

Insulation

US

KoolDuct[®]

Panel and Liner System

SAFETY DATA SHEET

1 Identification of Products and Company

Products:

Kingspan[®] KoolDuct[®] Liner System

Recommended use:

Fabrication into pre-insulated HVAC ductwork operating within the internal air temperature range of -26°C to +85°C / -15°F to 185°F.

Restrictions on use: Not for use in fire rated ductwork applications. Not for consumption.

Supplier:

Kingspan Insulation LLC

2100 Riveredge Parkway, Suite 175

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2 Hazards Identification

GHS Classification:

Combustible dust

GHS Label elements:

Pictogram: none

Signal Word: Warning

Hazard Statement: May form combustible dust concentrations in air

Precautionary statements: None

Other hazards:

Not applicable.

Other hazards which do not result in classification:

Overview: No unusual hazards are expected under conditions of normal use,

provided the appropriate engineering controls and safe working practices, as recommended by Kingspan insulation Ltd, are implemented (see Sections 7 & 8). Grinding, crushing and severe mechanical processing of the product, all of which are considered conditions of non-normal use, may result in the generation of some nuisance dusts. Ignition of airborne nuisance dust that has been allowed to accumulate to combustible concentrations suspended in air in a confined space may cause explosion. This SDS also includes for such circumstances.

- Health:** Exposure to high concentrations of dust may give rise to mechanical irritation of eyes, skin, nose or throat. Exposure of eyes and skin to UV light and heat reflected from the foil facings of the product, in bright or sunny weather conditions, may result in radiation burns.
- Physical:** When wet, the foil facings of the product may be slippery underfoot. The weight of the load imposed by multiple units of the product may give rise to physical injury if handled concurrently without assistance.
- Fire:** Grinding, crushing or severe mechanical processing of the product may result in: the excessive release of residual blowing agent gases, which may accumulate to ignitable concentrations in confined and / or unventilated spaces; and the generation of nuisance dust, which may accumulate to form combustible concentrations in air.

3 Composition/Information on Ingredients

Component Description	Common Name	Chemical Name	% Weight Range	Case No.
Insulation Core	Rigid phenolic foam	Phenolic resin	79-84	Not available
Residual Blowing agent	Isopropylchloride	2-Chloropropane	1-5	75-29-6
	Isopentane	2-Methylbutane	1-5	78-78-4
Composite foil facing	Foil	Aluminum	6-9	7429-90-5
	Glass mat & scrim	Continuous filament fiber glass	8-12	65997-17-3

4 First-Aid Measures

Description of first-aid measures:

Inhalation: Remove to fresh air. Place into a comfortable breathing position.

Blow nose to clear nasal passage. Drink water to clear throat. Seek medical attention if breathing difficulty persists or worsens.

Skin Contact: Wash with soap and water. Seek medical attention if skin

irritation persists or worsens.

Eyes: Flush with water. Remove contact lenses. Do not rub or wipe eyes. Seek medical attention if ocular irritation persists or worsens.

Ingestion: Wash mouth with clean water. Do not induce vomiting. Seek medical attention if irritation of the gastrointestinal tract persists or worsens.

Most important symptoms and effects, both acute and delayed: Exposure to residual blowing agent gases that have been allowed to accumulate to unacceptable concentrations, in a confined and / or unventilated space, may cause drowsiness, dizziness, nausea or headaches. Inhaled dust may cause temporary irritation of the upper respiratory tract. Continued inhalation of high concentrations of dust particles may, over a prolonged period of time, decrease pulmonary function, increasing vulnerability to respiratory disease. Rough cut product and dust may have an abrasive effect. Symptoms may include dryness, roughness and / or redness. Nuisance dust may cause irritation. Symptoms may include excess blinking, excess tear production and / or redness of the conjunctiva. Product and nuisance dust may cause gastrointestinal discomfort. Symptoms may include nausea, cramps or vomiting.

5 Fire-Fighting Measures

Extinguishing Media:

Use water spray, foam, carbon dioxide, dry chemical, or other extinguishing media appropriate for the surrounding fire. Water or foam may cause frothing. Use water to keep fire-exposed material cool.

Special hazards arising from the substance:

Not flammable. Product can burn if involved in a fire. During a fire, combustion can generate toxic fumes which may include resin fragments, smoke, carbon monoxide and carbon dioxide.

Advice for firefighters:

Burning of the product may produce irritating and potentially toxic fumes and gases including, but not limited to, carbon dioxide (CO₂) and carbon monoxide (CO). Product is of limited combustibility with low smoke emission (ASTM E 84 25/50). Ignition of airborne nuisance dust that has been allowed to accumulate to combustible concentrations suspended in air in a confined space may cause explosion.

Special Protective Equipment & Precautions for Firefighters

Firefighters should wear full protective clothing including self-contained breathing apparatus.

Keep upwind of fire. If using water spray extinguishing media, burning product

should be saturated with water using a spray nozzle.

