LECHSYS

USER HANDBOOK

REVISION N° 2 JULY 2007

COMPATIBILITY BETWEEN BASE COLOURS AND BINDERS

By following the **LECHSYS** formulations on the C.D. for **DATA BOX** and **COLOR TECH** you will never have any compatibility problems between the base colours and the several binders.
Sometimes, for many reasons, you must make new formulations or correct sample colours.
In these cases, it is recommended to follow the subsequent guidelines, relevant to the compatibility of the base colours with the binders.

This table colour caption shows the use of the base colours with the relevant binder:

	With NO links for use.
X	**X** shows the replace ability of the base colour, as shown here below, where there are economical needs with no technical links of colorimetric durability (lower colour resistances).

An example:

- 29010 base colour has a similar tone to 29016
  - If you want to obtain a more economical product (with lower colour change resistances) 29010 base colour can be replaced with 29016 base colour (always check the resulting colour).
- 29025 base colour has a similar tone to 29023
  - If you want to obtain a more economical product (with lower colour change resistances) 29025 base colour can be replaced with 29023 base colour (always check the resulting colour).
- 29049 base colour has a similar tone to 29046
  - If you want to obtain a more economical product (with lower colour change resistances) 29049 base colour can be replaced with 29046 base colour (always check the resulting colour).
- 29054 base colour has a similar tone to 29044
  - If you want to obtain a more economical product (with lower colour change resistances) 29054 base colour can be replaced with 29044 base colour (always check the resulting colour).

Vice versa with 29016-023-046-044 base colours you can operate on the contrary by increasing the products colour durability by always changing the formulation.

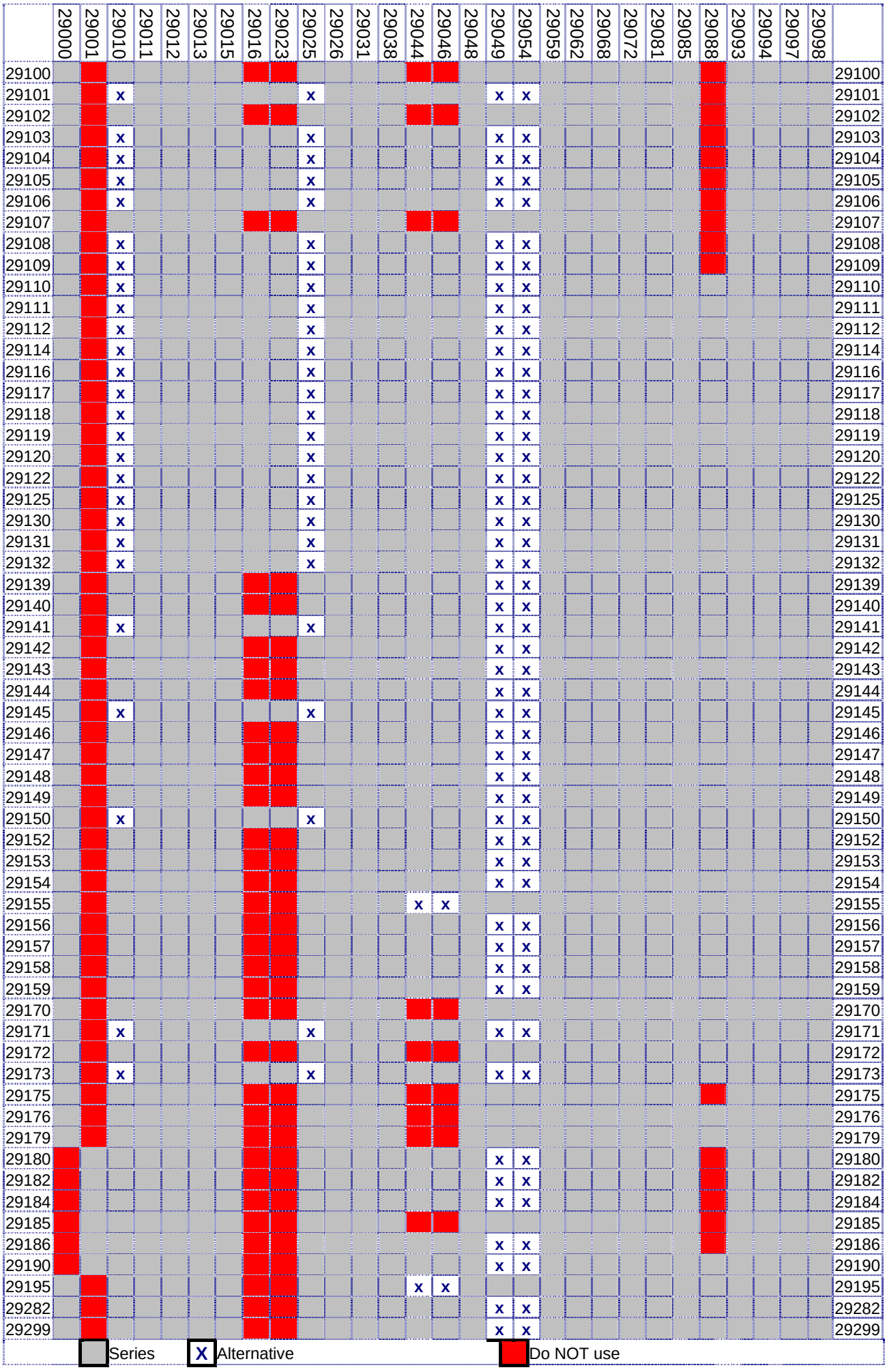
Absolute link of use = do ***not use***

29044 – 29046 must be avoided in the following binders:
29100, 29102, 29107, 29170, 29172, 29175, 29176, 29179, 29185.
As they are not compatible by mixing with some components of the formulations.

29000 29000 **must be avoided** in the following binders:
29180, 29182, 29184, 29185, 29186, 29190:
29000 would cause a shock between the base colours.
Use 29001 and vice versa.

29088 should be avoided in the following binders:
29100, 29101, 29102, 29103, 29104, 29105, 29106, 29107, 29108, 29109, 29175, 29180, 29182, 29184, 29185, 29186.
As the ratio between base colour and binder is high there is no particular need for its use.
Do not use at all in low opacity colours.

