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Insulation Floor Coating Technical Data Sheet

Product Description

Insulation Floor Coating is a specialized coating designed to provide both thermal insulation and protection to floors in industrial, commercial, and residential settings. The coating is formulated with advanced thermal insulating properties that help reduce heat loss or gain, improving the overall energy efficiency of the building. By providing a durable and heat-resistant surface, this coating not only contributes to energy savings but also protects the flooring from wear, moisture, and environmental damage.

The coating is designed to be applied directly onto concrete, wood, or metal floors, creating a seamless, smooth, and durable layer of protection. It forms a strong bond with the substrate, ensuring long-lasting performance even in high-traffic areas. With its thermal insulating capabilities, Insulation Floor Coating helps maintain consistent temperatures within a room or space, whether it's a factory, warehouse, office, or even a home. This feature is particularly beneficial in temperature-sensitive environments where energy consumption and operational costs need to be minimized.

In addition to thermal insulation, the coating provides resistance against a variety of factors such as moisture, chemicals, stains, and abrasion. It is ideal for use in environments that require floor protection against spills, leaks, and mechanical wear. The coating's non-slip finish provides added safety, making it suitable for both dry and wet conditions.

Available in various colors and textures, Insulation Floor Coating can be tailored to suit both aesthetic and functional needs. It is easy to maintain and clean, ensuring a long service life with minimal upkeep. This versatile product is also resistant to UV degradation, ensuring that it maintains its appearance and performance even when exposed to sunlight over extended periods.

Recommended Use

1. **Commercial and Industrial Flooring**: Insulation Floor Coating is commonly used in warehouses, factories, and distribution centers, where floor protection and thermal insulation are crucial. The coating helps to maintain a controlled temperature, especially in environments with high machinery or equipment that generate heat, such as manufacturing plants.
2. **Residential Spaces**: It is also recommended for residential areas, particularly in homes with exposed concrete floors, basements, garages, or utility rooms. The insulation properties of the coating help maintain a comfortable temperature in these spaces while protecting the underlying floor from wear and tear.
3. **Cold Storage Facilities**: In environments like cold storage warehouses or refrigeration units, Insulation Floor Coating helps preserve a controlled temperature while preventing condensation on floors. It offers an additional layer of protection against potential damage caused by moisture or temperature fluctuations.
4. **Hospitals and Laboratories**: Insulation Floor Coating is ideal for hospitals, laboratories, and other medical facilities where temperature control is essential. It provides a clean, easy-to-maintain surface that can help reduce energy costs by enhancing insulation.
5. **Commercial Kitchens**: Kitchens in restaurants, food processing plants, and hotels can benefit from this coating due to its resistance to heat and moisture. It helps regulate temperature within the space and protects floors from the damaging effects of constant exposure to high temperatures and spills.
6. **Swimming Pools and Spas**: Insulation Floor Coating is also used around pools and spas where moisture is prevalent. It provides a waterproof barrier, reducing the risk of water damage while providing insulation that helps maintain the temperature of the surrounding space.

7. **Mechanical and Equipment Rooms**: In mechanical and equipment rooms, Insulation Floor Coating helps control temperatures around high-heat equipment, reducing the need for energy-intensive cooling systems. Its insulating properties also help minimize the risk of condensation and moisture buildup.
8. **Public Spaces and Retail Floors**: Insulation Floor Coating is suitable for public spaces and retail environments where energy efficiency and a clean, professional appearance are important. It can help regulate interior temperatures, reducing the need for excessive heating or cooling.

