



TPD500 series

Scratch-Resistant, Easy-to-Clean Protective Coating for Metal Surfaces



Description

TPD500 is a one-component solution forming a thin, highly transparent clear-coat on metal substrates. Based on nanotechnology, the optimized composition of the organic-inorganic matrix provides easy-to-clean properties with excellent scratch resistance. TPD500 is a ready-to-use formulation compatible with various application processes. TPD500 coating provides excellent cleanability, reducing the formation of stains, scratches, and fingerprints. The extremely thin TPD500 (< 100 nm) coating is highly durable to chemical and environmental exposure, including high humidity, salt corrosion, UV-light, and temperature changes, without degradation of performance.

Applications

- Consumer electronics (i.e. notebooks case)
- Kitchen appliances
- Sinks

Highlights

- Excellent easy-to-clean properties and touch feel
- Extremely high abrasion resistance and environmental durability
- High hardness
- Easy applicable single-layer coating
- Optically transparent

Technical Background

The TPD coatings eliminate cosmetic distractions such as scratches, fingerprints and degradation due to environmental conditions. The ultra-thin coatings furthermore enhance the touch feel of metal surfaces. Optitune's patented siloxane nanomaterials result in a matrix, where the chemical functionality is controlled on the molecular level yielding a homogeneous and durable coating structure.

How to Apply

Typical application process for TPD is spray or dip coating followed by thermal curing. Surface should be free from dirt and grease before applying the coating. TPD formulations designed for other coating processes such as slot and roller techniques are available upon request. Both IR and convection oven heating are suitable for thermal curing.



Solution properties, storage and handling

Solution should be stored below room temperature, preferably +4°C to -18°C, in a well-ventilated place. Changes in the properties of the product may occur if product is stored above indicated temperature for extended periods of time. Keep containers tightly closed and protected from sources of heat and light. Shelf life of commercial materials is 12 months in -18°C and 6 months in +4°C from the date of manufacture. For R&D material (R-code materials) shelf life is 3 months in +4°C from the date of manufacture (R-code materials are still under research and development process, ageing data will be updated when new data is available). For working safety, consult product Material Safety Data Sheet.

The information given is based on our best knowledge at the date of issue but carries no guarantee or acceptance of responsibility. For further data on products toxicological, ecological and safety aspects, please consult the MSDS. It is the responsibility of the user of the product to ensure to satisfaction that the product is suitable for the intended purpose and methods of use. We do not accept responsibility for any harm caused by the use of this information.