29016 – 29023 should be avoided in the following binders:
29100, 29107, 29140, 29142, 29143, 29144, 29146, 29149, 29152, 29153, 29154, 29155, 29156, 29157, 29158, 29159, 29170, 29172, 29175, 29176, 29179, 29180, 29182, 29184, 29185, 29186, 29190, 29195, 29282, 29299.
As they have lower chemical resistances than the binders and the relevant hardeners or no solvent resistance.


29000 29001 29010 29011 29012 29013 29015 29016 29023 29025 29026 29031 29038 29044 29046 29048 29049 29054 29059 29062 29068 29072 29081 29085 29088 29093 29094 29097 29098
29100 29101 29102 29103 29104 29105 29106 29107 29108 29109 29110 29111 29112 29114 29116 29117 29118 29119 29120 29122 29125 29130 29131 29132 29139 29140 29141 29142 29143 29144 29145 29146 29147 29148 29149 29150 29152 29153 29154 29155 29156 29157 29158 29159 29170 29171 29172 29173 29175 29176 29179 29180 29182 29184 29185 29186 29190 29195 29282 29299
Series
X Alternative
Do NOT use

HOW TO IMPROVE THE OPACITY OR TO OBTAIN HIGH OPACITY PRODUCTS

All colours obtained through **LECHSYS** system have been formulated to allow an opacity by 2 cross coats except the bright colours of yellow, orange, red-orange range, obtained in lead-free formulation having a lower opacity.

LECHSYS allows the possibility of further improving the colour opacity.

There are 2 systems to follow:
Recommended

1. Use a primer/filler with the same colour as of the topcoat colour or a coloured primer/filler with high opacity similar to the topcoat colour.
   For this refer to the colour chips of the LECHSYS BASE COLOURS fan (see price list code 96953) under item “undercoats”.

   Example
   29107 EPOXYPRIMER formulated in 7777731 undercoat
   +
   29140 ISOLACK HIGH formulated in RAL 1023 colour
   This allows you to delete the contrast ratio primer/filler-topcoat and to obtain high opacity cycles.

2. Increase the coloured part of max. 20% (multiply the base colours weigh for 1, by taking away the bases quantity added to the binder of the formulation).

EXAMPLE: RAL 1023 COLOUR IN 29145 ISOLACK PUR

Base colour	weigh	Correction factor	Higher opacity formulation *Two decimals weigh*		Higher opacity formulation *One decimal weigh*
29016	**183,8**		**220,*56***		**220,*6***
29000	**22,7**		**27,*24***		**27,*2***
29023	**0,7**	**1,2**	**0,*84***		**0,*8***
29085	**0,3**		**0,*36***		**0,*4***
29145	**792,5**		**751,00**	△	**751,0**
	1000,0		**1000,00**		**1000,0**

△ Value obtained by taking away the sum of the Base Colours from 1000 gr.

The higher opacity new product keeps the same catalysis, the same dilution and the same chemical-physical characteristics as of the standard opacity product.

It is easy to guess the saving in application time above all when the refinishing cycle concerns a specially jointed manufacture as for example a complex working machine.

Especially for the point 2, considering the approximate values due to the recalculations of the formulas’ percentages, we recommend, before modifying the formula, to perform a preliminary test to verify the effectiveness of the adjustment.

RATIONALISATION OF PRODUCTION

In LECHSYS System rational cycles have been provided for, where the **same hardeners and thinners** for the PRIMER, the FILLER and for the TOPCOAT can be used.
It is a plus of the system and it is an important subject of the commercial proposal.

Example of cycles composed of:

1) 29109 ACRIPUR PRIMER + 29155 ACRITOP
2) 29109 ACRIPUR PRIMER + 29105 HI-BUILD FILLER + 29155 ACRITOP

This allows you to obtain the mixtures easily, to make less mistakes by catalysing, thinning and to have lower stocks in the warehouse.

In the system **many BINDERS adhering directly to the metal or plastic substrate with no need of applying neither any primers nor grip coats** are also available.

Besides rationalising the painting cycle with less product consumption, these topcoats with direct adhesion have the advantage of greatly reducing the times and therefore the painting costs.

LECHSYS FOR SEMI-GLOSS AND SEMI-MATT ENAMELS

In the most important range of enamels **LECHSYS** System always allows a choice between gloss enamel and matt. These binders are mixable with each other in all ratios in order to achieve all the intermediate mattness by following the table here below:

Gloss binder		**Matt binder**	**Semi-gloss 65-75 Gloss**	**Semi-matt 40-50 Gloss**
29116	+	29112	1:3	1:4
29117	+	29118	1:3	1:4
29120	+	29122	1:3	1:4
29132	+	29130	1:3	1:4
29145	+	29141	1:3	1:4
29144	+	29142	1:3	1:4
29143	+	29152	1:3	1:4
29157	+	29158	1:3	1:4
29170	+	29172	1:3	1:4
29171	+	29173	1:3	1:4
29180	+	29182	1:3	1:4

When you mix 2 binders, in order to obtain intermediate mattness, you must catalyse with the Binder's hardener used in the highest percentage, in the same ratios expected for the first enamel.
When the binders are used in the same ratio 1:1 you can use both hardeners' ratios since the chemical-physical characteristics do not change.

Example:

Binder	Use ratio	Standard catalysis	Hardener
29144		50	29344
29142		25	29342
29144 29142	2 1	50	29344
29144 29142	1 2	25	29342
29144	1	50	29344
29142	1	25	29342

In the visual evaluation of the colours obtained in the gloss version compared to the same colour obtained in a matt version (even if they have the same formula composition) you will notice a slight colour difference.
This does not mean that the colours are really different, but only an optical distortion caused by our eyes having a different sensitivity by “reading” the same colour in a gloss and a matt effect.

You must consider that the final mattness result is only approximate as they are strongly affected by many variables often linked each other.