6 Accidental release Measures

Personal precautions, protective equipment and emergency procedures:

Wear proper personal protective equipment as indicated in Section 8.

Environmental precautions:

It is good practice to prevent release of this product into the environment.

Methods and material for containment and cleaning up:

Sweep, scoop or vacuum product for recovery, recycling or disposal.

Additional Information:

See Section 8 for information on selection of personal protective equipment. See Section 13 for information on disposal of spilled product.

7 Handling and Storage

Precautions for safe handling:

Do not attempt, as an individual, to lift, push, pull or carry multiple units of the product concurrently without assistance. Do not stand, or otherwise support one's weight on the product unless it is fully supported by a load bearing surface. Do not walk or stand on the product, or on pieces of, in wet conditions. Do not smoke. Use personal protection (PPE) described in Section 8.

Conditions for safe storage:

Store in a ventilated area and away from ignition hazards such as flames, welding torches, electric heaters and other forms of direct radiant heat. Ensure stability of panel stack. Provide adequate aisle space for access between stacks.

Incompatible Materials:

Highly oxidizing liquids and polar organic solvents such as methyl ethyl ketone (MEK). If unsure, contact the Kingspan Insulation HVAC Technical Services Department.

8 Exposure Controls / Personal Protection

Ingredient	OSHA PEL	ACGIH TLV	NIOSH
2-Chloropropane	Not available	Not available	Not available
2-Methylbutane	Not available	600 ppm	Not available
Phenolic resin	Not available	Not available	Not available
Aluminum foil	Not available	Not available	Not available

Nuisance dust containing modified phenolic resin & continuous filament fiber glass	15mg/m ³ (Total)	5mg/m ³ TWA	Not available
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Exposure Controls:

Engineering controls:	Provide good general ventilation or local exhaust ventilation when necessary to control dust concentrations below exposure limits.
Personal protection:	Follow the directions for personal protective equipment for the worksite. Appropriate protective footwear is recommended when handling large boards.
Inhalation:	When dust concentrations in air exceed the occupational exposure guidelines, wear an approved particulate respirator equipped with an N95, R95 or P95 filter. A respiratory protection program that meets the regulatory requirements, such as OSHA's 29 CFR 1910.134 and ANSI Z88.2 or Canadian Standards Association (CSA) Standard Z94.4, must be followed whenever workplace conditions warrant a respirator's use.
Eyes / Face:	Wear safety glasses or goggles for all cutting operations.
Skin:	Not required for normal use of this product, however it is good practice to wear gloves and clean body- covering clothing.

9 Physician and Chemical Properties

Information on basic physical and chemical properties:

Appearance:	Rectangular shaped (right prism) panel with foam core faced with Kingspan KoolDuct® branded silver aluminum foil on one base side and plain silver aluminum foil on the other.
Physical State:	Solid.
Odor:	Odorless.
Odor threshold:	Not applicable.
pH:	Neutral under conditions of normal use.
Melting point/freezing point:	Not applicable.
Initial boiling point and boiling range:	Not applicable.
Flash point:	Not applicable.

Evaporation rate:	Not applicable.
Flammability (solid, gas):	Not applicable.
Upper/lower flammability or explosive limits:	Not available.
Vapor pressure:	Not applicable.
Vapor density:	Not applicable.
Specific Gravity:	0.01
Solubility (ies):	Insoluble.
Partition coefficient (n-octanol/water):	Not available.
Auto-ignition temperature:	Not applicable.
Explosive properties:	Not applicable
Sensitivity to mechanical impact:	Not applicable
Sensitivity to static discharge:	Not available
Decomposition temperature:	Not available.
Viscosity:	Not applicable.
VOC content:	Not available.

10 Stability and Reactivity

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical Stability: Stable at normal ambient and anticipated storage and handling conditions.

Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.

Conditions to avoid: Do not use in conditions of extreme heat or near open flames.

Incompatible Materials: Highly oxidizing liquids and polar organic solvents such as methyl ethyl ketone (MEK). If unsure, contact the Kingspan Insulation HVAC Technical Services Department.

Hazardous Decomposition Products: See Section 5 for products of combustion.

11 Toxicological Information

Likely Routes of Exposure

Inhalation, ingestion, skin and eye contact.

Symptoms Related to the Physical, Chemical & Toxicological Characteristics

Inhalation:	Exposure to residual blowing agent gases that have been allowed to accumulate to unacceptable concentrations, in a confined and / or unventilated space, may cause drowsiness, dizziness, nausea or headaches. Inhaled dust may cause temporary irritation of the upper respiratory tract. Continued inhalation of high concentrations of dust particles may, over a prolonged period of time, decrease pulmonary function, increasing vulnerability to respiratory disease.
Eyes:	Dust may cause irritation. Symptoms may include excess blinking, excess tear production and / or redness of the conjunctiva.
Ingestion:	Consumption may cause gastrointestinal discomfort. Symptoms may include nausea, cramps or vomiting.

