



Thermoplastic Coating Technical Data Sheet

Product Description

Thermoplastic Coating is a highly durable, versatile, and long-lasting coating solution designed to provide superior protection and decorative finishes for various substrates. Made from advanced thermoplastic resins, this coating is formulated to offer excellent adhesion, weather resistance, and impact durability. It is widely used in industrial, commercial, and infrastructure projects where robust performance and aesthetic appeal are equally critical.

This coating forms a thick, resilient layer upon application, ensuring protection against physical damage, abrasion, and chemical exposure. It boasts a fast-curing process and exceptional UV resistance, making it ideal for outdoor use. Thermoplastic Coating is available in various colors and finishes, allowing customization to suit specific project needs. Its heat-sensitive properties enable it to soften at elevated temperatures and re-harden upon cooling, making it a preferred choice for applications like road markings, industrial surfaces, and decorative finishes.

Thermoplastic Coating is environmentally friendly, with low volatile organic compound (VOC) emissions, and complies with stringent safety and environmental regulations. It is ideal for industries like construction, automotive, and infrastructure development, ensuring long-lasting protection and reduced maintenance costs.

Key Features:

- High resistance to weathering, UV radiation, and abrasion
- Superior adhesion to various substrates like concrete, metal, and wood
- Excellent impact resistance and durability
- Available in multiple colors and finishes for decorative applications
- Quick curing and easy application
- Environmentally friendly with low VOC content
- Heat-sensitive properties for thermoplastic flexibility
- Suitable for indoor and outdoor use

Recommended Use

1. **Road Markings:** Thermoplastic Coating is extensively used in road marking applications due to its durability and reflective properties. It ensures clear, long-lasting road lines, pedestrian crossings, and lane dividers that withstand heavy traffic and environmental wear.
2. **Infrastructure Protection:** Bridges, tunnels, and other infrastructure components benefit from the robust protection offered by Thermoplastic Coating. Its high impact and abrasion resistance ensure long-term durability even in challenging environments.
3. **Industrial Flooring:** Ideal for industrial and commercial flooring, the coating provides a tough, non-slip surface that resists chemicals, oil, and heavy machinery traffic, ensuring safety and longevity in high-usage areas.
4. **Automotive and Transportation:** The coating is widely used for automotive parts and transportation equipment, offering excellent corrosion resistance and aesthetic finishes. It is also ideal for protective underbody coatings.
5. **Marine Applications:** Thermoplastic Coating is perfect for marine environments where surfaces are exposed to saltwater, UV radiation, and abrasive conditions. It provides corrosion resistance and protects metal components from degradation.



6. **Architectural and Decorative Finishes:** For architects and designers, Thermoplastic Coating provides versatile options for decorative finishes, enabling the creation of visually appealing surfaces that remain protected from wear and tear.
7. **Outdoor Playgrounds and Sports Courts:** The coating is ideal for playgrounds, sports courts, and recreational areas, ensuring durability, non-slip properties, and vibrant colors that remain intact despite exposure to weather and heavy use.
8. **Protective Coating for Pipes and Tanks:** In industrial settings, Thermoplastic Coating protects pipelines, tanks, and storage vessels from corrosion, chemical damage, and impact, extending their operational life.

Technical Data Specification

- **Color:** Available in standard and custom colors
- **Finish:** Glossy, semi-gloss, or matte
- **Adhesion Strength:** Excellent to a variety of substrates
- **Weather Resistance:** High UV and environmental resistance
- **Abrasion Resistance:** Outstanding durability
- **Thermal Properties:** Softens at high temperatures and hardens upon cooling
- **Chemical Resistance:** Excellent
- **VOC Content:** Low
- **Application Thickness:** 1-3 mm (depending on use)

Dosage, Addition, and Method of Application

1. Dosage:

- Typically, 1–3 kg per square meter, depending on substrate type and required thickness.
- Adjust dosage based on application requirements, ensuring proper coverage.

2. Addition:

- The product is ready to use. For specific applications, additives like reflective glass beads (for road markings) can be incorporated for added functionality.

3. Method of Application:

- **Preparation:**
 - Ensure the surface is clean, dry, and free from contaminants like oil, grease, or dust.
 - For concrete surfaces, sandblasting or acid etching is recommended to enhance adhesion.
 - For metallic substrates, ensure the removal of rust and apply a suitable primer if required.
- **Application Process:**
 - Heat the Thermoplastic Coating material using a specialized melting kettle or applicator. Maintain the material at the recommended temperature (180–200°C) to achieve the desired consistency.
 - Pour the melted coating onto the surface or use specialized applicators for precise placement.
 - For road markings, use stencils and ensure proper alignment for accuracy.
- **Curing:**
 - Allow the coating to cool and harden. The curing time is typically 15–30 minutes, depending on environmental conditions.



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- For multilayer applications, ensure adequate curing of the first layer before applying subsequent layers.
- **Post-Application:**
 - Inspect the surface for uniformity and quality. Make necessary adjustments or touch-ups for optimal results.
- **Equipment Cleaning:**
 - Clean application equipment immediately after use with recommended cleaning agents or heat cleaning methods.

Safety Instructions

1. Personal Protection:

- Always wear protective gear, including gloves, safety goggles, and a heat-resistant apron, during the application process.
- Use a respirator or mask to prevent inhalation of fumes during melting and application.

2. Handling and Storage:

- Store the product in a cool, dry place away from direct sunlight and sources of heat.
- Avoid storing near flammable materials or open flames.
- Use caution when handling the product at high temperatures to prevent burns.

3. First Aid:

- **Inhalation:** Move to fresh air and seek medical attention if symptoms like dizziness or nausea persist.
- **Skin Contact:** In case of burns, cool the affected area immediately with water and seek medical advice.
- **Eye Contact:** Rinse eyes thoroughly with water for at least 15 minutes and seek medical assistance if irritation persists.
- **Ingestion:** Do not induce vomiting. Rinse the mouth and seek immediate medical attention.

4. Environmental Precautions:

- Avoid releasing melted or unused product into the environment.
- Dispose of waste materials and empty containers in accordance with local environmental regulations.

5. Fire Safety:

- Ensure that fire extinguishing equipment (foam, dry powder) is available at the application site.
- Avoid heating the product above the recommended temperature to prevent combustion.

6. General Precautions:

- Ensure proper ventilation during the application process to minimize exposure to fumes.
- Follow manufacturer guidelines and training instructions for safe handling and use.

Thermoplastic Coating ensures unmatched durability, making it an essential solution for industrial, infrastructure, and decorative applications. Proper handling and adherence to safety protocols will ensure optimal performance and long-term benefits.

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