TABLE OF MATTNESS VARIABLES

AFFECTING FACTORS		OBTAINED EFFECT	
		+ MATTER	**-** LESS MATT
AIR PRESSURE	HIGH	X	
	LOW		X
HARDENER	SLOW	X	
	FAST		X
THINNER	SLOW	x	
	FAST		x
DRYING TIME	AIR	X	
	LOW BAKE		X
APPLICATION	FLASH-OFF BETWEEN COATS		X
	ONE COAT	X	

RAL COLOURS
Information

RAL = German Institute for a quality assurance and identification

RAL 840 = System's birth (1927) – colours from N° 1 to 40
RAL 840 R = Revision – 1939 –1940 division 1 – yellow…9 – black/white
RAL 840 HR = Main list revision – The colour collection was increased (1961).
The colour references RAL 840 up to 840 HR were originally matt or semi-matt.
These colours, as for some red, yellow and green colours, still contain mainly chrome and lead pigments.

RAL 841 GL = Gloss colour references – from 1961/1964
Formulated with modern pigments.

The colours containing chrome and lead change over a period of time, each according to the colour, the thickness and the outside resistance.
The lead-free colours have a lower opacity but are more durable in time.
To ensure a higher opacity, for some colours the use of undercoats is recommended.
The undercoats can be found in the Data Box under item "SOTT" and are available in the colour fan *Lechsys Base colours* – sale code 96953.

Before painting, the user must check the colour with a sprayed sample.

INFO:

	COLOUR	RAL RANGE	
		FROM	TO
1	Yellow	1000	1028
2	Orange	2000	2009
3	Red	3000	3027
4	Lilac/Violet	4000	4007
5	Blue	5000	5022
6	Green	6000	6029
7	Grey	7000	7043
8	Brown	8000	8025
9	White, Black, Aluminium	9000	9018

For Lechler RAL colours are:

RAL 840 HR series is the series of RAL colours formulated with base colours also containing chrome and lead 29011-29012-29026 mainly in the range of yellow, orange and red colours.

RAL 841 GL series is the series of RAL colours formulated with lead-free pigments (29010-29015-29025-29013-29016).

Difference:

a) The colours, even if with the same name (ex. RAL 1018 Zink Gelb), are visually slightly different (on the MASTER TRUCK you can find the references of both series indeed).
b) The opacity of RAL 840 HR colours in the above-mentioned colour fields are always higher as formulated with base colours containing chrome and lead.
RAL 841 GL colours, in the yellow, orange and red range, often need a coloured primer/filler to improve their opacity and coverage.

Not all the Industrial Vehicle colours have their colour reference in the MASTER TRUCK (ex. the special colours), but their code is present in the COLOR INDEX and their formula is present in CD-ROM system formulas.

The Car Manufacturers of Industrial or Commercial Vehicles often give the RAL reference of the colours used on their production vehicles.
Nearly always the colour matching to RAL standard is only theoretical.
In these cases you have to refer to the manufacturer's specific colour code or to start with the RAL Colour formulation and then correct it.

SUGGESTIONS AND WARNINGS FOR THE CORRECT LECHSYS SYSTEM MANAGEMENT

HOW TO OBTAIN 5 AND 20 KG PACKAGES BY USING THE SAME BINDER TINS:
This system is valid for all the enamels.
Weigh the colour for 4-16 litres and add to the binder until you get the required weight of 5-20 kg.
The binder tins have already allowed for this opportunity and have a capacity able to obtain the expected weights.

29100 1K FAST PRIMER:
After adding **29000 BIANCO INTENSO** mix thoroughly and immediately with a mixing stick or alternatively automatic shaker which will help to avoid shock and formation of lumps.

29101-29103 SYNTOPRIMER:
Use the recommended thinners or thinners for nitrocombi products since SYNTOPRIMER products are not compatible with many synthetic thinners (not produced by LECHLER) present on the market.

29108-29171-29173 EPOPRIMER 1K - EPOTOP 1K:
These are one-pack epoxy-ester products, therefore, due to their chemical nature, they are slow through drying especially at low temperatures.
Their use must be suggested only for low film build.

29131 TECNOGRIP METAL:
For aesthetical reasons it can be over coated with clearcoats of any chemical nature (synthetic, 1K and 2K polyurethane clearcoats, 2K gloss and matt clearcoats).
At least 24 hours must pass from the application of TECNOGRIP METAL.
The obtained effect after the clearcoat finishing will be highly scratch and weather resistant.

29140 ISOLACK HIGH:
When used for the painting of industrial vehicles (buses, tanks) use as hardener 29341 ISOLACK HIGH SLOW HARDENER.

29143 ACRYL 2K:
The only binder can be used as a clear coat: **it has a direct adhesion**.

The 2K products' **BINDERS** must be normally catalysed. We recommend that the **BINDERS** do not contain any additives absorbers of U.V. rays and therefore they tend to yellow outdoors, while they remain unaltered indoors.

It is not recommended to use **MATT BINDERS** as finishing clearcoats since their composition was not conceived to obtain finishing matt clearcoats.

EPOXY BINDERS have some drying limits:
Below +15°C they get slow drying and below +5°C they do not get any cross linking.
Generally **epoxy topcoats** have scarce outside resistance (they tend to bleach, to yellow and to opacify)

29116 SYNTOLACK and generally the air drying synthetic enamels can be catalysed when using with 10-20% of **29344 LECHSYS ISOLACK HARDENER**.
In the most cases this allows us to have

- Faster drying at low temperature
- Higher through-drying
- Better outdoor resistance
- Higher adhesion to the primers

To tint the colours (especially white colours) with hardly weighable base colour quantities (example 0,1 g) you can prepare base colours of reduced concentration by following this example:

29081 TB LECHSYS INTENSE BLACK	20 g
29088 TB LECHSYS MIX BASE	80 g

You weigh 0,5 g in place of 0,1 g obtaining the same colour result.
In practice you multiply for 5 times the quantity to weigh.

LECHSYS base colours are viscous and durable; therefore they must be mixed by mixing machine on a regular basis and for a short time.
1 minute in the morning + 1 minute in the afternoon, at the work's beginning, are recommended.

