



Note:

Polish the zones to be connected

1)PROCEDURE 3

Standard method:

| Steps | Description             | Special notes                                                                                                                                          |
|-------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | Prepare the clearcoat   | Catalyze and dilute according to the LS - MS - HS PRODUCT TECHNICAL SHEET                                                                              |
| 2     | Apply the clearcoat     | According to the type of clearcoat (3, 2 or one coat)<br>Cover the basecoat painted zone<br>Overlap slightly towards the exterior of the repaired zone |
| 3     | Apply the union thinner | Apply thin coats                                                                                                                                       |
| 4     | Dry                     | According to the PRODUCT TECHNICAL SHEET                                                                                                               |



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## PAINTFAULT:DESCRIPTION

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## Types of paint faults

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## 1. GRAINS

Description: Particles of various shapes and sizes, this fault can be seen on the film surface. It is important to find out on which coating thickness the fault appears so that the procedure to be carried out can be identified.

### 1- MATERIAL / ENVIRONMENT

| CAUSES                                                                     | REMEDIES                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Incorrect maintenance of the booth                                         | <p>Clean the floor with a vacuum cleaner and repaint the booth walls</p> <p>Protection of the walls with a film or static product</p>                                                                                       |
| The inlet and extraction air filters are clogged, thus causing turbulences | <p>Replace the inlet and extraction filters</p> <p>Observe replacement frequencies:</p> <ul style="list-style-type: none"> <li>■ ceiling 1000 hours,</li> <li>■ floor 90 hours,</li> <li>■ pre-filter 500 hours.</li> </ul> |
| Booth depressurised                                                        | Adjust the ventilation to slight overpressure                                                                                                                                                                               |
| Application gun dirty                                                      | <p>Clean the gun straight away after use</p> <p>Never immerse it totally in thinner (clogging of the air circuit)</p> <p>Use a specific Base coat, Top coat or Clear coat gun</p>                                           |
| Dusty, dirty clothing or clothing that leaves fibres                       | Wear a clean anti-static overall, exclusively for the application                                                                                                                                                           |
| Non filtered products or dirty or pierced paint filters                    | <p>Filter all the products after mixing</p> <p>Use cone filters or clean, non-pierced plastic filters</p>                                                                                                                   |
| Contamination of the sprayed air                                           | Bleed your compressor and use a submicronic purifier, check the cleanliness of the cartridges                                                                                                                               |

| CAUSES                                                                                                         | REMEDIES                                                                                     |
|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <p>Deposits in the basecoat colours</p> <p>Usage limit date is exceeded</p>                                    | <p>Use clean and non-pierced paint filters</p> <p>Take basecoat colours from a new batch</p> |
| <p>The caps and covers have not been closed correctly on the cans and boxes allowing impurities to get in.</p> | <p>Close the cans and boxes after use</p>                                                    |

### 3- METHODS

| CAUSES                                                                                                                                                                                            | REMEDIES                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The vehicle operating, washing, cleaning, blowing, degreasing methods are insufficient.</p> <p>The internal and external surfaces of the vehicle have not been cleaned with compressed air</p> | <p>Do not wipe with fluffy cloths or paper</p> <p>Wash and clean the internal surfaces of the vehicle:</p> <ul style="list-style-type: none"> <li>■ clean with compressed air at a pressure greater than the one used for the application of the product ( + 1 bar ),</li> <li>■ wipe the vehicle and masking with a clean pad.</li> </ul> |
| <p>Masking paper on the support not suitable (newspaper type)</p> <p>Non-masked interiors: engine, wheel arches, etc</p>                                                                          | <p>Use masking paper</p> <p>Cover the interior of the engine compartment (shiny side of the paper towards the outside)</p>                                                                                                                                                                                                                 |
| <p>Unsticking of the basecoat fog during clearcoat application</p>                                                                                                                                | <p>Fix the residual basecoat fog on the masking with a slight clearcoat haze by lowering the pressure</p>                                                                                                                                                                                                                                  |
| <p>Lack of equipment maintenance and cleanliness in the whole workshop</p>                                                                                                                        | <p>Draw up a maintenance plan for the equipment</p>                                                                                                                                                                                                                                                                                        |
| <p>The bodywork surface is statically loaded which attracts dust</p>                                                                                                                              | <p>Install an Antistatic air pipe (see workshop equipment)</p> <p>In the booth:</p> <ul style="list-style-type: none"> <li>■ connect the components to be painted to earth,</li> <li>■ use an antistatic cleaner (composite material components)</li> </ul>                                                                                |

## 2. RUNS

Description: This fault can be seen when there is too much product or a very localised excessive thickness on a vertical or tilted surface. This excess flows along the support, forming runs.

### 1- MATERIAL / ENVIRONMENT

| CAUSES                                | REMEDIES                                                                                                       |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Incorrect adjustment of the gun       | Correct the nozzle adjustments, flow, pressure and width of the spray according to the component to be painted |
| Gun dirty or faulty                   | Clean the cap, the nozzle, the point                                                                           |
| Air Pressure incorrect                | Adapt the application pressure according to the gun type                                                       |
| Lack of lighting                      | Check the operation of the neon lights in your booth                                                           |
| Ambient temperature too low ( < 18°C) | Increase the application temperature 18to 23°C                                                                 |

## 2- PRODUCTS

| CAUSES                                                                                   | REMEDIES                                                                                                         |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Thinner and hardener unsuitable                                                          | Use the hardener and thinner which correspond to the application temperature                                     |
| Temperature of the product too low<br>Viscosity does not comply with the Technical Sheet | Get the products to the correct temperature before application<br>Adjust viscosity (see PRODUCT TECHNICAL SHEET) |
| Time for evaporation insufficient between coats                                          | Make sure there is enough time for solvent evaporation between each coat                                         |

## 3- METHODS

| CAUSES                                                        | REMEDIES                                                                  |
|---------------------------------------------------------------|---------------------------------------------------------------------------|
| Support temperature too low                                   | Increase the temperature of the support, ( 23°C) and the same for product |
| Support incorrectly degreased<br>Dirty surface                | Clean the support with a solvent surface cleaner                          |
| Supports poorly sanded                                        | Check the methods for sanding the supports                                |
| Irregular nozzle<br>Distance of application not complied with | Review the gun method                                                     |

### 3. POWDERING OF THE MONO OR BI COMPONENT PRIMERS

Description: Dry spraying, usually granular texture without any shine and porous.

#### 1- MATERIAL / ENVIRONMENT

| CAUSES                                                            | REMEDIES                                                                             |
|-------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Very fast air speed                                               | Improve booth ventilation (air speed): max 0.4 m/s                                   |
| Dirty gun<br>Incorrect spraying                                   | Check the cleanliness of the gun                                                     |
| Air pressure too high                                             | Check the application air pressure on the gun                                        |
| Incorrect adjustment of the gun<br>Nozzle unsuitable or too small | Correct the adjustment of your gun<br>Choice of nozzle (see PRODUCT TECHNICAL SHEET) |

2- PRODUCTS

| CAUSES                                                                                               | REMEDIES                                                                                                                           |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Viscosity does not comply with instructions                                                          | Adjust product viscosity                                                                                                           |
| Thinner and hardener not appropriate for the application temperature<br>Usage limit date is exceeded | Use a stronger evaporating thinner and in case of high temperatures add 5to 10%thinner<br>Check the storage dates of the hardeners |

3- METHODS

| CAUSES                                    | REMEDIES                                                                                                          |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Incorrect application of partial primings | Apply the undercoat in a pyramid shape: a very wide first coat on the repair and reducing for the following coats |
| Gun too far from the support              | Observe the application distance for the correct product wetness                                                  |

4. POWDERING OF THE BASECOATS

Description: Dry spraying, usually granular texture without any shine and porous. May cause a loss in the whole coating adherence.

