facing.

Melting Point: >1300°F

Specific Gravity: Variable

Solubility in Water: Insoluble

Pure/Mixture: Mixture

SECTION X - REACTIVITY

Stability: This is a stable, non-reactive product.

Hazardous Decomposition Products: Thermal decomposition of the resin may include carbon dioxide, carbon monoxide, fomaldehyde, carbon particulate and traces of hydrogen cyanide.

SECTION XI - TOXICOLOGICAL/ECOLOGICAL INFORMATION

LD_{50}: N/Av **LC_{50}:** N/Av

Toxicological Hazards: See the Emergency overview on page 1, Section II.

Ecological Hazards: No data exists for this product.

Teratogenicity, Mutagenicity, other Reproductive Effects: None known

SECTION XII - DISPOSAL CONSIDERATIONS

Waste Disposal Method This product is not regulated under RCRA Hazardous Waste Regulations. May be disposed in landfill. If unsure, contact the local office of the USEPA, your local public health department or the local landfill regulators.

SECTION XIII - TRANSPORTATION INFORMATION

US DOT Shipping Name: Not regulated **DOT Label:** None **UN/NA Number:** None

SECTION XIV - REGULATORY INFORMATION

OSHA Status: This product is regulated as a nuisance dust under OSHA criteria.

TSCA/CEPA Status: All components of this product are included in the TSCA and CEPA Chemical Inventories.

CERCLA Reportable Quantity: N/Ap

SARA Title III:

Section 302 Extremely Hazardous: This product contains no extremely hazardous substances as defined and listed in section #302.

Section 311/312 Hazard Categories: This product is not classified as hazardous.

Section 313 Toxic Chemicals: This product does not contain substances which are reportable under Section 313.

California Safe Drinking Water and Toxic Enforcement Act (Prop. 65) This product is exempt from labeling requirements under this ACT.

Canada (WHMIS): This product is a class D2A controlled product under Canadian WHMIS regulations.

SECTION XV - APPROVALS

Reason for Issue: Review and change issue date **Approval Date:** 01/20/14

Prepared by: B. Gardner **Supersedes Date:** 1/24/11

SECTION XVI - DISCLAIMER

As of the date of this document, the foregoing information is believed to be accurate and is provided in good faith to comply with applicable federal and state laws. However, no warranty or representation of law or fact, with respect to such information, is intended or given.