In order to produce ANODISED effects of various colours, you can tint **ACRYL 2K** enamels **(29143-29152-29153-29159)** with BRILLIANT COLOR (max. 10%) with 5 % addition of BC000 U.V. ABSORBER ADDITIVE to improve the light resistance.
Then they must be applied directly to aluminium or steel in order to get the coloured ANODISED effect.

EPODUR, after addition of 09830 GLASS ADHESION PROMOTER, has a fairly good adhesion on glass: however a preliminary test for the cycle acceptability must always be carried out.

FOR THE BINDERS:

29100 1K FAST PRIMER
29143 ACRYL 2K
……. All nitrocombi binders

By making the colours it is suggested to mix immediately the mixture just after the base colour addition.

29139 SOFT: We suggest and recommend that in order to always produce good results you need to follow the following cycle:

1. Apply specific grip coating on plastic or epoxy primer on metal.
2. Apply 04111 SOFT PRIMER NERO-AI or 04100 SOFT PROT.INC.SEALER
3. Apply wet-on-wet **29139 SOFT** in the desired colour
4. Low bake for 90' at 60°C or 60' at 80°C.

To paint PVC frames and castings, besides using the special product 29282 FRAMECOAT PVC, you can use with good results

- mixture 1:1 of **29157 ACRYL 1K** and **29143** or **29152 ACRYL 2K (glossy or matt)** catalysed 10% with 29342 LECHSYS ISOLACK ESP HARDENER
  or
- mixture 1:1 of 29157 **ACRYL 1K** and **29143** or **29152 ACRYL 2K (glossy or matt)** with 10% addition of **09760 FLESSIBILIZZANTE** catalysed with 10% of 29355 LECHSYS ACRITOP STANDARD HARDENER.

A preliminary test is always recommended as well as the use of high resistance pigments.

29130 TECNOGRIP in the black and derivative colours by totally absorbing the sun rays (unlike the other colours) gets thermoplastic (soft) when is applied to iron and is directly exposed to the sun rays in summer. By temperature's falling it produces its normal consistency.

In the **LECHSYS SYSTEM** it is important to use the suggested thinner to achieve the expected performances levels. By using non specific economic thinners you run the risk to have poor finishes as for aesthetical aspect, durability and drying.

PARTICULAR USES OF LECHSYS SYSTEM PRODUCTS

For the economical and abrasion resistant refinishing of **concrete floors** (for inside) of workshops or warehouses you can use **29170-172 EPODUR** after careful cleaning with hydro polishing machine of the surfaces to paint.
Apply the first overthinned coat as an impregnating varnish and the second coat as a normal coat.
The application can be made by brush or by roller, but it is important to verify that the concrete is compact, in good condition, absolutely free from any humidity when being applied and that the temperature is above 15°C.

For the painting of **PVC tarpaulins of industrial vehicles**, previously degreased and cleaned, you can use **29157 ACRYL 1K.**
For more valuable finishes you can use a mixture of **29132 TECNOGRIP GLOSS** + **29157 ACRYL 1K** in ratio 1:2 according to the tarpaulin PVC.
(29130+29158 in ratio 1:3 for matt version).
A preliminary test is always necessary.

For the painting of the “asphalt” as a **line marker** you can use **29119 MONOSYNT** thinned with synthetic thinner (00570 for application by roller and by brush or 00572 for spray application).

To obtain a one coat semi-matt, very fast drying finish you can mix **29103 SYNTOPRIMER + 29180 NITRON** in ratio 1:1.

For the painting of **wood**, as a **colourless impregnating varnish**, you can use the only binder **29132 TECNOGRIP GLOSS** without base colours, thinned at 100% with 00825.
It can be applied directly to wood.
It is important to prepare it already thinned, because it has not to form any film, but it must be all absorbed by the wood.

As **Flatting** lacquer you can use the only binder **29117 SYNTOLACK PENN** or **29118 SYNTOLACK PENN OPACO** without base colours, with 2% addition of **29298 ESSICCATIVO PENN**.

The acid hardener **29385 LECHSYS NITRON 2K HARDENER** can be used as a **degreasing – phosphatising agent for steel sheets and aluminium** to be cleaned carefully with demineralised water after its application.

29100 1K FAST PRIMER can be used as a **weld through primer**.

LECHSYS ISOCYANIC HARDENERS: USE AND CHARACTERISTICS

CODE	TRADE NAME	HARDENER TYPE AND CHEMICAL CHARACTERISTICS	BINDER PARTNER		CATALYSIS BY VOLUME	THINNER	
			CODE	NAME		TYPE	%
29304	ISOFILLER HARDENER	AROMATIC YELLOWING	29104	ISOFILLER	4:1	00825/4	20-35
29340	ISOLACK HIGH HARDENER	ALIPHATIC HIGH QUALITY NON-YELLOWING FOR OUTDOORS	29140 29149 29106	ISOLACK HIGH ISOLACK TEXT. ISOSEALER B/B	2:1 2:1 2:1	00825/4	30-40 30-40 30-40
29341	ISOLACK HIGH SLOW HARD.	ALIPHATIC HIGH QUALITY NON-YELLOWING FOR LARGE SURFACES	29140 29149	ISOLACK HIGH ISOLACK TEXT.			
29342	ISOLACK ESP HARDENER	ALIPHATIC	29142 29146 29147 29143 29152	ISOLACK MATT ISOLACK GFR ISOLACK PENN ACRYL 2K ACRYL 2K MATT	4:1 4:1 2:1 4:1 5:1	00825/4	25-30 0-30 0-5 0-50 35-40
		NON-YELLOWING HIGH QUALITY	29153 29156 29159	ACRYL 2K MATT ACRYL 2K GFR ACRYL 2K TEX.	5.1 5:1 5:1		30-50 0-30 30-35
			29139	SOFT	3:1	00673	15-20
29343	ISOLACK ESP INDUSTRY HARDENER	ALIPHATIC AND AROMATIC MIXTURE CHEAP FASTER AND LESS RESISTANT THAN 29342	29142 29146	ISOLACK MATT ISOLACK GFR	4:1 4:1	00825/4	25-30 0-30
29344	ISOLACK HARDENER	ALIPHATIC HIGH QUALITY AND NON-YELLOWING	29141 29144 29145	ISOLACK PUR MATT ISOLACK ISOLACK PUR	4:1 2:1 4:1	00825/4	25-30 10-15 25-30
29345	ISOLACK INDUSTRY HARDENER	ALIPHATIC AND AROMATIC MIXTURE CHEAP SLIGHTLY YELLOWING FASTER AND LESS RESISTANT THAN 29344 FOR INDOORS	29141 29144 29145	ISOLACK PUR MATT ISOLACK ISOLACK PUR	4:1 2:1 4:1	00825/4	25-30 10-15 25-30
29349	ISOLACK EC HARDENER	AROMATIC YELLOWING FAST DRYING HIGH CHEMICAL RESISTANCES FOR INDOORS	29140 29144 29149 29146	ISOLACK HIGH ISOLACK ISOLACK TEXT. ISOLACK GFR	2:1 2:1 2:1 4:1	00825/4	30-40 10-15 30-40 0-30
29354	ISOLACK UHS STAND.HARD.	ALIPHATIC GOOD QUALITY	29154	ISOLACK ULTRA HS	2:1	00825/4	0-15
29355	ACRITOP STANDARD HARDENER	ALIPHATIC HIGH QUALITY GENERAL USE FOR POLYURETHANE AND ACRYLIC LACQUERS	29105 29109 29155	HI-BUILD FILLER ACRIPUR PRIMER ACRITOP	5:1 3:1 2:1	00825/4	5-20 15-25 10-15
29356	ACRITOP HARDENER FAST	ALIPHATIC HIGH QUALITY FASTER VERSION THAN 29355					
29357	ACRITOP HARDENER SLOW	ALIPHATIC HIGH QUALITY SLOWER VERSION THAN 29355	29109 29155	ACRIPUR PRIMER ACRITOP	3:1 2:1	00825/4	15-25 10-15