1- MATERIAL / ENVIRONMENT

| CAUSES                                                            | REMEDIES                                                                             |
|-------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Booth application temperature too high                            | Add a retarder (e.g. :D40)                                                           |
| Very fast air speed                                               | Improve booth ventilation (air speed) max 0.4 m/s                                    |
| Dirty gun<br>Incorrect spraying                                   | Check the cleanliness of the gun                                                     |
| Air pressure too high                                             | Check the application air pressure on the gun                                        |
| Incorrect adjustment of the gun<br>Nozzle unsuitable or too small | Correct the adjustment of your gun<br>Choice of nozzle (see PRODUCT TECHNICAL SHEET) |

2- PRODUCTS

| CAUSES                                                                                               | REMEDIES                                                                       |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Viscosity does not comply with instructions                                                          | Adjust product viscosity                                                       |
| Thinner and hardener not appropriate for the application temperature<br>Usage limit date is exceeded | Use a stronger evaporating thinner<br>Check the storage dates of the hardeners |

3- METHODS

| CAUSES                       | REMEDIES                                                                             |
|------------------------------|--------------------------------------------------------------------------------------|
| Support too hot              | Reduce the temperature of the support, if possible to the temperature of the product |
| Gun too far from the support | Observe the application distance for the correct product wetness                     |

5. POROSITY IN THE POLYESTER MASTIC COAT

Description: Characterised by a group of small holes in the mastic coat. Can be seen during mastic application or after sanding.

1- MATERIAL / ENVIRONMENT

| CAUSES                                                                                                                | REMEDIES                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Storage of the boxes of polyester mastic in a place which is too humid or which has a lot of temperature fluctuations | Store the boxes of polyester mastic at a temperature of between 18°C and 23°C and in a dry place |
| Use of knives in poor condition                                                                                       | Check the cleanliness of your mastic knives                                                      |

2- PRODUCTS

| CAUSES                                                                                                                    | REMEDIES                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Quality of the polyester mastic                                                                                           | <p>Use a standard polyester mastic then a finishing mastic to plug the porosities or, instead, use a finishing mastic which plugs and finishes directly</p> <p>Take into consideration the quality of the surface to be repaired (aluminium, zinc, etc)</p> |
| The boxes of polyester mastic are incorrectly closed after use, causing the mastic to dry and allowing impurities get in. | Close the boxes of polyester mastic correctly, the solvent used for its manufacture contributes to the ease of application and to the final quality                                                                                                         |

3- METHODS

| CAUSES                                                                   | REMEDIES                             |
|--------------------------------------------------------------------------|--------------------------------------|
| On highly damaged supports mastic has been applied in a very thick layer | Apply polyester mastic twice         |
| Porosity on the surface of the polyester mastic                          | Apply a very thin coat for finishing |

## 6. DAPPLING

Description: Coloured area with darker sheen (clouded effect) with pearlescent or metallic colours due to migration of aluminium particles or of pearl particles forming small greyish clouds.

### 1- MATERIAL / ENVIRONMENT

| CAUSES                                         | REMEDIES                                                                                                                                                                |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The temperature of your booth is too low       | Regulate the temperature of your booth to between 18°C and 23°C in order to facilitate the evaporation of the solvents                                                  |
| The atomisation of your gun is not to standard | <p>Make sure your gun is kept clean</p> <p>Check the tightening of the nozzle and air cap</p> <p>Modify the adjustment of your gun</p> <p>Carry out a test on paper</p> |
| The air pressure is not correct                | Check the pressure of your gun (see PRODUCT TECHNICAL SHEET)                                                                                                            |

### 2- PRODUCTS

| CAUSES                                                                                     | REMEDIES                                                                                                     |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Viscosity does not comply with the Technical Sheet                                         | Adjust viscosity (see PRODUCT TECHNICAL SHEET)                                                               |
| The thinner used for the solvent paints is not suitable for the surface or the temperature | Reconsider the choice of thinner, for large surface area or high temperature, slow thinner, avoid fast range |

### 3- METHODS

| CAUSES                                                                         | REMEDIES                                                                                                                                                     |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The support to be painted is too cold                                          | Increase the temperature of the support and product to 23°C                                                                                                  |
| Your gun is too near or too far from the support<br><br>The speed is irregular | Check the spray method, distance and speed depending on the gun<br><br>The aluminium is placed on the last coat before the total evaporation of the solvents |
| The evaporation time between coats is insufficient                             | Allow enough time for evaporation between the basecoats and between the application of the basecoat and clearcoat (see PRODUCT TECHNICAL SHEET )             |

## 7. ORANGE PEEL

Description: Paint defect where spreading properties and imperfect drying conditions lead to a film with a flecked surface.

### 1- MATERIAL / ENVIRONMENT

| CAUSES                                                                        | REMEDIES                                                                                                                          |
|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| The application temperature is too high so the solvents evaporate too quickly | Adjust the temperature of your booth between 18°C and 23°C and check the ventilation (air speed)                                  |
| The air pressure is insufficient                                              | Correct the air pressure. A pressure which is too low will not give a correct atomisation and will not disperse the product       |
| The nozzle of your gun is unsuitable                                          | Check the choice of your gun nozzle. If the nozzle is too strong, the flow will also be too strong (see PRODUCT TECHNICAL SHEET ) |

## 2- PRODUCTS

| CAUSES                                                                     | REMEDIES                                                                                                                                    |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| The thinner and hardener are inappropriate for the application temperature | Adapt the thinner and hardener to the application temperature, for higher than 25°C use a slower thinner                                    |
| The viscosity does not comply with the instructions                        | Adjust the viscosity of the top coat<br>The product temperature must be between 18°C and 23°C, reheat the product in the booth if necessary |

## 3- METHODS

| CAUSES                                                                  | REMEDIES                                                                                            |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Old surfaces that already have orange peel skins                        | Sand the surface to remove the existing orange peel skin<br><br>Use a suction sander P3200r P400dry |
| The spray method is incorrect<br><br>The application speed is irregular | Correct the spray gun procedure<br><br>Uniform gun spray                                            |

8. MARBLING

Description: Appearance fault in the grade of a metallic paint which leaves each gun spray pass visible. The aluminium flakes or the pearl particles are applied irregularly, which causes dark and light straight bands.

