

# ISO 90 GLOSSY

## Series 0410

Glossy polyurethane top coat for single stage



### TECHNICAL FEATURES

2k, glossy enamel based on hydroxylated polyester resins and isocyanates, characterized by high gloss, body effect, mechanical and exterior resistance and ease of application. The product is characterized also by high surface hardness and scratch resistance.

### APPLICATION FIELD

Polyurethane glossy enamel ideal as glossy final coat for ACE sector (i.e. agricultural and earthmoving machinery and machines for handling and lifting), for small means of transport such as van and minibuses, special fittings for industrial bodywork, light and heavy carpentry, industrial machinery where high gloss, good flow and remarkable resistance to UV rays are required.

## GENERAL INFORMATION

**System:** Two pack - 2K

**Nature:** Solvent-based

**Packages:** 1 kg - 4 kg - 20 kg

**Tinting Service:** Tinting service with solvent-based colorants Series 0615

**Color fans and color cards:** Ral 841 GL, Ral Design, Ncs 1950, ColoradoMix 1040, Colorado Box 2.0

## SUBSTRATE PREPARATION

As this is a finishing product, in case of outdoor application or where anticorrosive protection is required, it is necessary to first apply a suitable primer. The preparation of the substrate must be carried out with reference to what is indicated in the specific technical data sheet of the appropriate primer. In order to investigate and select the ideal coating system, it is advisable to consult the technical assistance service or the commercial support in order to obtain the precise indication of the suitable primers to be used according to the type of product and the support to be painted. Finally, it is essential to respect the overcoating times of the primer.

## APPLICATION

### Application conditions

The application of the coating product is subject to various factors such as environmental conditions (among which it is necessary to mention temperature, humidity and ventilation), geometry and laboriousness of the products to be painted, surface profiles and thicknesses to be applied. The application system to be used is of particular importance as, depending on the type of system, various parameters may vary including the transfer efficiency of the coating product, the overspray, the aesthetic appearance obtained, the sagging stability of the product and the ease or complexity of application. For these reasons, prior to applications on systems and lines of considerable scope, it is advisable to contact the technical assistance service in order to carry out the inspection and the necessary surveys for a consultancy activity relating to the application methods and the definition of ad hoc technical details on the plant in question.

| EQUIPMENT          | VISCOSITY                           | NOOZLE       | PRESSURE     | NOTES                                                                                                    |
|--------------------|-------------------------------------|--------------|--------------|----------------------------------------------------------------------------------------------------------|
| AIRBRUSH - CUP GUN | 20" - 30" Ford Cup 4                | 1,4 - 1,7 mm | 3,5 - 4 bar  | -                                                                                                        |
| AIRMIX             | Depending on application parameters | 11 - 13      | 60 - 100 bar | -                                                                                                        |
| ROLLER AND BRUSH   | -                                   | -            | -            | Catalysis at 25% with HS Plus 420 Hardener Series 1392 - Dilution at 5% max with Pur Thinner Series 0988 |
| ELECTROSTATIC      | -                                   | -            | -            | Contact technical assistance to decide the suitable antistatic additive                                  |

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### CATALYSIS

| SERIES | HARDENER                              | CATALYSIS                                 | USE                                                                | POT LIFE AT 20°C | PACKAGE              |
|--------|---------------------------------------|-------------------------------------------|--------------------------------------------------------------------|------------------|----------------------|
| 0929   | PUR ALIPHATIC HARDENER                | 50% by weight (100 + 50)                  | Non yellowing for outdoor use                                      | 3 hours          | 0,5 kg - 2 kg - 5 kg |
| 0941   | AROMATIC PUR HARDENER                 | 50% by weight (100 + 50)                  | For indoor use                                                     | 3 hours          | 0,5 kg - 2 kg - 5 kg |
| 0935   | PUR MIXED AROMATIC/ALIPHATIC HARDENER | 50% by weight (100 + 50)                  | For indoor and outdoor use                                         | 3 hours          | 0,5 kg - 2 kg - 5 kg |
| 1383   | STANDARD HS HARDENER                  | 50% by weight (100 + 50)                  | Slow, non yellowing for outdoor use                                | 3 hours          | 0,5 l - 1 l - 5 kg   |
| 1392   | HS PLUS 420 HARDENER                  | 25% by weight (100 + 25) or 4:1 by volume | Uhs, for catalysis by volume and for roller and brush applications | 3 hours          | 1 l - 2,5 l          |

### ENVIRONMENTAL CONDITIONS



ENVIRONMENT  
TEMPERATURE

5°C - 35°C



SUBSTRATE  
TEMPERATURE

5°C - 35°C



RELATIVE  
HUMIDITY

60 %



SHELF LIFE

Store 2 years in original sealed packaging at +5/+35°C.