CODE	TRADE NAME	HARDENER TYPE AND CHEMICAL CHARACTERISTICS	BINDER PARTNER		CATALYSIS BY VOLUME	THINNER	
			CODE	NAME		TYPE	%
29395	ACRITOP ULTRA HS INDURITORE	ALIPHATIC FOR TRADITIONAL USE	29195	ACRITOP ULTRA HS	2:1	00742	0-5
29396	ACRITOP ULTRA HS INDURITORE AIRLESS	ALIPHATIC FOR SPECIFIC USE IN AIRLESS			2:1	00653	0-10

LECHSYS AMINIC HARDENERS: USE AND CHARACTERISTICS

CODE	TRADE NAME	HARDENER TYPE AND CHEMICAL CHARACTERISTICS	BINDER PARTNER		CATALYSIS BY VOLUME	THINNER	
			CODE	NAME		TYPE	%
29302	EPOBUILD PRIMER HARDENER	POLYAMIDE ----------	29102	EPOBUILD PRIMER 2K	2:1	00516	0-10
29370	EPOXYPRIMER STANDARD HARDENER	POLYAMIDE FOR LARGE SURFACES OR FOR HIGH TEMPERATURES	29107	EPOXYPRIMER	2:1	00516	0-10
29371	EPOXYPRIMER FAST HARDENER	POLYAMIDE FAST FOR SMALL SURFACES OR FOR LOW TEMPERATURES					
29376	EPODUR HARDENER	POLYAMIDE ADDUCT HIGH QUALITY	29170 29172 29176	EPODUR EPODUR MATT EPODUR EFB	5:1 5:1 3:1	00516	20-25 40-50 0-20
29377	EPODUR FAST HARDENER	POLYAMIDE ADDUCT FAST DRYING, HIGH QUALITY					
29378	EPODUR FAST INDUSTRY HARDENER	POLYAMIDE VERY FAST DRYING, MEDIUM QUALITY YELLOWING					
29379	EPOXYLACK HARDENER	POLYAMIDE FAST DRYING	29179	EPOXYLACK EFFEKT	3:1	00516	0-20

LECHSYS ACID HARDENERS: USE AND CHARACTERISTICS

CODE	TRADE NAME	HARDENER TYPE AND CHEMICAL CHARACTERISTICS	BINDER PARTNER		CATALYSIS BY VOLUME	THINNER	
			CODE	NAME		TYPE	%
29385	NITRON 2K HARDENER	ACID HARDENER ----------	29185	NITRON 2 K	2:1	00825	10-20

BRIAR ROOT EFFECT PAINTING CYCLE

BROWN BRIAR ROOT CYCLE WITH LECHSYS PRODUCTS

- Apply on the substrate to be painted with briar root effect **ISOLACK ENAMEL** in RAL 1018 colour or similar colours.
- Allow to dry, then sand dry with grit paper P400 or wet with grit paper P800-1000. Slightly rub evenly with Ultra Fine Scotch Brite
- Prepare the following mixture (**LECHSYS MIX RADICA**)

o 29038	TB LECHSYS DARK OXIDE RED	20 parts
o 29081	TB LECHSYS INTENSE BLACK	5 parts
o 29190	BASECOAT	75 parts
o 00825	LECHSYS UNIVERSAL STANDARD THINNER	50 parts

To obtain other darker or less dark colours change the mixing ratio of LECHSYS Basecoats.

- Degrease the substrate with **00695 SILICONE REMOVER SLOW**
- Apply on the substrate in an **uneven way** the coloured mixture **with a sponge or with a lint free cloth**.
- Allow to flash off for 5-10’ at 20°C.
- Stipple with a clean cloth dampened with **00744 FADE-OUT BLENDER** (the cloth must be damp not soaked). **Since the quantity and the application of 00744 on the surface affect the effect, it is important to optimise this operation**.
- Allow to flash-off for at least 20’ at 20°C.
- Over apply by spraying by light coats the following mixture:

o 29155	ACRITOP BINDER	975 parts
o 29038	TB LECHSYS DARK OXIDE RED	20 parts
o 29081	TB LECHSYS INTENSE BLACK	5 parts
o 29355 (Standard)/356 (Fast)	LECHSYS ACRITOP HARDENER	500 parts
o 00825	LECHSYS UNIVERSAL STANDARD THINNER	150 parts

- Allow to dry for 20-30’ at 60°C.
- If necessary, in order to obtain a high quality finish, sand dry with grit paper P400 or sand wet with grit paper P1000, degrease with 00695 SILICONE REMOVER SLOW and overcoat with a glossy or matt clearcoat *.
  * Any two-pack car refinishing clearcoat can be used.