Technical Data Specification

- **Colour**: Custom colors available (standard: white, grey)
- **Finish**: Semi-gloss to matte
- **Viscosity**: 70–80 KU (Krebs Units)
- **Specific Gravity**: 1.5–2.0 g/cm³
- **Flash Point**: > 40°C (Closed Cup)
- **Dry Film Thickness (DFT)**: 100–150 microns per coat
- **Coverage**: 8–12 m² per liter per coat (varies with surface porosity)
- **Solids Content**: 65–75%
- **Drying Time**: Touch dry in 1 hour; fully cured in 24 hours
- **Thermal Resistance**: Up to 180°C
- **Moisture Resistance**: Excellent
- **Chemical Resistance**: Resistant to oils, detergents, and mild acids
- **Slip Resistance**: Anti-slip finish available
- **Durability**: High abrasion resistance

Dosage, Addition, and Method of Application

1. **Dosage**:
    - For standard applications, apply at a coverage rate of 8–12 square meters per liter per coat. For more absorbent surfaces or areas with heavy foot traffic, a slightly higher coverage may be needed.
    - The product should be applied in two coats for optimal thermal insulation and protection. The first coat should be applied as a primer, followed by the second coat to build up the insulating layer.
2. **Addition**:
    - **Pigments**: The base color is typically grey or white, but custom colors can be mixed on request. The added pigments should be compatible with the insulating properties to ensure no degradation in performance.
    - **Thinners**: If thinning is required, use the recommended solvent. For airless spray application, thinning may be minimal or unnecessary, while for conventional spray systems, thinning may be required to adjust the viscosity.
3. **Method of Application**:
    - **Surface Preparation**: Ensure the surface is clean, dry, and free of oils, grease, dirt, or other contaminants. Concrete floors should be cleaned using a power washer or abrasive cleaning method. Smooth or glossy surfaces should be lightly sanded to promote adhesion.
    - **Mixing**: Stir the product thoroughly before application to ensure the insulation agents are evenly distributed. If required, add the recommended thinner to adjust for desired viscosity.
    - **Application by Brush**:

    - For smaller areas or detailed work, use a high-quality brush to apply the coating. Use long, even strokes to avoid uneven thickness and ensure full coverage.
  - **Application by Roller**:
    - Use a medium- or short-nap roller for flat, large surfaces. Apply in a consistent manner, overlapping each stroke to ensure even coverage.
  - **Spray Application**:
    - For large or commercial projects, an airless spray gun can be used for quicker and more uniform coverage. Adjust the nozzle to the recommended setting for optimal spray pattern and consistency.
    - Apply the first coat thinly to avoid excessive pooling, followed by a second coat for better insulation and protection.
  - **Drying and Curing**:
    - The coating will be touch-dry in about 1 hour under standard conditions (25°C and 50% humidity). However, it requires a full 24 hours to cure completely. Avoid placing heavy items or exposing the surface to moisture during this period.
  - **Clean-Up**:
    - Clean tools and equipment immediately after use with the appropriate solvent. Dried product can be challenging to remove, so prompt cleaning is essential.

Safety Instructions

1. **Personal Protection**:
   - Always wear protective gloves, goggles, and suitable clothing during application to avoid skin and eye contact with the coating.
2. **Ventilation**:
   - Apply the coating in well-ventilated areas. Use fans or open windows to ensure the workspace is adequately ventilated. If working in confined spaces, use respiratory protection to avoid inhaling fumes or vapors.
3. **First Aid**:
   - **Inhalation**: If inhaled, move to fresh air immediately. Seek medical attention if symptoms persist.
   - **Skin Contact**: Wash skin with soap and water immediately if contact occurs. Seek medical attention if irritation develops.
   - **Eye Contact**: Rinse eyes immediately with clean water for at least 15 minutes. Seek medical attention if irritation persists.
   - **Ingestion**: Do not induce vomiting. If ingestion occurs, seek immediate medical attention.
4. **Storage**:
   - Store in a cool, dry area, away from heat, direct sunlight, and open flames. Ensure containers are tightly sealed to prevent contamination.
5. **Disposal**:
   - Dispose of unused product and packaging according to local regulations. Do not dispose of in waterways or the environment.

This **Insulation Floor Coating** offers excellent protection, improving both the thermal efficiency and durability of floors in a range of industrial, commercial, and residential settings. By reducing energy consumption and extending the life of the flooring, it provides an effective solution for maintaining optimal conditions in any environment.