BTX-FREE · FOR AUTOMOTIVE EXTERIOR & INTERIOR PARTS

# Ecoplus TFP51

## High-Performance, High-Gloss 2-Component Acrylic Urethane Coating (2K)

Scratch- and sunscreen-resistant

ISO 9001:2015 Certified (Intertek)
**TAIEI INDUSTRIES Co.,Ltd.** TECHNO PAINT CHEMICALS SECT.

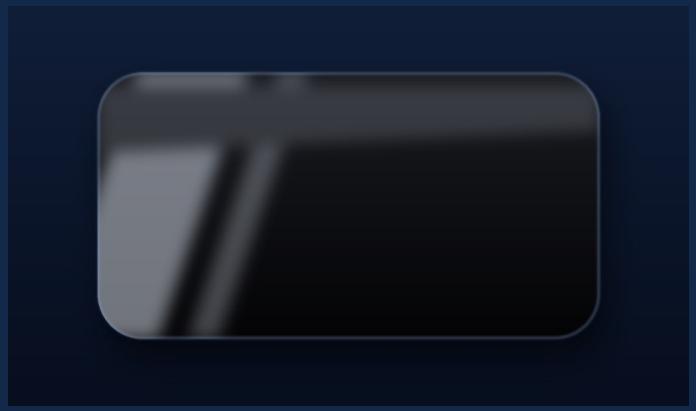


**Image ①** High gloss & jet-black finish

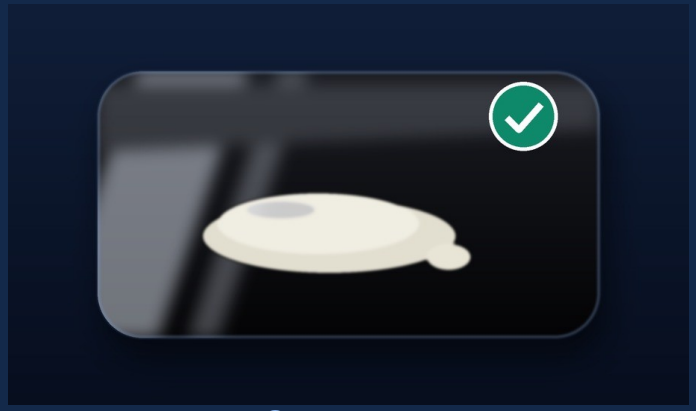


**Image ②** Sunscreen resistance

Illustration only (not an actual product photo)

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## Product Description

A BTX-free, scratch-resistant two-component reactive modified acrylic urethane that contains no toluene, xylene or ethylbenzene, solvents with a high environmental load. Main applications: automotive interior and exterior plastic parts (PC/ABS, ABS). It offers scratch resistance, high gloss, chemical resistance, weatherability and sunscreen resistance, and delivers a high-gloss, deep jet-black finish in a single coat.

**BTX-Free**
No toluene or xylene

**Scratch Resistant**
1-coat gloss & jet black

**Sunscreen Resistant**
Chemical & weather resistant

**SWOM 1000 h**
Gloss retention ≥ 90%

**TAIEI INDUSTRIES Co., Ltd.**

We are a paint manufacturer specializing in the development and production of metallic paints for OEM automotive exterior and interior parts.

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## Painting Specification

| Item | Conditions |
|---|---|
| Mixing ratio (by weight) | 50 / 10 / 30–40<br>Paint / Hardener / Thinner<br>Varies by color and hardener type |
| Pot life (after mixing) | 4 hours |
| Paint viscosity (diluted) | 11 ± 1.5 sec<br>Anest Iwata NK-2 cup, 23°C<br>Varies by color |
| Atomizing air pressure (spray gun) | 0.2–0.3 MPa |
| Standard film thickness | 20–30 µm |
| Standard drying condition | 80°C × 30 min |

## Recommended System

| Item | Details |
|---|---|
| Substrates | ABS, PC/ABS |
| Hardener | Ecohard SHG-80<br>Standard type (high solids) |
| Thinner | Standard volatility: YD-319<br>Low-attack (mild): FPT-MLD#7 |
| Mixing ratio by hardener | Ecohard SHG-80: 50 / 10 / 30–40<br>The ratio may vary slightly by color |

## Paint Film Performance

| Test item | Test method | Result |
|---|---|---|
| **Film hardness** | Mitsubishi Hi-Uni pencil | **H** |
| **Initial adhesion** | 1.0 mm cross-cut, adhesive tape peel | **100/100** |
| **Impact resistance** | DuPont impact tester, 2.9 N (300 gf), 20 cm or more | **PASS** |
| **Tack resistance** | Gauze, 70°C × 2 h, 500 gf, ⌀40 mm | **PASS** |
| **Adhesion after humidity exposure** | 50°C, 98% RH, 240 h, then adhesion test | **100/100** |
| **Water discoloration resistance** | 5 ml distilled water dropped inside a ring sealed to the test surface; 55°C × 4 h | **ΔE* ≤ 0.8** |
| **Alkali resistance** | 5 ml NaOH (0.1 N) dropped inside a ring sealed to the test surface; 55°C × 4 h | **ΔE* ≤ 1.5** |
| **Acid resistance** | 5 ml $H_2SO_4$ (0.1 N) dropped inside a ring sealed to the test surface; 23°C × 24 h | **ΔE* ≤ 1.5** |
| **Volatile oil resistance** | Immersed in No. 1 volatile oil at room temperature (20°C) for 3 h | **PASS** |
| **Dry rubbing fastness** | Gakushin-type rubbing tester, 5 layers of gauze, 500 g load × 200 cycles | **PASS**<br>No substrate exposure |
| **Alcohol-based hair liquid resistance** | Hair liquid (1 g/100 cm²), 80°C × 168 h, then abrasion test (2 kg × 200 cycles) | **PASS**<br>No substrate exposure |
| **Beef tallow resistance** | Beef tallow (2 g/100 cm²), 80°C × 168 h, then abrasion test (2 kg × 200 cycles) | **PASS**<br>No substrate exposure |
| **Sunscreen resistance** | Sunscreen cream (0.5 g/100 cm²), 55°C × 4 h, then abrasion test (2 kg × 200 cycles) | **PASS**<br>No substrate exposure |
| **Light resistance** | FOM (fade meter), 400 h | **Gloss retention ≥ 95%**<br>**ΔE* ≤ 3.0** |
| **Accelerated weathering** | SWOM (sunshine weather meter), 1000 h | **Gloss retention ≥ 90%**<br>**ΔE* ≤ 3.0** |