In order to obtain a briar root effect with other colours, a lighter substrate colour than the finishing colour must be used, f.i.: pink colour on the substrate and wine-red finish or light blue on the substrate and dark blue finish.

MARBLE EFFECT PAINTING CYCLE

Apply on the substrate a primer/filler or a two-pack enamel of the desired colour.
Allow to dry and sand dry with grit paper P400 or wet with grit paper P800.

Prepare the following mixture:

29180 NITRON (only the binder)	99 parts
LECHSYS basecoats mixture	1 part
00744 FADE-OUT BLENDER	150 parts

Spray two coats in an uneven way.

Stipple immediately and unevenly with creased industrial paper.
Allow to flash off for about 10'.
Apply light and uniform coats of the previous colour until you get the wished colour.

Allow to flash off for about 10-15'.
Apply 1-2 coats of two-pack gloss or matt clearcoat.
Allow to dry for 30-40' at 60°C.

Example to obtain GLOSS ROSY MARBLE EFFECT

Apply primer/filler or two-pack enamel RAL 9010.

Drying

Dry sanding with grit paper P400

Prepare the following mixture:

29180 NITRON	99 parts
29054 TB LECHSYS AMARANTH	1 part
00744 FADE-OUT BLENDER	150 parts

Apply two uneven coats

Stipple immediately with creased industrial paper.
Allow to flash off for about 10'
Apply 1-2 coats of the previous mixture until you obtain the desired effect.

Allow to flash off for about 10-15'
Apply two coats of gloss clearcoat 09792 ACRIFAN 2000
Allow to dry for 30-40' at 60°C.

TECHNICAL INSTRUCTIONS ON PRE-TREATMENT OF PLASTIC SUBSTRATES PAINTING

SUBSTRATE	ESSENTIAL PREPARATION	MAXIMUM LEVEL PREPARATION
ABS	DEGREASING WITH 00617 PLASTIC CLEANER. DRYING.	DEGREASING IN RAINY PLANTS WITH ALKALINE SURFACE-ACTIVE AGENTS OR ACID SURFACE-ACTIVE AGENTS. RINSING WITH DEMINERALISED WATER. DRYING.
PC/ABS		
PC		
PP	DEGREASING WITH 00617 PLASTIC CLEANER. DRYING. BLAZING WITH OXIDISING FLAME. (WETTABILITY 48/52 DM/CM MINIMUM)	DEGREASING IN RAINY PLANTS WITH ALKALINE SURFACE-ACTIVE AGENTS OR ACID SURFACE-ACTIVE AGENTS. RINSING WITH DEMINERALISED WATER. DRYING. BLAZING WITH OXIDISING FLAME. WETTABILITY 48/52 DM/CM MINIMUM
POLYOLEFIN RUBBERS	DEGREASING WITH 00617 PLASTIC CLEANER. DRYING.	DEGREASING IN RAINY PLANTS WITH ALKALINE SURFACE-ACTIVE AGENTS OR ACID SURFACE-ACTIVE AGENTS. RINSING WITH DEMINERALISED WATER. DRYING.
RIGID POLYSTYRENE		
SEMI-FOAM POLYSTYRENE		
SOFT PVC		
RIGID PVC		
SOFT FOAM POLYURETHANE	//	DEGREASING IN CHLORINATED SOLVENT VAPOURS
RIGID FOAM POLYURETHANE		
POLYURETHANE R/RIM	//	DEGREASING IN CHLORINATED SOLVENT VAPOURS OR DEGREASING IN WATERY PHASE WITH ACID SURFACE-ACTIVE AGENTS (5 STAGES PLANTS). FOLLOWING DRYING.
POLIUREA		
NYLON	DEGREASING WITH 00617 PLASTIC CLEANER. DRYING.	DEGREASING IN RAINY PLANTS WITH ALKALINE SURFACE-ACTIVE AGENTS OR ACID SURFACE-ACTIVE AGENTS. RINSING WITH DEMINERALISED WATER. DRYING.
FIBREGLASS	SANDING, DEGREASING BY HAND WITH 00617 PLASTIC CLEANER OR WITH CLEANING NITRO THINNER . DRYING WITH DRY CLOTH.	SANDING CLEANING IN HOT WATERY PHASE WITH SURFACE-ACTIVE AGENTS (RAINY PLANTS OR HIGH PRESSURE JET CLEANERS) RINSING AND DRYING.