Delayed, Immediate & Chronic Effects of Short & Long Term Exposure
Not available.

INGREDIENT	LC50	LD50
2-Chloropropane	Inhalation 120000 mg/m ³ , Rat	Oral 5000 mg/kg, Rat
2-Methylbutane	Inhalation 280000 mg/m ³ 4 hrs, Rat	Not available

Component Carcinogenicity

INGREDIENT	NTP	IARC	OSHA	ACGIH	CP65
2-Chloropropane	3 - The agent is not classifiable as to its carcinogenicity to humans	Not listed	Not listed	Not listed	Not listed
2-Methylbutane	3 - The agent is not classifiable as to its carcinogenicity to humans	Not listed	Not listed	Not listed	Not listed

12 Ecological Information

Ecotoxicity:	Inert and stable in water.
Persistence & Degradability:	Not available.
Bioaccumulative Potential:	Not available.
Mobility in Soil:	Inert and stable in soil.
Other Adverse Effects:	Not available.

13 Disposal Considerations

Reduce, Reuse, Recycle

Product is inert and non-hazardous in waste form. Nuisance dust should be contained in a sealed bag or container. Waste can be reduced by reusing clean, undamaged product. Where facilities exist, both product and dust can be recycled.

End of Life

Waste product and dust, which cannot be reused or recycled, should be disposed of in accordance with all local, state, provincial, and federal regulations.

14 Transport Information

UN Number: Not regulated.

UN proper shipping name: Not regulated.

Transport hazard class(es): Not applicable.

Packing group: Not applicable.

Environmental hazards: Not available.

Special precautions for user: Do not handle until all safety precautions have been read and understood (see Section 7). Ensure security and stability of load. Use mechanical handling and lifting equipment when moving bulk loads.

15 Regulatory Information

Occupational Safety & Health Administration (OSHA) Regulation 29 CFR Hazard Communication Standard 1910.1200 (HAZCOM 2012)

Kingspan Insulation Ltd deems Kingspan KoolDuct® panels to be exempt from the requirements of OSHA HAZCOM 2012, Subpart Z - Toxic & Hazardous Substances', in accordance with paragraph (b) (6) (v), after having been determined as being an 'Article'1, as defined in paragraph (c) 'Definitions'.

Controlled Products Regulation (CPR) & Hazardous Products Act (HPA)

Kingspan Insulation Ltd deems Kingspan KoolDuct® panels to be exempt from the requirements of the CPR and HPA, in accordance with Section 12 (i) of the HPA, after having been determined as (a) being a 'manufactured article'2 as defined in Section 11 of the HPA (b) not being a 'Controlled Product', as defined in Section 2 of the HPA.

Workplace Hazardous Materials Information System (WHMIS)

Combustible dust

Toxic Substances Control Act (TSCA)

The product's components are listed on the TSCA inventory

Domestic Substance List (DSL) / Non-Domestic Substance List (NDSL)
The product's components are listed on the DSL and / or the NDSL

California Proposition 65 (CP65)
The product does not contain ingredients that are subject to CP65.

Sara Title III

	Product	2-Chloropropane	2-Methylbutane
Section 302 (EHS) TPQ (LBS.)	Not listed	Not listed	Not listed
Section 304 (EHS) TPQ (LBS.)	Not listed	Not listed	Not listed
Cercla RQ (LBS.)	Not listed	Not listed	Not listed
Section 313	Not listed	Not listed	Not listed

Hazardous Materials Identification System (HMIS)

Health: 1 = Slight Hazard

Fire: 0 = Minimal Hazard

Physical: 0 = Minimal Hazard

15.9 National Fire Protection Assembly (NFPA)

Health: 1 = Slight Hazard

Fire: 0 = Minimal Hazard

Physical: 0 = Minimal Hazard

16 Other Information

Revision date:

June 23, 2022

Version:

2.0

References and sources for data:

Supplier SDS for component materials.

Legend to abbreviations:

ACGIH American Conference of Governmental Industrial Hygienists.

GHS Globally Harmonized System for Classification and Labeling,
UNECE 2013.

IARC International Agency for Research on Cancer.

OSHA United States, Occupational Safety and Health Administration.

NOAEL No observed adverse effect level.

NTP National Toxicology Program.

WHMIS Canada, Workplace Hazardous Materials Information System.

Additional information:

For additional product and/or SDS information, please contact Kingspan Insulation LLC at (800) 241-4402. Information provided by sources external to our company and set forth herein is

offered in good faith as accurate, but without guarantee. Safety precautions contained herein cannot anticipate all individual and unique situations. Conditions of use and suitability of the product for particular uses are beyond our control. All risks of use of the product are, therefore, assumed by the user, and we expressly disclaim all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the product. Nothing herein is intended as recommendation for uses which infringe valid patents or as extension of license under valid patents. Appropriate warnings and safe handling procedures should be provided to users.



Please scan the QR code for the most recent product information.

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