

Fluorolink® P56

Perfluoropolyether

Fluorolink® P56 is a waterborne dispersion of an anionic polyurethane based on a PFPE backbone. It has been developed in particular to impart water and oil repellency and stain release properties to the treated surfaces.

The surfaces treated with Fluorolink® P56 show exceptional water and oil repellency and easy cleanability versus common staining agents. The staining agents can be easily removed with water or common cleaning

products. The protective treatment does not modify the aesthetic characteristics of the treated surfaces.

Fluorolink® P56 can be used as such or in formulation; it can be further diluted with water to the proper concentration of use with the recommendation to shake the dispersion before use in order to reduce the possibility of partial settling.

| Property | Typical Value | Unit | Test Method |
|------------------|---------------|-------------------|-------------|
| PFPE dry content | 25 | % w/w | |
| Solvent content | < 2% | % w/w | |
| Density at 20°C | 1.1 | g/cm ³ | |
| pH at 20°C | 7-8 | | |

How to use

Fluorolink® P56 can be applied by dipping, roll or spray.

Fluorolink® P56 can be easily additivated with common rheological additives.

In order to achieve the best water and oil repellency, Fluorolink® P56 can be cured with conventional curing agents that can be easily blended with Fluorolink® P56 before use.

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Fluorolink® P56 can be cured both at low and high temperature; examples of typical formulations are as follows:

Typical formulation for low temperature curing

| | |
|---|--------|
| Fluorolink® P56 (25 % solids) | 1,000g |
| Dynasilan® Glymo* | 25.5g |
| Imicure® Emi-24** (5 % wt water solution) | 2.5g |

* 3-Glycidyoxypropyltrimethoxysilane
(Crosslinker from Evonik Industries)

** Catalyst from Air Products and Chemicals

Preparation

Add the crosslinker to Fluorolink® P56 and stir for a few minutes. Add the catalyst to the solution and stir to obtain a homogeneous solution.

Dry Time [24 °C, 50 % RH]

| | |
|----------------|---------------|
| Film thickness | 25–35 µm |
| Tack free time | 2.0–2.5 hours |

Curing Condition

| | |
|------------------|----------------------|
| Room temperature | > 4 days |
| Oven | 80 °C for 30 minutes |

Typical formulation for high temperature curing

| | |
|--|--------|
| Fluorolink® P56 (25 % solids) | 1,000g |
| Cymel® 303* | 12.5g |
| p-Toluene sulfonic acid triethylammonium salt** (5 % wt water solution) | 2.5g |

* Melamine (Crosslinker from Cytec Industries):
pre-dilute with 1:1 with IPA before adding

** reaction catalyst

Preparation

Add the crosslinker and the catalyst to Fluorolink® P56, then stir for a few minutes to obtain a homogeneous solution.

Dry Time [24 °C, 50 % RH]

| | |
|----------------|---------------|
| Film thickness | 25–35 µm |
| Tack free time | 2.0–2.5 hours |

Curing Condition

| | |
|------|-----------------------|
| Oven | 180 °C for 10 minutes |
|------|-----------------------|

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