1- MATERIAL / ENVIRONMENT

| CAUSES                                                                   | REMEDIES                                                                                                        |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| The temperature of your booth is too low                                 | Adjust the product, support and booth temperature to between 18°cand 23°c                                       |
| The centre or the ends of the projection of your gun are loaded too much | Correct the adjustment of the gun<br><br>Test on a sheet of paper (shape of the spray and product distribution) |
| The air pressure is not correct                                          | Check the air pressure (see PRODUCT TECHNICAL SHEET )                                                           |
| Gun dirty, incorrect atomisation                                         | Check the cleanliness of your gun                                                                               |

| CAUSES                                              | REMEDIES                                                                    |
|-----------------------------------------------------|-----------------------------------------------------------------------------|
| The viscosity does not comply with the instructions | Adjust viscosity (see PRODUCT TECHNICAL SHEET)                              |
| The thinner used is inadequate                      | Choose a solvent that dries more quickly in colder or more humid conditions |

## 3- METHODS

| CAUSES                                                                                 | REMEDIES                                                                                                                                            |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| The support to be painted is too cold                                                  | Increase the temperature of the support and product (see PRODUCT TECHNICAL SHEET )                                                                  |
| Profusion of static electricity                                                        | Connect the vehicle to the booth earth                                                                                                              |
| The overlapping of passes is irregular<br>The gun is not perpendicular to the supports | Review the spray gun method. If the fault is only visible after the application of the clearcoat, dry, sand and apply a new basecoat and clearcoat. |
| The evaporation times between the coats are insufficient                               | Allow sufficient evaporation times between coats (see PRODUCT TECHNICAL SHEET )                                                                     |
| The number of coats is excessive                                                       | Comply with the recommended number of coats (see PRODUCT TECHNICAL SHEET )                                                                          |

## 9. CURLING - CURLS

Description: Deterioration of the paint surface characterised by crinkling (at various depths), the film rising during the hardening process.

#### 1- MATERIAL / ENVIRONMENT

| CAUSES                                                                          | REMEDIES                                                               |
|---------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <p>The application temperature is too low</p> <p>No evaporation of solvents</p> | <p>Increase the temperature of the support and the product to 23°C</p> |

#### 2- PRODUCTS

| CAUSES                                    | REMEDIES                                            |
|-------------------------------------------|-----------------------------------------------------|
| <p>The thinner used is too aggressive</p> | <p>Choose a lighter and less aggressive thinner</p> |
| <p>The viscosity is not correct</p>       | <p>(see PRODUCT TECHNICAL SHEET)</p>                |

#### 3- METHODS

| CAUSES                                                                               | REMEDIES                                                                                                                                                   |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No solvent compatibility test                                                        | Check surface sensitivity<br>Solvent test (surface hardness)                                                                                               |
| Painting on not fully hardened top coat                                              | Sand the surfaces fully and carry out the procedure again<br><br>Insulate with a bi component primer or strip completely and carry out the procedure again |
| Hole on a vehicle with clearcoat sanded to the bi coat basecoat                      | Insulate with a bi component primer, applying thin coats to prevent soaking                                                                                |
| The application is too wet from the first coat which causes the surface to be soaked | Apply a first very fine layer in order to insulate the surface                                                                                             |
| No evaporation of solvents                                                           | Allow sufficient evaporation time between coats                                                                                                            |

#### 10. VISIBILITY OF THE MELTED UNIONS ON BI LAYER BASECOAT RE PAINTED WITH CLEARCOAT

Description: The outlines or edges of the union can be seen.

##### 1- MATERIAL / ENVIRONMENT

| CAUSES                                               | REMEDIES                                                                                                                                                              |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Application temperature too high                     | Decrease the application temperature (ideally between 18°C and 23°C)                                                                                                  |
| Lack of lighting<br>Poor visibility                  | Check the cleanliness and the operation of the booth neons (see maintenance plan)                                                                                     |
| Application pressure too high                        | Check the application pressure                                                                                                                                        |
| Incorrect gun adjustment (spray width, product flow) | Correct the gun adjustment according to the surfaces (flow) and according to your application: open to the maximum for a whole component, reduced for a small surface |

## 2- PRODUCTS

| CAUSES                                                                     | REMEDIES                                                                                                                                            |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Inappropriate thinner, too light<br>Incorrect positioning of the particles | Thinner intended for this use (see PRODUCT TECHNICAL USE )                                                                                          |
| Viscosity of the bi-layer basecoat not in compliance with the instructions | Adjust the viscosity according to PRODUCT TECHNICAL SHEET recommendations<br>Take high temperature conditions into account (possible over-diluting) |
| Too much difference in colour                                              | Check the colour before application on a test plate                                                                                                 |
| Time for evaporation insufficient between coats                            | Allow sufficient evaporation time between coats (see PRODUCT TECHNICAL SHEET)                                                                       |

| CAUSES                                          | REMEDIES                                                                                                                                               |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Poor preparation of the surface to be connected | <p>Roughen the area to be faded out</p> <p>Use a grey abrasive pad or P1000 and degrease the complete component</p> <p>Wipe and blow the component</p> |
| Fog too dry or too much (dark areas)            | <p>Widen the layers by graduating uniformly to melt the union area</p> <p>Reapply clearcoat to the whole component (see Powdering the components)</p>  |

# 11. VISIBILITY OF THE MELTED UNIONS ON THE DIRECT SHINY TOPCOAT

Description: The outlines or edges of the union can be seen.

| CAUSES                                               | REMEDIES                                                                                                                                                              |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lack of lighting<br>Poor visibility                  | Check the cleanliness and the operation of the booth neons (see maintenance plan)                                                                                     |
| Too much fluctuation in the application temperature  | Adjust the application temperature to between 18°C and 23°C                                                                                                           |
| Application pressure too high                        | Check the application pressure                                                                                                                                        |
| Incorrect gun adjustment (spray width, product flow) | Correct the gun adjustment according to the surfaces (flow) and according to your application: open to the maximum for a whole component, reduced for a small surface |

2- PRODUCTS

| CAUSES                                                                                    | REMEDIES                                        |
|-------------------------------------------------------------------------------------------|-------------------------------------------------|
| Inappropriate thinner<br>Viscosity of the topcoat not in compliance with the instructions | Adjust viscosity (see PRODUCT TECHNICAL SHEET ) |
| Too much difference in colour                                                             | Check the colour before application             |
| Time for evaporation insufficient between coats                                           | Allow sufficient evaporation time between coats |

3- METHODS

| CAUSES                                           | REMEDIES                                                                                                                                             |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Poor preparation of the surfaces to be connected | Prepare the area to be faded out according to the method<br><br>Buff the component surface (shiny part)<br><br>Degrease, blow and wipe the component |
| Fog too dry and matt area too large              | Widen while graduating the topcoats with light and wet coats. Over dilute with paint thinner and flood the fog area<br><br>Finish with union thinner |

12. FOG FALL OUT

Description: Small particles of paint spray fall on the vehicle during the first drying phase which causes lots of bubbles forming on the surface. Do not confuse with microbubbles, the appearance is practically identical, the causes are different.