TECHNICAL INSTRUCTIONS ON PRE-TREATMENT OF METALLIC SUBSTRATES AND THE LIKE FOR PAINTING

SUBSTRATE	ESSENTIAL PREPARATION	MAXIMUM LEVEL PREPARATION
COLD ROLLED STEEL SHEET WITHOUT CORROSION (LOW THICKNESS)	PHOSPHO-DEGREASING WITH HIGH PRESSURE JET CLEANERS. RINSING WITH DEMINERALISED WATER. DRYING. DEGREASING WITH 00695 SILICONE REMOVER SLOW. DRYING.	DEGREASING WITH 00695 SILICONE REMOVER SLOW. DRYING. SANDING OR DISCO CLEANING. FURTHER DEGREASING. DRYING.
COLD ROLLED STEEL SHEET WITH CORROSION (LOW THICKNESS)	DEGREASING WITH 00695 SILICONE REMOVER SLOW. DRYING. SANDING OR DISCO CLEANING. FURTHER DEGREASING. DRYING.	DEGREASING WITH 00695 SILICONE REMOVER SLOW. SANDBLASTING TO WHITE METAL. BLOWING.
BLACK HOT ROLLED STEEL SHEET WITHOUT CALAMINE (HIGH THICKNESS)	PHOSPHO-DEGREASING WITH HIGH PRESSURE JET CLEANERS. RINSING WTH DEMINERALISED WATER. DRYING.	DEGREASING WITH 00695 SILICONE REMOVER SLOW. DRYING. SANDING OR DISCO CLEANING. FURTHER DEGREASING. DRYING.
BLACK HOT ROLLED STEEL SHEET WITH CALAMINE (HIGH THICKNESS)		DEGREASING WITH 00695 SILICONE REMOVER SLOW. SANDBLASTING TO WHITE METAL. BLOWING.
PRE-COATED STEEL SHEET (ELECTROPHORETIC DEPOSITION)		DEGREASING WITH 00695 SILICONE REMOVER SLOW. LIGHT SANDING OR RUBBING DOWN . FURTHER DEGREASING. DRYING.
ELECTRO GALVANIZED STEEL SHEET		DEGREASING WITH 00695 SILICONE REMOVER SLOW. DRYING.
HOT GALVANIZED STEEL SHEET		DEGREASING WITH 00695 SILICONE REMOVER SLOW. DRYING. LIGHT SANDING OR RUBBING DOWN . FURTHER DEGREASING. DRYING.
INOXYDABLE STEEL		DEGREASING WITH 00695 SILICONE REMOVER SLOW. DRYING. SANDING OR DISCO CLEANING OR LIGHT RUBBING DOWN FURTHER DEGREASING. DRYING.

SUBSTRATE	ESSENTIAL PREPARATION	MAXIMUM LEVEL PREPARATION
LIGHT ALLOYS	DEGREASING WITH 00695 SILICONE REMOVER SLOW. DRYING. LIGHT RUBBING DOWN WITH RED SCOTCH BRITE. FURTHER DEGREASING. DRYING.	1) DEGREASING WITH 00695 SILICONE REMOVER SLOW NON METALLIC AND CALIBRATED SANDING. BLOWING. 2) TREATMENT OF CHEMICAL CONVERSION. NOT FIXED ANODISATION OR CHROMATING OR PHOSPHO-CHROMATING.
PRFV		SANDING. DEGREASING WITH 00695 SILICONE REMOVER SLOW. DRYING.
SOLVENT RESISTANT OLD PAINTINGS		DEGREASING WITH 00695 SILICONE REMOVER SLOW. DRYING. LIGHT SANDING OR RUBBING DOWN WITH U.F. SCOTCH BRITE . FURTHER DEGREASING. DRYING.

29088 TB LECHSYS MIX BASE

Among LECHSYS base colours there is also a binder whose function is to replace some high opacity colours of the coloured basecoats (f.i. grey, beige and brown colours). The function of 29088 TB LECHSYS MIX BASE is therefore to replace the coloured basecoats by keeping the same ratio between BINDERS and BASE COLOURS and by reducing at the same time the final product costs.

Sometimes the cost of 29088 is higher than some binders' cost, therefore it is economically convenient to replace it with the BINDER with no modification of the product's characteristics.

WHEN IT IS ECONOMICALLY CONVENIENT REPLACE 29088 TB LECHSYS MIX BASE WITH THE RELEVANT BINDER.

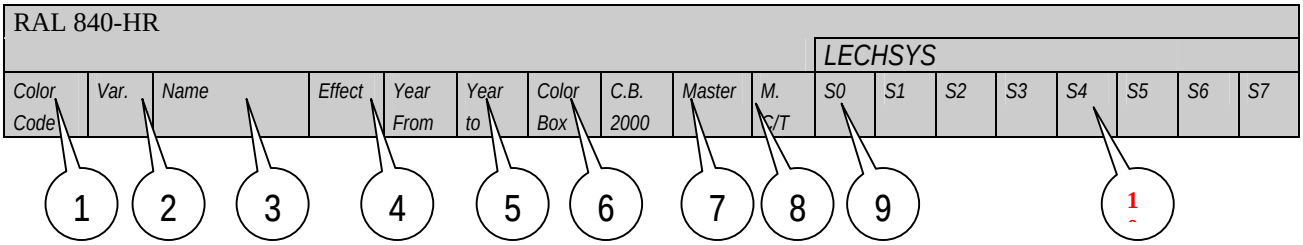
CODE	NAME
29112	SYNTOLACK OP
29114	SYNTOLACK RAP.
29116	SYNTOLACK
29119	MONOSYNT
29141	ISOLACK PUR
29145	ISOLACK PUR OP
29180	NITRON
29182	NITRON OPACO

INTRODUCTION AND PRESENTATION OF "COLOR INDEX"

It is the leading indicator which contains a series of information for the search of the colours available in the System. Here below please find the subdivision and the explanation of the various items of "Color Index".

MANUFACTURE – It contains all updated Car Manufacture's colours presented in the CD.

THE COLOR INDEX CONTAINS THE FOLLOWING INFORMATION



← **CODE** – All colours are classified according to the original Car Manufacturer or according to the Standard Rule (RAL, NCS, etc.). When there is no code the colours are arranged according to colour groups or according to alphabetical order.

↑ **VARIANTS** – Type of variant, in order after the base formulations. The variants can be as follows:

C LIGHTER	G YELLOWER	D MOST WIDESPREAD COLOUR
I DEEPER	B BLUER	E FORMULA WITH ECOLOGICAL BASECOATS
S DIRTIER	R REDDER	F FINER GRAIN (FOR METALLIC COLOURS)
P CLEANER	V GREENER	M COARSER GRAIN (FOR METALLIC COLOURS)

→ **NAME** – Colour name in the original tongue of the manufacturer country or of the standard rule.

↓ **EFFECT** – It identifies the effect of the colour in question; MET. (metallic), MICA (mica or pearlescent), MATT (matt or semi-matt).

° **YEAR FROM/YEAR TO** – Starting and end production year. It helps identify especially those colours having with the same code different tones and different production periods.

± **COLOR BOX** – Colour number (f.i.: GR 1563): it allows to identify the reference colour chip in the NEW COLOR BOX.

″ **COLOR BOX 2000** – The symbol **4** means that the reference colour chip is available in COLOR BOX 2000.

≥ **MASTER** – The number followed by a letter in MASTER column shows the position of the colour reference on MASTER BOX catalogue.

