



KAPCI
COATINGS

For professional use only
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Painting plastic substrates

Types of the most common plastics utilized in automotive industries

As the tremendous number of different plastics is currently used, it's become very important to identify correctly the type of plastic used for a specific application. The identification of plastics used on car components is important for the correct repair and painting process.

Kapci painting system for plastics gives gradual approach to priming, undercoating and topcoating plastics.

Kapci 2K fillers can be applied over the properly primed plastics with Kapci Adplast 615 plastic primer.

Addition of flexible additive Kapci 616 Adflex to Kapci 2K fillers, Kapcicryl 660 top coats and Kapci 2K clear coats is necessary when painting flexible plastics.

The existing plastic texture can be matched using Kapci C334 coarse and Kapci C334 fine texture additive (see Texturing process).

In the tables below the types of plastics utilized in automotive industries for components have been given and Kapci painting system has recommended for many types of different plastics as well.

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These products are for the professional painting of automotive vehicles only after reference to the manufacturer's Material Safety Data Sheets

Kapci Car
Refinishes
System

Plastic	Name	Car part location*	Kapci plastic primer
AAS (ASA)	Acrylonitrile Acrylic Styrene	Door mirror (black); Roof rack cover (front, centre, rear);	Kapci 615
ABS	Acrylonitrile Butadiene Styrene	Door mirror (color); Roof spoiler;	N/A
PC	Polycarbonate	Headlamp;	N/A
PC+PET	Polycarbonate + Polyethylene terephthalate	Rear door outside handle; Front door outside handle;	Kapci 615
PE	Polyethylene	Rear splash shield; Front splash shield;	N/A
PET,PETP	Polyethylene terephthalate	Rear wiper arm;	Kapci 615
PP	Polypropylene	Front bumper core; Rear bumper core; Delta cover inner; Inside rear view mirror; Tailgate trims (lower, upper, side); Rear end trim; Luggage floor box, centre; Rear and front scuff plate; Cowl side trim;	N/A
PP-E	Polypropylene foam	Luggage floor box, side	Kapci 615
PP+E/P	Rubber denatured polypropylene	Centre cover; Front bumper face; Rear bumper extension; Rear and front over fender; Rear door over fender; Side sill garnish; Front bumper extension;	Kapci 615
PP/EPDM	Polypropylene/Ethylene propylene diene	Front and rear bumper face;	Kapci 615
PP+E/P-TD (HMPP)	Talc filled rubber modified polypropylene	Rear bumper face;	Kapci 615
PP-TD10 (PPF)	Talc filled polypropylene (10%)	Front and rear door trim; Centre pillar trim, lower;	Kapci 615

This information is the result of our knowledge but given without warranty.

Plastic	Name	Car part location*	Kapci plastic primer
PP-TD20 (PPF)	Talc filled polypropylene (20%)	Front deck garnish; Front pillar trim; Centre pillar trim, upper; Instrument panel;	Kapci 615
PPE (PPO) + PA6	Polypropylene ether + Polyamide 6	Hood air inlet garnish;	Kapci 615
TSOP	Toyota Super Olefin Polymer	Bumpers;	Kapci 615

* The most common locations. Always check type of plastic before paint job.

Other plastics

Plastic	Name	Kapci plastic primer
A/MMS	Acrylonitrile/Methyl methacrylate	Kapci 615
AS	Acrylonitrile Styrene	N/A
EMPP	Elastomeric Modified Polypropylene	Kapci 615
EPDM	Ethylene propylene diene	Kapci 615
EVA	Ethylene vinyl acetate	Kapci 615
FEP	Fluorinated ethyl propylene	Kapci 615
GRP	Glass fiber reinforced plastic	Kapci 615
HDPE	High density polyethylene	N/A
MODPE	Modified polyethylene	N/A
PA	Polyamide (Nylon)	Kapci 615
PBT,PBTP	Polybutylene terephthalate	Kapci 615
PMMA	Polymethyl methacrylate	Kapci 615
POM	Polyoxymethylene (polyacetal)	N/A
PPC	Polypropylene compound	Kapci 615
PPE	Polyphenylene ether	Kapci 615
PUR	Polyurethane	N/A
PVC	Polyvinyl chloride	Kapci 615
PPO	Polyphenylene oxide modified	Kapci 615
PS	Polystyrene	N/A
PU	Polyurethane foam	N/A

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Plastic	Name	Kapci plastic primer
RRIM	Fiber glass reinforced polyurethane	N/A
TPE	Thermoplastic elastomer	Kapci 615
TPO	Thermoplastic olephine	Kapci 615
TPR	Thermoplastic rubber	Kapci 615
TPU, TPUR	Thermoplastic polyurethane	Kapci 615
UP	Unsaturated polyester	Kapci 615

Plastic alloys

Plastic	Kapci plastic primer
ABS/AS	N/A
ABS/PBT	N/A
ABS/PC	N/A
ABS/PPO	Kapci 615
ABS/PRO	Kapci 615
ABS/TPU	N/A
ASA+PC	Kapci 615
PBT/PC	N/A
PC+PE	Kapci 615
PC+PP	Kapci 615
PMMA+ABS	Kapci 615
PMMA+PP	Kapci 615
PUR+PVC	Kapci 615
PUR+RRIM	N/A

Note: Some grades of PE and PP are considered unpaintable. Polystyrene (PS) plastic is very solvent sensitive.

