

PE (POLYETHYLENE) SUBSTRATES PAINTING

Painting processes of polyethylene (PE) substrates are often requested since most petrol tanks and various motorcycles details are made of this material.

Usually PE is in mass pigmented, that is to say that coloured plastic is used.

The PE substrates painting has never been recommended since there is no guarantee for a good finish as for the durability as well as for the adhesion over time.

However, if the user accepts these technical limits, we describe the painting process as follows.

1. **Substrate degreasing** with 00617 PLASTIC CLEANER.
2. **Flame treatment**, that is a quick passage over an oxidising flame (blue flame) with a direct contact of the flame with the substrate lower than 1 second to avoid the plastic deformation or burning. **This operation is essential for a good finish.**
3. **Application of an adhesion primer**: use LS920 (29920) MULTIPLAST PRIMER with 50% 31516 PP ACTIVATOR.
4. **Application of the lacquer**: a two-pack acrylic lacquer or a matt basecoat + acrylic clearcoat can be directly applied. **It is absolutely necessary to add 20-30% of 09760 PLASTICIZER to the top coat** (acrylic lacquer or clearcoat). Do not use fast or extra fast hardeners which would make the film fragile.

Examples:

a) One coat finish

LS155 (29155) ACRITOP	700-800 parts
09760 FLESSIBILIZZANTE (plasticizer)	200-300 parts
29355 LECHSYS ACRITOP STANDARD HARDENER or	500 parts
29395-29397 (Fast) LECHSYS ACRITOP ULTRA HS HARDENER	
00824 (Slow)-00825 (Standard) LECHSYS UNIVERSAL THINNER	0-200 parts

b) Two-coat finish

Apply until complete opacity the colour obtained with LECHSYS LS190 (29190) BASECOAT (see TDS n° 0456).

After 30-60 min. flash-off at 20°C apply the following clearcoat mixture:

96390 ACRIFAN COACH CLEARCOAT	700-800 parts
09760 FLESSIBILIZZANTE (plasticizer)	200-300 parts
29342 LECHSYS ISOLACK ESP HARDENER	300 parts
00824 (Slow)- 00825 (Standard) LECHSYS UNIVERSAL THINNER	100-200 parts



IMPORTANT

This process is the safest one from the technical point of view, even if it is not possible to guarantee the same tenacity and safety as of the other plastics; some risk is then always possible even if this process is correctly followed.

The motorcycle petrol tank painting is highly risky as polyethylene is permeable to petrol, which, sweating from petrol tanks causes painting bubbles.

**PAINTING PROCESS TECHNICAL DATA SHEET N° CV011-GB
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