1- MATERIAL / ENVIRONMENT

| CAUSES                                                                     | REMEDIES                                                                                                                                              |
|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Too high concentration of fog in the booth</p> <p>Clogged up filter</p> | <p>Replace the air extraction and inlet filters</p>                                                                                                   |
| <p>The air extraction is insufficient</p> <p>Air circulation deficient</p> | <p>Get the air speed checked</p> <p>Adjust the opening valves of the air extraction and inlets on the chimneys</p> <p>Create a light overpressure</p> |
| <p>The air pressure is not correct (too powerful)</p>                      | <p>Check the air pressure at application (see PRODUCT TECHNICAL SHEET )</p>                                                                           |

## 2- PRODUCTS

| CAUSES                                   | REMEDIES                                                                                                 |
|------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <p>The level of dilution is too high</p> | <p>Observe the level of dilution recommended by the paint manufacturer (see PRODUCT TECHNICAL SHEET)</p> |

## 3- METHODS

| CAUSES                                      | REMEDIES                                                                                                              |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Gun spray too far from the support          | Review the gun method                                                                                                 |
| Paint fog is already present on the vehicle | Remove the existing fog by polishing                                                                                  |
| Masking the vehicle carelessly              | Completely mask the interior and exterior of the vehicle before painting<br><br>Use of a disposable or reusable cover |

13. REAPPEARANCE OF SANDING SCRATCHES

Description: When repairs are finished, sanding marks can be seen in the coating thickness. The parts concerned may also have no shine.

1- MATERIAL / ENVIRONMENT

| CAUSES                                                               | REMEDIES                                                                                           |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Buffing with an abrasive disc too rough before polyester application | Sand the transition areas<br><br>Bevelling of the old paintwork with block sand papers P80 / P100. |
| Mastic and undercoat drying temperatures not complied with           | Comply with the recommended temperature<br><br>Use an Infrared dryer if possible                   |

2- PRODUCTS

| CAUSES                                | REMEDIES                                                                                                                                                                                                                                                                                           |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Undercoat not suitable for the finish | Choose a protective bi component type undercoat for repair of 60 to 300μ and an undercoat type 1K, for the new components max 30μ (see PRODUCT TECHNICAL SHEET )                                                                                                                                   |
| Aggressive thinner (slow evaporation) | Use a lighter and less aggressive thinner                                                                                                                                                                                                                                                          |
| Sandpaper too rough                   | <p>Sanding (see PRODUCT TECHNICAL SHEET):</p> <p>Sand the old paint surfaces ( dry P500 to P600/ dry P400 to P800)</p> <p>Do not exceed more than three sizes of grain between every operation (example: the P240 does not remove P80 scratches, for this it is necessary to use P150 or P180.</p> |

### 3- METHODS

| CAUSES                                                      | REMEDIES                                                                                                                                                  |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Original finishing<br><br>Old surfaces sensitive to solvent | Identify the surfaces using a clean cloth soaked in solvent<br><br>On damaged surfaces, sand down to the panel and insulate with a bi-component undercoat |
| Incorrect polyester finishing                               | Sand the polyester mastic dry<br><br>They must be insulated with a pre-treatment primer                                                                   |
| Hardening of the undercoat not sufficient (drying time)     | Sand the polyester mastic dry<br><br>They must be insulated with a pre-treatment primer                                                                   |
| Undercoat not thick enough                                  | Apply the undercoat in a pyramid shape on the whole surface while overlapping well on the mastic repair areas<br><br>Apply a black matt sanding guide     |

#### 14. FILM CREASING AT ASSEMBLY

Description: Paint film not fully hardened, remaining supple and deforming during accessory, aerial and door handle assembly, after tightening. The panel forms creases around the assembled parts.

##### 1- MATERIAL / ENVIRONMENT

| CAUSES                                                             | REMEDIES                                |
|--------------------------------------------------------------------|-----------------------------------------|
| The nozzle chosen for the gun is not suitable (diameter too large) | Check the choice of nozzle for your gun |

##### 2- PRODUCTS

| CAUSES                                                         | REMEDIES                 |
|----------------------------------------------------------------|--------------------------|
| Product viscosity is not correct<br>The product is too thick   | Adjust product viscosity |
| The thinner used is not suitable, too heavy<br>Poorevaporation | Check the thinner choice |

### 3- METHODS

| CAUSES                                   | REMEDIES                                                                                                                                             |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Old paint has not hardened sufficiently  | Heat the poorly hardened paint surfaces for 30 min at 60°C                                                                                           |
| Clearcoat or topcoat applied too thickly | Apply thinner coats (see PRODUCT TECHNICAL SHEET)                                                                                                    |
| The number of coats is excessive         | Comply with the advised number of coats                                                                                                              |
| the drying is incorrect                  | Carry out the drying for the time and at the temperature recommended by the paint manufacturer<br>Make sure there is total cooling before reassembly |

### 15. MARKS IN THE PRIMER COAT

Description: Imperfection of a paint film characterised by the presence of small holes which look like needle holes.

#### 1- MATERIAL / ENVIRONMENT

| CAUSES                                                                                     | REMEDIES                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The drying of the undercoat is not correct</p> <p>Incorrect usage of Infrared dryer</p> | <p>Heat (see PRODUCT TECHNICAL SHEET) using an Infrared dryer</p> <p>Observe the distances between the support and the Infrared dryer 60to 70 cm</p> <p>Observe the desolvation phase</p> |
| <p>The nozzle used on the gun is unsuitable or too large</p>                               | <p>Reconsider the choice of gun nozzle (see PRODUCT TECHNICAL SHEET )</p>                                                                                                                 |
| <p>Presence of impurities in the compressor, the purifier or the air pipes</p>             | <p>Improve the compressor, sensor and air pipe cleanliness</p>                                                                                                                            |
| <p>The gun adjustment is inadequate</p>                                                    | <p>Correct the adjustment of the gun flow according to the application</p>                                                                                                                |
| <p>The air pressure is not correct</p>                                                     | <p>Check the air pressure</p>                                                                                                                                                             |

## 2- PRODUCTS

| CAUSES                                                                                                                        | REMEDIES                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <p>Viscosity does not comply with the recommendations (preparation without thinner)</p> <p>The thinner used is unsuitable</p> | <p>Check viscosity</p> <p>Observe the Technical Sheet recommendations</p> <p>Use a thinner which evaporates more slowly</p> |
| <p>Undercoat unsuitable for the load (example: 1K primer)</p>                                                                 | <p>Apply a protective bi-component primer</p>                                                                               |
| <p>Usage limit date is exceeded</p> <p>Hardeners that have absorbed humidity</p>                                              | <p>Check the use limit date of the products</p>                                                                             |

### 3- METHODS

| CAUSES                                                                                  | REMEDIES                                                                                                                   |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Fault still present, after a previous repair not carried out following best practises   | Check there are no marks on the support. If there are, sand until a homogenous surface, and then apply bi-component primer |
| The support to prime is too hot                                                         | Do not apply primer to a support that is too hot                                                                           |
| Porosity of the polyester mastics                                                       | Cover the porosities with an extra fine polyester mastic before priming                                                    |
| Sanding residues<br>Support sanded with water is not dry enough (humidity condensation) | Check the cleanliness of the support to be primed                                                                          |
| Thick layer of primer coat applied                                                      | Apply thinner coats (see PRODUCT TECHNICAL SHEET)                                                                          |
| The evaporation time between coats is insufficient                                      | Allow sufficient evaporation time between coats (total mating)                                                             |
| The number of coats is excessive                                                        | Comply with the recommended number of coats (see PRODUCT TECHNICAL SHEET)                                                  |

## 16. HOLES / MICROBUBBLES IN THE TOPCOAT OR CLEARCOAT

Description:

**HOLES:** Imperfection of a paint film characterised by the presence of small holes which look like needle holes.

**MICROBUBBLES:** Very small bubbles that can hardly be seen appear in the thickness of the film.

### 1- MATERIAL / ENVIRONMENT

| CAUSES                                                                          | REMEDIES                                                                                                          |
|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Temperature increases too quickly during drying phase                           | Adjust the booth with a desolvation stage of 5 to 10 min before drying and an increase of 60°C in 7°C/ min stages |
| Ventilation is too strong                                                       | Adjust the air speed to 0.40 m/s<br>Add a retarder thinner temporarily                                            |
| The temperature is high too for the application                                 | Decrease the application temperature to between 18 and 23°C<br>Avoid thermal shocks                               |
| The nozzle of the gun is not suitable, the flow is too strong                   | Check the nozzle choice for your gun                                                                              |
| Presence of impurities in your compressor, purifier and air pipes.              | Optimise the compressor, sensor and air pipe cleanliness                                                          |
| The adjustment of your gun is inadequate<br><br>The air pressure is not correct | Correct the adjustment of your gun (paint flow / application speed)<br><br>Check the air pressure                 |

## 2- PRODUCTS

| CAUSES                                                                                          | REMEDIES                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hardener is not suitable for the application temperature                                        | Hardener must be chosen according to the application temperature (see PRODUCT TECHNICAL SHEET)                                                                                                             |
| The thinner used is not suitable, too slow or too fast, it gets trapped in the successive coats | Use the solvent suitable for the temperature. A thinner which dries too quickly at a high temperature does not allow the solvents in the topcoats and clearcoats to evaporate in the correct way from 25°C |
| The viscosity does not comply with the recommendations and application conditions               | Adjust the viscosity of your product (see PRODUCT TECHNICAL SHEET )                                                                                                                                        |
| Usage limit date is exceeded                                                                    | Observe the service life of the products                                                                                                                                                                   |

### 3- METHODS

| CAUSES                                             | REMEDIES                                                                                                                                                                                  |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bicoat basecoat too thick, or not dry enough       | Observe the thicknesses of the bicoat basecoat and the number of coats<br><br>Observe the recovery time between the basecoat and the clearcoat                                            |
| The support to be painted is too hot               | Check the temperature of the supports and products in order to avoid a thermal shock                                                                                                      |
| Clearcoat applied in a thick coat                  | Apply thinner coats. Comply with the recommended number of coats (see PRODUCT TECHNICAL SHEET)                                                                                            |
| The evaporation time between coats is insufficient | Allow sufficient evaporation times between coats, which may vary depending on the products and temperatures<br><br>After application wait for 5 to 10 min before the drying stage at 60°C |
| Thermal shock after drying                         | Allow the booth to cool down before getting the vehicle out                                                                                                                               |

## 17. LOSS OF SHINE IN THE CLEARCOAT AND TOPCOAT

Description: This fault is characterised by less luminosity in the paint film and by a lack of shine and reflection. It can be localised or generalised on the whole of the repair area.

### 1- MATERIAL / ENVIRONMENT

| CAUSES                                                                             | REMEDIES                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The booth temperature is irregular</p> <p>Strong humidity in the booth</p>      | <p>Regulate the application temperature between 18 and 23°C</p> <p>Do not spray the walls and the floor (stagnant water in the booth)</p>                                                                                      |
| <p>Too high concentration of fog</p>                                               | <p>Replace the air extraction and inlet filters</p>                                                                                                                                                                            |
| <p>Extraction fault (weak extraction)<br/>incorrect extraction of the solvents</p> | <p>Adjust the air speed in the cab 0.4 m/s</p> <p>It should be overpressurised</p>                                                                                                                                             |
| <p>Impurity in the purifiers</p>                                                   | <p>Check the cleanliness of the purifiers</p>                                                                                                                                                                                  |
| <p>The nozzle of your gun is unsuitable</p>                                        | <p>Correct the choice of gun nozzle</p> <p>Observe the recommendations</p>                                                                                                                                                     |
| <p>The adjustment of your gun is inadequate</p>                                    | <p>Check the adjustment of your nozzle (product flow / application speed)</p>                                                                                                                                                  |
| <p>The drying is incorrect</p>                                                     | <p>Check that the booth performs a complete drying cycle: duration and temperature</p> <p>If the vehicle is not sufficiently dried, the polymerisation continues in the cold, outside and the hardener may absorb humidity</p> |

## 2- PRODUCTS

| CAUSES                                              | REMEDIES                                                                       |
|-----------------------------------------------------|--------------------------------------------------------------------------------|
| The thinner or hardener used is inappropriate       | Modify the choice of thinner or hardener                                       |
| Viscosity is not in accordance with recommendations | Adjust product viscosity, an over dilution decreases the richness of the resin |
| Usage limit date is exceeded                        | Observe the service life of the products                                       |

### 3- METHODS

| CAUSES                                                                      | REMEDIES                                                                                                                    |
|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Undercoat wet / wet too thick                                               | Apply an undercoat max 20μ                                                                                                  |
| Clearcoat or top coat applied either too thickly or too thinly              | Observe the number of layers, thicknesses and evaporation time between coats (see PRODUCT TECHNICAL SHEET)                  |
| The evaporation times between Clearcoats and Topcoats are not complied with | Allow sufficient evaporation times between topcoats. Observe the evaporation time between the bicoat base and the clearcoat |

## 18. INCORRECT HARDENING OF THE CLEARCOAT OR TOPCOAT

Description: This fault is perceptible with a slight finger touch, the surface is sticky or soft. The paint film may have light microbubbles, a loss of shine or a high sensitiveness to scratches.

### 1- MATERIAL / ENVIRONMENT

| CAUSES                                                                                                                   | REMEDIES                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Insufficient application temperature</p> <p>The atmosphere is too humid</p>                                           | <p>Adjust the temperature of the support, products and booth to between 18 and 23°C. Temperature lower than 5°C stops polymerisation</p>                                 |
| <p>The drying is incorrect, duration shortened</p> <p>Drying temperature not sufficient</p>                              | <p>Observe the recommended drying time and temperature</p> <p>The recommended time does not take into account the time for the temperature to increase</p>               |
| <p>The air circulation in your booth is defective</p> <p>Incorrect discharge of solvents</p> <p>Not enough fresh air</p> | <p>Check the booth air speed at spraying 0.40 m/s</p> <p>During drying the air must be recycled 85 to 90% to evacuate solvents and maintain the required oxygen rate</p> |
| <p>The choice of nozzle is unsuitable (diameter is too large)</p>                                                        | <p>Adapt the nozzle according to the product used (see PRODUCT TECHNICAL SHEET )</p>                                                                                     |
| <p>The adjustment of your gun is not appropriate</p>                                                                     | <p>Correct the adjustment of your gun</p>                                                                                                                                |

2- PRODUCTS

| CAUSES                                                                            | REMEDIES                                                                                                                                             |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| The clearcoat and hardener mixture ratio is not correct                           | Observe the recommended proportioning, (see PRODUCT TECHNICAL SHEET )<br><br>More hardener does not dry faster                                       |
| Excess of retarder or antislicone thinner                                         | Observe the operating instructions and recommended proportions                                                                                       |
| Hardener which has been subjected to humidity<br><br>Incorrect choice of hardener | Put the caps back on the cans after use<br><br>Check the cleanliness and the quality of your hardener<br><br>Check the storage dates of the products |