Surface preparation

When painting plastics, next steps should be followed:

1. Identify the type of plastic;
2. Identify the correct paint system for that type of plastic;
3. Clean the surface thoroughly and clean it again. Cleaning is the most important step in the painting plastic process. The initial clean should be with soapy warm water, followed by rinse and well dry. It is essential to ensure that the surface is chemically clean before any further phase;

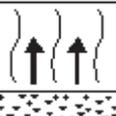
This information is the result of our knowledge but given without warranty.

4. Flat the surface with Scotch Brite grey or red pad saturated with Kapci degreaser 605. The plastic should be thoroughly cleaned and dry again after flattening;

Priming and undercoating plastic substrates

Product description

Product	Description
Kapci 615	Adplast primer (primer for plastics)
Kapci 616	Adflex (flexible additive for plastic)
Kapci C334 coarse	Texture additive coarse
Kapci C334 fine	Texture additive fine
Kapci 625/630/633	2K Acrylic fillers

Priming plastic substrates	
Product	Kapci 615 Adplast primer
	Ready for use
	Fluid tip 1.2-1.3 mm Pressure: 2.0 (30 psi inlet) Refer to manufacturer's recommendation.
	Fluid tip 1.2-1.3 mm Pressure: 3.0-3.5 bar (45-50 psi inlet) Refer to manufacturer's recommendation
	1 light + 1 normal coat
	Flash off 5 minutes between coats
Overcoating	Kapci 615 plastic primer is recoatable after 15-20 min/20°C

Flexibilising plastic substrates

Flexible additive Kapci 616 Adflex is added to any Kapci 2K filler to enhance its flexibility over plastics. Use the next mixing ratios when painting flexible and very flexible plastics.

Note: The addition of Kapci Adflex 616 will extend drying time.

	Flexible plastic		Very flexible plastic	
	Kapci 2K filler	5 parts	Kapci 2K filler	3 parts
	Kapci 616	1 part	Kapci 616	1 part
	Then add hardener in the normal manner but without thinner. See relevant TDS for Kapci 2K filler.			

Topcoating plastic substrates

Product description

Product	Description
Kapci 616	Adflex (flexible additive for plastic)
Kapci C333	Matting agent
Kapci C334 coarse	Texture additive coarse
Kapci C334 fine	Texture additive fine
Kapci 660, Kapci 641 ready mixed	2K Acrylic top coats
Kapci 2K clears	2K MS and HS clear coats

Modification of Kapci top coats and Kapci clear coats by the addition of flexible additive Kapci 616 is necessary when painting flexible plastics.

Texturing of the top coats is achieved by the addition of Kapci C334 fine and Kapci C334 texture additive to 2K top coats. Use the proper ratio to match fine or coarse structure.

In some cases matt finish on plastic parts is required. To get the smooth matt finish Kapci C333 matting agent should be used in Kapci 2K top coats.

Texturing plastic substrates

Texture additives Kapci C334 coarse and Kapci C334 fine can be added to 2K acrylic top coats. To achieve the existing plastic texture match, trials with different mixing ratios should be made. However, Kapci C334 is added up to 50%. The following gives general recommendation for texturing.

Note: Texture additive should be stirred well before use.

Note: The addition of the texture additive will extend drying time.

	Fine texturing		Coarse texturing	
 by weight	Kapci 660/641 2K top coats	50%	Kapci 660/641 2K top coats	50%
	Kapci C334 fine	50%	Kapci C334 coarse	50 %
 by volume	Then add hardener and thinner in the normal manner. See relevant TDS for Kapci 660/641 2K acrylic paints.			
	Fluid tip 1.3-1.4 mm Pressure: 3.0-3.5 bar (45-50 psi inlet) Refer to manufacturer's recommendation.			
	Fluid tip 1.3-1.4 mm Pressure: 2.0 bar/ 30 psi inlet Refer to manufacturer's recommendation			
	Apply 2-3 coats of texture.			
	Allow 5-10 min flash off between coats.			
	Air dry at 20°C Hard dry: 16 h		Bake at a metal temperature 60°C Hard dry: 30-40 min	

Flexibilising plastic substrates

Flexible additive Kapci 616 Adflex is added to any Kapci 2K clear coat or Kapci 2K acrylic paint to enhance its flexibility over plastics. Use the next mixing ratios when painting flexible and very flexible plastics.

Note: The addition of Kapci Adflex 616 will extend drying time.

	Flexible plastic		Very flexible plastic	
	Kapci 2K paint or Kapci 2K clear coat	5 parts	Kapci 2K paint or Kapci 2K clear coat	3 parts
	Kapci 616	1 part	Kapci 616	1 part
	Then add hardener in the normal manner but without thinner. See relevant TDS for Kapcicryl 660/641 or Kapci 2K clear coats.			

Note: The addition of Kapci Adflex 616 will extend drying time.

Matting plastic substrates

Matting agent Kapci C333 is added to Kapci 2K paint to give smooth and matt plastic surface.

Note: Matting agent should be stirred well before use.

Note: The addition of the matting agent will extend drying time.

		Gloss level		
	Product	Semi-gloss	Satin	Matt
	Kapcicryl 2K paint	70%	60%	50%
by weight	Kapci C333	30%	40%	50%
	Then add hardener and thinner in the normal manner. See relevant TDS for Kapcicryl 2K top coats 660 and 641 series.			

Note: The amount of matting agent Kapci C333 should be increased up to 70% for less opaque 2K top coats.

Health and Safety

1. For full Health and Safety information please refer to Material Safety Data Sheet;
2. Observe the precautionary notices displayed on the container;
3. Goggles and suitable protective equipment must be worn while using these products;
4. Good ventilation must be provided in the working environment;