

**MATERIAL SAFETY DATA SHEET  
KALMATRON® KF-I**

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**SECTION 1. PRODUCT IDENTIFICATION**

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KALMATRON® KF-I is a thermal resistant inorganic, non-asbestos compound designed for heat/cold protection of concrete, masonry, metal, and wooden structures. KF-I is impermeable to the liquids and provides stable attenuation of thermal climatic cycles.

KF-I is highly recommended for thermal resistance restoration of the walls, ceilings and roofs of aged walls panels, metal pipes, concrete and metal frames, masonry and wooden structures.

**Trademark:** KALMATRON® patent No. 2,724,832

**Manufacturer:** KALMATRON Corporation, California, USA.

**Consistency:** coarse dry powder

**Color:** from light White to light Gray

**Odor:** light specific odor; disappears after application

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**SECTION 2. COMPOSITION**

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Chemical name:	CAS number:	EC number:	%:	Classification:
Portland Cement [chromium (VI) of less than 0.0002%]	65997-15-1	266-043-4	>50%	Xi; irritant; R36/37/38, R43
Silica sand	14808-60-7	238-878-4	<50%	Not classified
Chemical Base	See section XV for full text of R-phrases.			
Insulator	Data is variable by requested Thermal Resistance for current project.			
See section 16 for full text of R- phrases.				

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**SECTION 3. HAZARDS IDENTIFICATION**

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Classification: Xi; irritant; R36/37/38, R43.

Human health hazards: Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact.

Environmental hazards: This product is not classed as dangerous for the environment.

Other hazards: None.

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**SECTION 4. FIRST AID MEASURES**

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General: If after receiving first aid according to the following instructions and symptoms persist, immediately seek medical attention.

Inhalation: Move exposed person to fresh air. Keep person warm and at rest.

Skin contact: Remove contaminated clothing. Wash skin thoroughly with soap and water. If irritation persists seek medical attention.

Eye contact: Check for and remove any contact lenses. Hold eye lids ajar and immediately flush eyes with water. Continue flushing eyes with water for at least 15 minutes.

Ingestion: If swallowed, rinse mouth with water and drink plenty of water. Seek immediate medical advice and show container or label.

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**SECTION 5. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Workplace Exposure: Limits (WEL): 8 hour Time Weighted Average (TWA):-  
Portland Cement (CAS 65997-15-1) 10mg/m<sup>3</sup> total inhalable dust and 4 mg/m<sup>3</sup> respirable dust per EH40.

Silica crystalline (CAS 14808-60-7) 0.1mg/m<sup>3</sup> respirable dust per EH40.

Occupational exposure controls: Do not eat, drink or smoke when working with product.

Avoid contact with eyes and skin and do not breathe dust. Immediately after working wash hands thoroughly with soap and water.

Respiratory protection: In case of exposure to concentrations above WEL's, use appropriate respiratory protection (type FFP2).

Eye protection: Wear safety glasses/goggles to EN166.

Skin protection: Wear impervious, abrasion and alkali resistant gloves, suitable boots and closed long-sleeved protective clothing.

Environmental exposure controls: Prevent direct discharge in to drains or watercourses.

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**SECTION 6. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state: Solid, coarse dry powder.

Odor: Characteristic (slight).

Color: CEMENT grey.

pH: 12-13.

Melting point: Not applicable.

Density: 37 LB/CF ÷ 55 LB/CF or 600 kg/m<sup>3</sup> ÷ 850 kg/m<sup>3</sup>.

Flammability: Not flammable.

Solubility: Soluble (up 35%) during the mixing with the concrete batch.

Other information:

Melting point, freezing point, boiling point, flash point, evaporation rate, explosive limits, vapour pressure and density, partition coefficient, autoignition temperature, decomposition temperature, viscosity, explosive properties and oxidizing properties are all not applicable.

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**SECTION 7. STABILITY AND REACTIVITY**

Stability: Stable with any solid and finished matter in their accomplished phase, under normal conditions. Unstable with hardening reaction like cementitious product when mixed with water.

See handling and storage conditions (see section 7).

Conditions to avoid: Avoid high humid when packages opened.

Materials to avoid: Accidental contact of unpacked product with water.

Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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**SECTION 8. TOXICOLOGICAL INFORMATION**

Eye contact: Irritating, may cause chemical burns.

Skin contact: Irritating, may cause sensitization.

Ingestion: Swallowing large quantities may cause irritation to the gastrointestinal tract.

Inhalation: May irritate the throat and respiratory tract leading to coughing.

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**SECTION 9. FIRE FIGHTING MEASURES**

This product is not flammable.

Extinguishing media:

Suitable: Use extinguishing media suitable for the surrounding fire.

Unsuitable: Water jet - may spread fire.