3- METHODS

| CAUSES                                                                     | REMEDIES                                                                     |
|----------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Basecoat too thick                                                         | Observe the thickness of the bi coat basecoat (see PRODUCT TECHNICAL SHEET ) |
| The support to be painted is too cold                                      | Increase the temperature of the support and product ( 23°C)                  |
| Topcoats and clearcoats applied very thickly                               | Apply thinner coats<br>Take care not to overcharge flat surfaces             |
| The evaporation time between coats is insufficient<br><br>Solvent blocking | Allow sufficient evaporation times between coats                             |
| The number of coats is excessive                                           | Comply with the recommended number of coats (see PRODUCT TECHNICAL SHEET)    |

19. INCORRECT DRYING OF THE MONO OR BI COMPONENT PRIMER

Description: Can be felt when touching slightly. The film is not hard. During sanding it can be noticed because the paper gets clogged. Can generate sanding scratches and loss of shine on all the finishes.

1- MATERIAL / ENVIRONMENT

| CAUSES                                                                          | REMEDIES                                                                    |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Application temperature not suitable<br>The atmosphere is too cold or too humid | Increase the temperature of the support and product ( 23°C)                 |
| No drying of the undercoat                                                      | (see PRODUCT TECHNICAL SHEET)<br>Dry the undercoat                          |
| The choice of nozzle is unsuitable (diameter is too large)                      | Choose the correct nozzle (nozzle diameter)                                 |
| The adjustment of your nozzle is not appropriate (too much flow)                | Readjust your gun: paint flow / application speed<br>Check the air pressure |

## 2- PRODUCTS

| CAUSES                                             | REMEDIES                                                                                          |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------|
| The primer and hardener mixture ratio is not right | Observe the recommended proportions, too much hardener does not mean faster hardening             |
| Hardener not suitable for loaded primers           | Use recommended hardeners (see PRODUCT TECHNICAL SHEET)                                           |
| Hardener which has been subjected to humidity      | Put the caps back on the cans after use<br>Check the cleanliness and the quality of your hardener |

## 3- METHODS

| CAUSES                                                                                                | REMEDIES                                                                                   |
|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| The support to apply primer to is too cold                                                            | Increase the temperature of the support and product ( 23°C)                                |
| Primer coat applied very thickly<br>The number of coats is excessive                                  | Apply thinner coats. Observe the PRODUCT TECHNICAL SHEET                                   |
| The evaporation time between coats is insufficient, the solvents are blocked in the product thickness | Allow sufficient solvent evaporation time, increase the drying time in case of overloading |

## 20. FORMATION OF STAINS

Description: This is characterised by a physical attack or a decolouration of the painted surface.

### 1- MATERIAL / ENVIRONMENT

| CAUSES                                                                                                       | REMEDIES                                                                                                 |
|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| The nozzle is not cleaned correctly, particles from a previous application pollute the product to be applied | Check the cleanliness of your gun, do not immerse the gun during cleaning<br>Clogging of the air circuit |
| Dirty cleaning solvents                                                                                      | Replace the cleaning solvents often                                                                      |

### 2- PRODUCTS

**CAUSES****REMEDIES**

Increase in peroxide, too much polyester mastic hardener has been used

Observe the correct proportions of peroxide hardener  
(see PRODUCT TECHNICAL SHEET- use scales)  
  
In case of excess, strip and start the mastic operation  
again

**3- METHODS**

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| CAUSES                                                                                                                      | REMEDIES                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tree sap                                                                                                                    | Wash in soapy water for pollution less than 24 hours, after this time, clean with turpentine fluid                                                                                                                    |
| Guano                                                                                                                       | <p>Wash with detergent and water</p> <ul style="list-style-type: none"> <li>■ fine sanding, polishing,</li> <li>■ sanding until all defects have disappeared.</li> </ul> <p>Reapply the primer and finishing coat</p> |
| Stains without soaking, migration of an exterior agent: rubber support gallery, self-adhesive                               | Buff if the stains are superficial, otherwise sand then insulate with a bi-component primer and finish                                                                                                                |
| <p>Acid rains</p> <p>Bleached stains in the upper coat pigments</p>                                                         | <p>Wash with detergent and water</p> <ul style="list-style-type: none"> <li>■ fine sanding, polishing,</li> <li>■ sanding until all defects have disappeared.</li> </ul> <p>Reapply the primer and finishing coat</p> |
| Cement stains                                                                                                               | <p>Wash in water and detergent for fresh projections</p> <p>Then Water + Acetic acid 10%</p>                                                                                                                          |
| Reaction between the original finishing coat pigments and the solvents of the coat applied underneath. Poor pigment quality | Test the old finishing coat by applying a coloured coat on a small area.                                                                                                                                              |
| Colour pigment appear of original or repair products that are sensitive to solvents (example: white on red = pinkish white) | Insulate the pigmentation with a bi component undercoat or a coat of black paint                                                                                                                                      |

Description: Is characterised by a contracted appearance and a loss of shine. Along with the reappearance of sanding scratches.

#### 1- MATERIAL / ENVIRONMENT

| CAUSES                                                                | REMEDIES                                                                                 |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| The nozzle of your gun is unsuitable                                  | Choose the correct nozzle (nozzle diameter)                                              |
| The adjustment of your nozzle is not suitable, its flow is too strong | Readjust your nozzle: paint flow / application speed                                     |
| Lack of equipment for drying the undercoats                           | Equip the workshop with an infrared type dryer<br>To be used throughout the repair cycle |

#### 2- PRODUCTS

| CAUSES                                                   | REMEDIES                                                                |
|----------------------------------------------------------|-------------------------------------------------------------------------|
| Hardener and thinner inappropriate, procedure too fast   | Check the choice of hardener and thinner (see PRODUCT TECHNICAL SHEET ) |
| Incorrect hardener rate                                  | Observe the hardener rate (see PRODUCT TECHNICAL SHEET )                |
| The viscosity is not in compliance with the instructions | Adjust the viscosity of your products                                   |

#### 3- METHODS

| CAUSES                                                                                      | REMEDIES                                                                                                                                        |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Original topcoat sensitive to the solvents                                                  | Insulate with a bi-component primer, using thin coats                                                                                           |
| The bi coat basecoat is too thick                                                           | Comply with the number of recommended coats                                                                                                     |
| Non-compliance with the technical sheets                                                    | Consult regularly and COMPLY with the technical sheets                                                                                          |
| The drying temperature has not been complied with for all the products used during painting | Observe the recommended drying time and temperature (see PRODUCT TECHNICAL SHEET)<br><br>After drying and cooling, open the doors of your booth |

## 22. POLYESTER MASTIC TRIMMING

Description: Reappearance of the edge of the repair area after undercoat drying. It leaves a lack of shine near the mastic and sanding scratches on the whole of the repair area.

