

640 Permanent Protect

GENERAL PRODUCT DESCRIPTION

640 Permanent Protect is a transparent, high-performance ceramic coating for smooth surfaces such as glass, metal, plastic, and painted materials. It forms an ultra-thin, invisible protective layer with excellent mechanical, chemical, and thermal resistance. The coating is hydrophobic, oleophobic, scratch-resistant, and UV-stable, making it ideal for applications in the automotive, industrial, household, and food-related sectors.

Application Areas

- Vehicle surfaces (car paint, rims, headlights, trim parts)
- Metallic surfaces (stainless steel, aluminium, chrome, tool steel)
- Plastic parts (smooth plastics, e.g., PC, PMMA, ABS, PET)
- Laboratory equipment, machine housings, industrial components
- Glass and ceramic products with food contact (approved by migration test)
- Anti-graffiti coatings on non-porous surfaces
- Long-lasting protection in marine environments

PROPERTIES

- Extremely hard surface: up to 9H (Martens/Vickers hardness tested)
- Hydrophobic and oleophobic – water, oil, and dirt bead off
- Easy-to-clean effect – reduced cleaning frequency
- Very high scratch and abrasion resistance
- Temperature resistant up to 600 °C (briefly up to 700 °C)
- UV-stable and weather-resistant
- Food-safe – migration tested
- Resistant to household chemicals, cleaners, and solvents
- Transparent, gloss-enhancing, no visible change to the surface

PRODUCT SPECIFICATIONS & CHEMICAL PROPERTIES

Property	Value
Base	Organosilanes / siloxanes in solvent
Active content	approx. 92 %
VOC content	approx. 92 %
Flash point	approx. 11 °C (closed cup, DIN EN ISO 3679)
Layer thickness	1–10 µm (depending on application)
Density	approx. 0.92 g/cm ³

Ph value	neutral (water-free)
Odor	solvent-like
Colour	Colourless to slightly yellowish
Consumption	Approx. 5–10 ml/m ² (up to 200 m ² per litre)
Temperature resistance	up to 600 °C continuous, 700 °C short-term
Shelf life (liquid)	12 months (unopened, stored appropriately)
Storage	5 °C to +25 °C
Durability of coating	2–5 years outdoors, significantly longer indoors

PFAS INFORMATION

640 contains no PFOA or PFOS.

The fluorine content is below the legal limits according to EU Regulation 2024/2462. The fluorinated additives used serve solely to enhance dirt and oil repellence. They are firmly embedded in the cured coating and do not migrate.

APPLICATION & PROCESSING

General

- Thoroughly clean and degrease the surface (e.g., with ≥ 70 % isopropanol, ethyl acetate, or petroleum ether)
- Surface must be completely dry, dust- and grease-free
- Processing temperature: 15–30 °C, relative humidity: 40–80 %
- Avoid direct sunlight, wind, or humidity
- Protect from water contact for at least 24 h after application; full curing after 7–10 days

Wipe Application (recommended method)

- Apply a few drops (approx. 5–10 ml/m²) to a clean, lint-free microfiber cloth
- Spread evenly in linear motions with light pressure
- After 1–2 minutes, gently polish with a soft cloth (e.g., Peach Skin) to remove excess
- Do not apply multiple layers – one uniform layer is sufficient
- Only correct visually defective areas (e.g., high spots) carefully if necessary

Spray Application (for industrial series application)

- Nozzle size: 0.8–1.0 mm / Pressure: 0.6–1.0 bar / Distance: 15–25 cm
- Apply thin, uniform layer – no polishing required
- Layer thickness (dry): approx. 2–10 µm
- Optional: rotary bell (30,000 rpm, 2 bar, 0.2–0.4 m/s, 50–150 ml/min)

CLEANING & CARE

Aggressive cleaners are no longer required. Surfaces can be easily cleaned with a mild cleaner (e.g., CCM Bio Cleaner Biosativa®). Do not use abrasive sponges. Regular care extends the coating's lifespan.

QUALITY STANDARDS – TESTS

- Hardness test: Martens hardness up to 3831 N/mm², Vickers up to 884 HV
- Strengthening of float glass: flexural strength increased from 121 MPa to 187 MPa
- Migration test according to EN 1186 and DIN 10531: all limits met
- Food-safe in accordance with (EC) 1935/2004, LFGB, FDA
- Chemical resistance: ethanol, acetic acid, isooctane, ketchup, coffee, red wine, oil, etc.
- UV and weather resistance (ISO 16474-2)
- Improved surface hardness, no optical change

PACKAGING UNITS & VARIANTS

- 50 ml bottle (640-50)
- 100 ml bottle (640-100)
- 500 ml bottle (646-500)

SAFETY & TRANSPORT

- Hazardous goods: UN 2924, Class 3 (8), Packing Group III
- Hazard statements: H226, H314, EUH066
- Personal protective equipment required (gloves, safety goggles, respiratory protection when spraying)
- Storage: tightly sealed, dry, cool (5–25 °C)
- Shelf life: 12 months (unopened)

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