× **M.C/T** – The symbol **7** means that the reference colour chip is available in MASTER CAR/TRUCK.

∝ **SERIES** – The symbol **7** in correspondence of the Series shows the availability of the formulation for the binders following here below.

S0	29111	SYNTOLACK METAL	S2	29155	ACRITOP	S3	29112	SYNTOLACK MATT	S3	29173	EPOTOP 1K MATT
	29131	TECNOGRIP METAL		29156	ACRYL 2K EFB		29114	SYNTOLACK RAPID	S4	29100	FAST PRIMER
S2	29139	SOFT		29157	ACRYL 1K		29116	SYNTOLACK		29102	EPOBUILD PRIMER 2K
	29140	ISOLACK HIGH		29158	ACRYL 1K MATT		29117	SYNTOLACK PENN		29107	EPOXYPRIMER
	29142	ISOLACK MATT		29159	ACRYL 2K TEXTUR		29118	SYNTOLACK PENN MATT		29170	EPODUR
	29143	ACRYL 2K		29195	ACRITOP UHS		29119	MONOSYNT		29172	EPODUR MATT
	29144	ISOLACK		29299	ISOLACK EFB HIGH		29120	STOVE 120° C	S5	29176	EPODUR EFB
	29146	ISOLACK EFB	S3	29101	SYNTOPRIMER ZINC		29122	STOVE 120° C MATT		29179	EPOXYLACK EFFEKT
	29147	ISOLACK PENN		29103	SYNTOPRIMER		29125	ISORUBBER	S6	29180	NITRON
	29148	ISOLACK PENN MATT		29104	ISOFILLER		29130	TECNOGRIP		29182	NITRON MATT
	29149	ISOLACK TEXTUR		29105	HI-BUILD FILLER		29132	TECNOGRIP GLOSS		29184	NITRON HIGH
	29152	ACRYL 2K OPACO		29106	ISOSEALER B/B		29141	ISOLACK PUR MATT		29186	NITRON HAMMER
	29153	ACRYL 2K MATT 7gloss		29108	EPOPRIMER 1K		29145	ISOLACK PUR		29190	BASE COAT
	29153	ACRYL 2K MATT 7gloss		29109	ACRIPUR PRIMER		29150	ISOLACK 1K	S7	29185	NITRON 2K
	29154	ISOLACK HS		29110	SINTOLACK HIGH		29171	EPOTOP 1K			

All codes, indications, colour names in this catalogue and the relevant formulations on CD-ROM refer to Car Manufacturers indications, to Standard rule or they are the products of our experience.

We still decline all responsibility for any possible errors.

However, we suggest that you choose the formula after checking the colour reference on our samples and then, after preparing the colour, to spray it catalysed and to compare it dry with the car under optimum light conditions.

MANUFACTURER NAMES TRANSLATIONS

ITALIAN	ENGLISH	FRENCH	SPANISH	GERMAN
AGRICOLE ED OPERATRICI	*AGRICULTURAL AND OPERATING MACHINES*	*MACHINES AGRICOLES ET D'EXPLOITATION*	*MACHINARA AGRICOLA*	*LAND MASCHINEN*
DIVERSE	*VARIOUS*	*DIVERSES*	*VARIOS*	*VERSCHIEDENE*
F.S. FERROVIE DELLO STATO	*RAILWAY*	*CHEMIN DE FER*	*FERROCARRILES NACIONALES*	*STAATSBAHN ITALIEN*
METALLIC COLOURS	*METALLIC COLOURS*	*COULEURS MÉTALLIQUES*	*COLOR METALICO*	*METALLISCHE FARBEN*
PETROLIFERE	*OIL COMPANY COATINGS*	*TEINTES PÉTROLIÈRES*	*PETROLERAS*	*ERDÖL-GESELLSCHAFTEN*
SERVIZI PUBBLICI	*PUBLIC SERVICES*	*SERVICES PUBLIQUES*	*SERVICIOS*	*OFFENTLICHE VERKEHRSMITTEL*
SOCIETARIE	*CORPORATE COATINGS*	*TEINTES DES SOCIÉTES*	*SOCIEDADES*	*GESELLSCHAFTEN*
SOTTOTINTE	*UNDERCOATS*	*SOUS-COUCHES*	*FONDOS*	*UNTERGRÜNDE*
TINTE BASE	*BASE COATS*	*TEINTES DE BASE*	*TINTA BASE*	*BASISFARBEN*
TINTE DI CARTELLA	*LECHLER SAMPLES*	*LECHLER ÉCHANTILLONS*	*LECHLER CARTA DE COLORES*	*LECHLER MUSTERFARBEN*

LECHSYS PRODUCTS IN AIRLESS SPRAYING

29109 ACRIPUR PRIMER

29107 EPOXYPRIMER

29195 ACRITOP ULTRA HS

LECHSYS PRODUCTS IN AIRMIX /AIRLESS SPRAYING

29140 ISOLACK HIGH

29141 ISOLACK PUR MATT

29142 ISOLACK MATT

29144 ISOLACK

29145 ISOLACK PUR MATT

29154 ISOLACK HS

29155 ACRITOP

29195 ACRITOP ULTRA HS

LECHSYS PRODUCTS IN ELECTROSTATIC SPRAYING

29107 EPOXYPRIMER

29109 ACRIPUR PRIMER

29112 SYNTOLACK MATT + 09826 ADDITIVO ANTISTATICO

29116 SYNTOLACK + 09826 ADDITIVO ANTISTATICO

29130 TECNOGRIP

29131 TECNOGRIP METAL

29140 ISOLACK HIGH + 09826 ADDITIVO ANTISTATICO

29141 ISOLACK PUR MATT + 09826 ADDITIVO ANTISTATICO

29142 ISOLACK MATT + 09826 ADDITIVO ANTISTATICO

29144 ISOLACK + 09826 ADDITIVO ANTISTATICO

29145 ISOLACK PUR + 09826 ADDITIVO ANTISTATICO

29154 ISOLACK HS + 09826 ADDITIVO ANTISTATICO

29155 ACRITOP + 09826 ADDITIVO ANTISTATICO

New Zealand Importer

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