### 1- MATERIAL / ENVIRONMENT

| CAUSES                                                              | REMEDIES                                                                                                               |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Drying temperature of the polyester mastic not complied with        | Observe the recommended drying times and temperature<br><br>For complete drying, optimise the usage of infrared dryers |
| Insufficiently long and wide sanding blocks for the mastic surface. | Use a manual sander block adapted to the surface or a vibrating suction sander with a hard plate                       |

### 2- PRODUCTS

| CAUSES                                                                          | REMEDIES                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Polyester mastic insufficiently hard, incorrect proportion of peroxide hardener | <p>Observe the proportion of peroxide hardener (see PRODUCT TECHNICAL SHEET)</p> <p>Use scales to visualise the proportions</p>                                                                                                                                                                                            |
| Polyester mastic sanded with paper that is not suitable                         | <p>Do not sand polyester mastic with grain that is:</p> <ul style="list-style-type: none"> <li>■ too fine P240P320 : poor trimming,</li> <li>■ too large P40P60 : scratches too deep, impossible to smooth scratches.</li> </ul> <p>Sand the polyester mastics with papers of grain P100 / P150PRODUCT TECHNICAL SHEET</p> |

3- METHODS

| CAUSES                                                                                                                  | REMEDIES                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Application of the polyester mastic on unknown surfaces                                                                 | Identify the surfaces using a clean cloth soaked in solvent.<br>Application of polyester mastic only on bare panels. Then insulate with a protective bi component undercoat or a polyester sprayable primer (see PRODUCT TECHNICAL SHEET) |
| Your buffing after straightening is too rough, poorly softened                                                          | After component straightening, dry sand with an orbital sander P80 or a block P100(hard plate)<br><br>Smooth the old surfaces, repair areas should be perfect with no thicknesses                                                         |
| Mastic application insufficiently lengthened<br><br>Mastic sanding incorrectly faded out                                | Apply mastic with knives suitable for repairing the surface by widening to the maximum                                                                                                                                                    |
| Mastic sanding with trimming on the edges                                                                               | Begin the sanding at the centre of the mastic                                                                                                                                                                                             |
| Mastic sanding without block (or not suitable) to recover the flatness of the area on which the mastic has been applied | Apply a sanding guide<br><br>Sand the polyester mastic with a block suitable for the surface<br><br>For P150 P220Sand using crossed lines according to PRODUCT TECHNICAL SHEET                                                            |

### 23. TRIMMING OF BI COMPONENT PRIMER

Description: This fault can be observed with partial primer application by sinking of the topcoat, structure contracted to around 5 mm wide on the edge of the primer after paint drying.

#### 1- MATERIAL / ENVIRONMENT

| CAUSES                                           | REMEDIES                                                                                                                                                  |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Drying temperature not complied with             | Adjust the booth or the infra-red dryer to the recommended temperature and time<br><br>Observe the recommended temperature (see PRODUCT TECHNICAL SHEET ) |
| Sanding block not suitable<br><br>Manual sanding | Sand with a suction orbital sander P320 P400<br><br>Use supple plates (sanding will be finer)<br><br>For repairing large surfaces sand with a large block |

2- PRODUCTS

| CAUSES                       | REMEDIES                                                                                            |
|------------------------------|-----------------------------------------------------------------------------------------------------|
| Incorrect dilution           | Avoid diluting too much. Use the recommended thinner                                                |
| Time for drying insufficient | Observe the number of coats and the recommended drying time<br><br>Recommend the use of an infrared |

3- METHODS

| CAUSES                                                                                                                    | REMEDIES                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Polyester mastic saturated with humidity                                                                                  | Always sand the polyester mastics dry, cover them quickly with pre-treatment primer and a bi-component primer     |
| Non-adherence of the primer to shiny parts, lack of sanding                                                               | Sand correctly the mastic areas                                                                                   |
| Lack of sanding on the edge of the primer                                                                                 | Bevel with the sander the edge of the primer with fine sand paper P320 P400dry, finishing with P500 P600          |
| Insufficient application of primer on the edge of the repaired areas<br><br>Significant fog on the edge of partial primer | Apply the undercoat in a pyramid shape: a very wide first coat on the repair and reducing for the following coats |

#### 24. REFUSAL (SILICONE)

Description: Craters appear during or after the application, on surfaces of supports that have been polluted during or after the gun spray.

##### 1- MATERIAL / ENVIRONMENT

| CAUSES                                        | REMEDIES                                          |
|-----------------------------------------------|---------------------------------------------------|
| The booth ventilation is done in the workshop | Use exterior ventilation (see workshop equipment) |

##### 2- PRODUCTS

| CAUSES                                                                                                  | REMEDIES                                                                                                                      |
|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| The caps and covers have not been closed correctly on the cans and boxes allowing impurities to get in. | Close the cans and boxes after each use. The anti-silicone products to be mixed with the topcoat are only palliative products |

3- METHODS

| CAUSES                                                                                              | REMEDIES                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The support has been cleaned carelessly</p> <p>Silicone, grease, oil residues etc.</p>           | Wash the vehicle with a solution composed of 20% vinegar or an alkaline solution with 10% ammonia in a bucket of hot water. Then rinse in clean water and dry |
| Greasy surface. Sweat stain. Soap, oil, exhaust smoke etc.                                          | Carefully degrease small surfaces of the surfaces to be painted and wipe before evaporation                                                                   |
| Use of silicone-based aerosols and buffing products in the workshop                                 | Do not use silicone-based products. Silicone is very volatile, it can pollute a workshop very quickly                                                         |
| The vehicles are introduced in the booth with the engine running thus releasing their exhaust gases | Observe the cleanliness rules, push the vehicle manually into the booth with the engine switched off                                                          |

25. WEAKNESSES / CRACKS

Description: Superficial cracks on paint type coating, characterised by small mosaic shaped cracks on the whole painted support.

1- MATERIAL / ENVIRONMENT

| CAUSES                                        | REMEDIES                      |
|-----------------------------------------------|-------------------------------|
| The choice of the gun nozzle is inappropriate | (see PRODUCT TECHNICAL SHEET) |

## 2- PRODUCTS

| CAUSES                                                                       | REMEDIES                                                                                                                            |
|------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Use of a very thick thermoplastic undercoat                                  | Choose a bi-component undercoat                                                                                                     |
| Application of a non-catalysed top coat<br>(confusion with bi coat basecoat) | Observe the hardener and thinner proportions<br>Sand down to stable surface then work upwards<br>according to the product procedure |

## 3- METHODS

| CAUSES                                                                                                                                  | REMEDIES                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| The wet undercoat and the top coat are too thick                                                                                        | Apply thinner coats<br>Allow sufficient evaporation time for solvents<br>between product coats                                             |
| Application of a two component product on non<br>hardened surfaces                                                                      | Eliminate completely the areas concerned and if<br>necessary start from the panel before proceeding<br>with a complete application process |
| The weakening of the upper coat is caused by<br>expansion due to the elasticity of the surface.<br>Non stabilised surface, not hardened | Remove all sanding faults, then insulate with a bi-<br>component undercoat                                                                 |

## 26. DETACHMENT ON PLASTIC MATERIALS

Description: Deterioration characterised by a loss of adherence which can be seen by the lifting of the film on the support or by the separation of coats.