Special exposure hazards: No specific fire or explosion hazard.

Hazardous combustion products: Possible formation of harmful combustion products.

Do not inhale gases formed during the fire.

Advice for firefighters:

Fire-fighters should wear appropriate protective equipment resistant to chemical agents and a self-contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode. Fight fire hazard with cool water spray from safe distance.

Do not allow extinguishing water to enter sewer system.

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**SECTION 10. ACCIDENTAL RELEASE MEASURES**

Personal precautions: Observe general safety rules. Put on appropriate personal protective equipment (see section 8).

Keep unnecessary and unprotected personnel from entering.

Provide adequate ventilation.

Avoid contact with eyes and skin.

Environmental precautions: Do not allow dispersal of spilled material and runoff and contact with waterways, drains and sewers.

Inform the relevant authorities if the product has caused environmental pollution (surface water and ground water).

Methods for containment and clean up:

Move containers from the spill area. Mop up material and place in suitable designated and labeled waste container.

Activated material can be removed mechanically.

Dispose of via a licensed waste disposal contractor.

See section 8 for personal protective equipment and section 13 for waste disposal.

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**SECTION 11. HANDLING AND STORAGE**

Handling:

Keep packaging sealed until ready for use. Put on appropriate protective equipment (see section 8). Comply with Health and Safety at Work laws.

Work in a well ventilated area. Avoid contact with eyes and skin. Do not ingest.

Storage:

Store in original packaging or tightly closed containers in a dry and well ventilated area. Do not store in temperatures below - 7.6°F or -22 °C.

Keep away from food, beverages and feeds. Avoid moisture - maximum humidity in storage area is 96%.

Specific applications: Admixture for concrete and mortar. Inorganic oxidant micro/macro elements of the group of metals contained in the cement binders, providing electro-chemical dissolution of cement grains by electrolysis. For professional use only.

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**SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity:	This product is not classified as being hazardous to the environment (LC50 aquatic toxicity not determined).
Persistence and degradability:	The dried product may cause mechanical contamination of the soil.
Bioaccumulative potential:	Not expected to bio accumulate.
Mobility:	This product is soluble in water by 35%.
Other adverse affects:	None known.

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**SECTION 13. DISPOSAL CONSIDERATIONS**

Methods of disposal:	Dispose of in accordance with local legislation. Prevent entry into the sewage water system. Dispose of the hardened product as concrete waste.
European Waste Catalogue (EWC):	17 01 01 (construction and demolition wastes - concrete) and 15 01 02 (plastic packaging)

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**SECTION 14. TRANSPORT INFORMATION**

Product is not covered by the international regulation on the transport of dangerous goods (IMDG, ICAO/IATA, ADR/RID) and therefore no classification is required.

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**SECTION 15. REGULATORY INFORMATION**

Regulation: According to 1999/45/EC



Classification:	Irritant
Risk phrases:	R36/37/38 Irritating to eyes, respiratory system and skin. R43 May cause sensitization by skin contact.
Safety Phrases:	S2 Keep away from children. S24/25 Avoid contact with skin and eyes. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S46 If swallowed, seek medical advice immediately and show this container or label.
National legislation and requirements:	Health and Safety at Work etc Act 1974 Control of Substances Hazardous to Health Regulations COSHH 2002 Control of Substances Hazardous to Health (Amendment) Regulations COSHH 2004 Environmental Protection Act 1990 Any authorized manual on First Aid by Manual Handling Operations Regulations (as amended)

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**SECTION 16. OTHER INFORMATION**

The information on this datasheet reflects the currently available knowledge and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or technical guidance literature.

Any other use of the product is the responsibility of the user. It is implicit that the user is responsible for determining appropriate safety measures and for applying the legislation covering his/her own activities.

The information on this datasheet is accurate at the time of printing but KALMATRON® Corporation reserve the right to amend details as part of product development program.

Undisclosed technical data is a private intellectual property of business or personal entities, which may or may not be disclosed to non-affiliated sources.

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**KALMATRON CORPORATION**  
*Research & Production Division*

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276 MICHELLE COURT  
South San Francisco, CA 94080, USA  
Phone/Fax : 650-872-2555  
CELLULAR: 415-385-3290

[www.kalmatron.com](http://www.kalmatron.com)  
[www.shieldcrete.com](http://www.shieldcrete.com)  
[www.blockdegree.com](http://www.blockdegree.com)  
[www.seismicstar.com](http://www.seismicstar.com)

e-mail: [kalmatronworld@aol.com](mailto:kalmatronworld@aol.com)  
[market@kalmatron.com](mailto:market@kalmatron.com)  
[k100@kalmatron.com](mailto:k100@kalmatron.com)  
Skype: KALMATRON