

Starting Formulation for Plastic Coating - coating with higher hardness and good adhesion to HIPS

Formulation No: C12 - 17

(a) Introduction

This starting formulation is recommended for substrate such as HIPS and ABS.

(b) Formulation

Ingredients	w/w	
Carbon Black	2.5	
BYK-163	0.8	
30% 2009	24.0	30 % 2009 + 70% toluene
30% 2614	24.0	30% 2614 + 70% toluene
Methyl Ethyl Ketone	12.5	
Butyl Acetate	8.0	
25% $\frac{1}{4}$ " NC	24.0	
BYK-306	0.2	
OK-500*	1.0	
MP-123	<u>3.0</u>	
	100.0	

* OK-500, matting agent from Degussa; MP-123, wax from Micro-Powder

(c) Recommended processing procedure

(1) Dissolution of Elvacite Resin

30% solid content w/w : 30% Elvacite + 70% xylene. Roll until bead resins dissolve.

(2) To make mill base:

- (i) Add BYK-163 to carbon black + resin solution (1:1:3 by wt)
- (ii) Add (i) to rest of ingredients and rest of resin solution

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(3) During 3-roll milling, solvent will be evaporated.

Hence after milling, check weight of mill base using total weight of ingredients used.
Make up solvent loss by adding in more solvent (xylene) to (b) (iv). Blend well.

(d) Application Guidelines

- (i) Before spraying, dilute with thinner to spray viscosity (about 25 sec, Ford Cup #4)
- (ii) Spray and dry for 60 min at 50°C

Thinner

- (1) Under winter condition whereby the air is drier, the following is recommended:
Toluene: MEK : EAc at 2:1:1
If the substrate is bigger in size then lower boiling point thinner is needed for better flow, use Toluene : MEK: EAc: BAc at 2:1:1:1
- (2) During the summer time the following thinner composition is recommended:
Xylene : MEK: BAc at 1:1:1

For solvent sensitive substrate (e.g. some type of HIPS), add in small amount of IPA to the above thinner.

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