### 1- MATERIAL / ENVIRONMENT

| CAUSES                                                                                                               | REMEDIES                                                                         |
|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| The atmosphere is too humid, see humidity rate during application                                                    | Maintain the temperature of the support, booth and product between 18°C and 23°C |
| Large quantities of various sorts of pollution in the compressor, purifier and air pipes (oil, humidity, dust, etc.) | Check the cleanliness of your compressor, purifier, filters and air pipes        |

### 2- PRODUCTS

| CAUSES                                                       | REMEDIES                                                     |
|--------------------------------------------------------------|--------------------------------------------------------------|
| Adhesive primer inappropriate for the plastic support        | Use an adhesive primer for plastic material                  |
| The proportion ratio of adhesive primer is not in compliance | Observe the proportion ratios (see PRODUCT TECHNICAL SHEET ) |

### 3- METHODS

| CAUSES                                                                                                    | REMEDIES                                                                                        |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| No support cleaning                                                                                       | Completely clean twice the surface to be painted with an Antistatic degreaser                   |
| The sanding is insufficient                                                                               | Sand the components to be painted correctly, original primer or thermohardening                 |
| The adhesive primer coats are applied very thickly                                                        | Apply thinner coats. Comply with the number of recommended coats                                |
| The number of coats is excessive<br>The recovery time is too long or too short                            | Observe the recovery time (chemical reaction) between the primary and the primer or the topcoat |
| Parts in drained supple polyurethane foam<br>Composite materials (Plastic) soaked in mould removing agent | Proceed with drying for 1/2 hour at 60°C, to degrease again                                     |

## 27. DETACHMENT OF THE UNDERCOAT

Description: Deterioration characterised by a loss of adherence between the undercoat and the mastic or the original cataphoretic coating, which can be seen by lifts in the film on the support or by the separation of the coats.

### 1- MATERIAL / ENVIRONMENT

| CAUSES                                         | REMEDIES                                                                         |
|------------------------------------------------|----------------------------------------------------------------------------------|
| The support to be painted is too hot           | Maintain the temperature of the support, booth and product between 18°C and 23°C |
| The atmosphere is too humid, see humidity rate | Maintain the temperature of the support, booth and product between 18°C and 23°C |
| Incorrect usage of Infrared dryer              | Observe the support/infrared and desolvation distance                            |

2- PRODUCTS

| CAUSES                                                                         | REMEDIES                                                                                                                         |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Hardener taken humidity, DLU overlapped                                        | Put the caps back on cans after use. Check the cleanliness and quality of your hardener, check the storage dates of the products |
| Hardener rate inappropriate<br><br>Choice of thinner or hardener inappropriate | Check the hardener rate<br><br>Use the recommended thinner or hardener                                                           |

3- METHODS

| CAUSES                                                                            | REMEDIES                                                                                                                               |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| No support cleaning                                                               | Clean the component to be painted completely with a surface cleaner                                                                    |
| Sanding the old paint is not sufficient                                           | Degrease and sand the surfaces to be primed with care, a matt appearance is essential<br><br>Sand according to PRODUCT TECHNICAL SHEET |
| The support has either not received a filler or has received an unsuitable filler | Apply suitable filler on the bare supports (metal sheets, composite material) (see PRODUCT TECHNICAL SHEET)                            |

28. DETACHMENT OF THE CLEARCOAT AND TOPCOAT

Description: Deterioration characterised by a loss of adherence which can be seen by the lifting of the film on the support or by the separation of coats.

1- MATERIAL / ENVIRONMENT

| CAUSES             | REMEDIES                                                                                                                                             |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Basecoat powdering | Avoid applications that are too dry<br><br>Use the bicoat thinner, suitable for a temperature of 25°Cuse a slow thinner. (example: retarder thinner) |

2- PRODUCTS

| CAUSES                                                                         | REMEDIES                                                                                                                         |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Hardener which has been subjected to humidity                                  | Put the caps back on cans after use. Check the cleanliness and quality of your hardener, check the storage dates of the products |
| Use of anti silicone in the basecoat to be recoated with clearcoat             | Cleaning the support with an ammoniac product or applying thin coats of basecoat in order to block the silicone is not permitted |
| Hardener rate inappropriate<br><br>Choice of thinner or hardener inappropriate | Check the hardener rate<br><br>Use the recommended thinner or hardener                                                           |

3- METHODS

| CAUSES                                                                         | REMEDIES                                                                                                                                                 |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| The sanding and cleaning of the old paint is insufficient                      | Degrease and sand the surfaces to be painted with care, there should be a matt finish before painting. The same applies with a polishing pad for a union |
| The bicoat basecoats are applied too thickly                                   | Apply thinner bicoat basecoats 20 microns (see PRODUCT TECHNICAL SHEET )                                                                                 |
| The evaporation time between the bicoat basecoat and the clearcoat is too long | Observe the evaporation time between the bicoat base and the clearcoat                                                                                   |

29. DETACHMENT OF THE POLYESTER MASTIC

Description: Characterised by the separation of the mastic from the panel or other types of support,

(electro, galva, alu).

#### 1- MATERIAL / ENVIRONMENT

| CAUSES                                                                            | REMEDIES                                                                                      |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| The mastic has been burnt with the use of an infrared device                      | Observe a distance of 60 to 70 cm from the support when using an infrared device              |
| The atmosphere is too humid. The temperature is too low during mastic application | See humidity rate<br>Maintain the temperature during mastic application between 18°C and 23°C |

#### 2- PRODUCTS

| CAUSES               | REMEDIES                                |
|----------------------|-----------------------------------------|
| Mastic inappropriate | Use mastic appropriate for the supports |

#### 3- METHODS

| CAUSES                                  | REMEDIES                                                                                              |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------|
| No support cleaning                     | Completely clean the surface to be applied with mastic with a surface cleaner                         |
| Support too cold for mastic application | Increase the temperature of the support (the same as the product temperature) to avoid thermal shocks |

### 30. BLISTERING

Description: Phenomenon characterised by the appearance of more or less voluminous damage under a coat of paint or under coats of complex coating. Small bubbles form in the film thickness.

#### 1- MATERIAL / ENVIRONMENT

| CAUSES                                                                                                                         | REMEDIES                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Poor ventilation in the booth, high air humidity<br><br>See humidity rate, exterior of site favouring humidity (water sources) | Regulate the workshop temperature between 18°C and 23°C as well as in the booth. Adjust the air speed 0.40 m/s<br><br>Your booth must be overpressurised |
| Lifting due to too fast a temperature increase with an infrared dryer                                                          | Observe the desolvation phase and the distance between the support and infrared                                                                          |
| Significant impurities and water in your compressor, purifier and air pipes                                                    | Clean your compressor. Check the cleanliness of the purifier filters and air pipes used in the paint workshop and the booth                              |

#### 2- PRODUCTS

| CAUSES                                                                    | REMEDIES                                                                                                       |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Thinner too aggressive, may cause the surface coats to deform or inflate. | Choose a thinner which is suitable for the finishing coat and the conditions in the workshop                   |
| Hardener which has been subjected to humidity                             | Check the cleanliness and the quality of your hardener<br><br>Put the caps back on the cans after use          |
| Polyester mastic sanded with water                                        | Only sand the polyester products dry, cover them quickly with a pre-treatment primer and a bi-component primer |