### TECHNICAL DATA



| THEORETICAL<br>AVERAGE<br>SPREADING RATE                                     | APPLICATION             | DILUTION                                 | GLOSS         | WET FILM<br>THICKNESS<br>EACH COAT | DRY FILM<br>THICKNESS<br>EACH COAT | N° OF COATS                                               | TOTAL DRY FILM<br>THICKNESS | THEORETICAL<br>AVERAGE<br>CONSUMPTION |
|------------------------------------------------------------------------------|-------------------------|------------------------------------------|---------------|------------------------------------|------------------------------------|-----------------------------------------------------------|-----------------------------|---------------------------------------|
| 10,5 m <sup>2</sup> /kg<br>each coat at the<br>dry film thickness<br>of 40 μ | Spray, Roller,<br>Brush | 5-10% with PUR<br>Thinner Series<br>0988 | 88 - 98 gloss | 84 μ                               | 40 μ                               | 1 or 2 coats to<br>achieve the total<br>desired thickness | 70 μ                        | 95 g/m <sup>2</sup>                   |

### DRYING



| OVERCOATING<br>INTERVAL                               | AIR DRYING | DUST-FREE<br>DRYING | DRY TO TOUCH | DRY THROUGH   | FULL CURE | FLASH OFF                 | STOVING DRYING               | RESISTANCE TO<br>TEMPERATURE                     |
|-------------------------------------------------------|------------|---------------------|--------------|---------------|-----------|---------------------------|------------------------------|--------------------------------------------------|
| 4 - 96 hours<br>(after it is<br>necessary to<br>sand) | 20°C       | 20 - 30 minutes     | 1 - 2 hours  | 24 - 36 hours | 14 days   | 5 - 10 minutes at<br>20°C | 30 minutes at<br>50°C - 60°C | 80°C short<br>temperature leap<br>at 100°C-120°C |

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### WARNINGS AND RECOMMENDATIONS

- As this is a finishing product, it has no anticorrosive properties, therefore in case of outdoor application or where anticorrosive protection is required, it is necessary to apply a suitable anticorrosive primer.
- The use of nitro thinners for the application of polyurethane coating systems can create pitting phenomena on the surface of the dried film. Furthermore, the presence of partially reactive solvents can give rise to undesired reactions, reducing the aesthetic and mechanical features of the system. The choice of unsuitable regenerated thinners can create problems of color change, product sedimentation and less effectiveness in reducing viscosity.
- The product is limitedly resistant to solvents generally intended as temporary contact and limited in time.
- The color match is evaluated after the application and drying of the product. It is recommended to carry out practical tests, such as spreading or applying the colored product on small surfaces made of suitable material, before proceeding with the product painting.
- After having colored the product with the suitable colorants, mix it in a short time.
- In order not to incur financial penalties, after having colored a product with tinting machine, send the MSDS and apply the appropriate legal labelling printable using the Databook P&C tinting software.
- For slightly matt colored products (yellow, orange, red) it is recommended to use a suitable white primer.
- Shelf Life Component B: the shelf life of the hardener used with Component A is 12 months.
- The use of the Pur Aliphatic Hardener Series 0929, for products for outdoor use, grants better color and gloss retention.
- For indoor use and if chemical resistance is requested, the use of the Aromatic Pur Hardener Series 0941 is recommended.
- For indoor and outdoor application, it is possible to use the Pur Mixed Aromatic/Aliphatic Hardener Series 0935 with catalysis ratio by weight at 50% (100+50). White colors and shades derivated from white, if exposed to the outside, can yellow over time. The product catalyzed with 0935 is out of touch after 2-3 hours.
- For large surfaces the Standard HS Hardener Series 1383 with catalysis ratio by weight at 50% (100 + 50) is suggested. The product catalyzed with 1383 is out of touch after 5-6 hour and dry in depth after 36-48 hours.
- For roller applications (short hair), it is recommended to use the HS Plus 420 Hardener Series 1392 with a catalysis ratio by weight at 25% (100 + 25) and with Unithinner Pur Slow Series 1507. The product catalyzed with 1392 is out of touch after 5-6 hours, and dry in depth after 36-48 hours.
- The product can be applied by roller and brush only on small areas and parts of the product to be coated, for maintenance purposes and in case of moderate needs and expectations in relation to the the final aesthetic finish.
- If the product is catalysed with HS PLUS 420 HARDENER Series 1392
  - for the shades realized from the binder, catalyse at 25% by weight (100 + 25) and 4:1 by volume
  - for the white color and all colors realized from white, catalyse at 25% by weight (100 + 25) and 3:1 by volume

### SUPPLY TECHNICAL DATA

**Composition:** Hydroxy polyester

**Reference color:** White

**% solid content by weight:** 68 ± 2%

**% solid content by volume:** 56 ± 2%

**VOC:** 385 ± 2 g/l

**VOS:** 31 ± 2%

| PARAMETER       | DATA                                       | TEST METHOD |
|-----------------|--------------------------------------------|-------------|
| VISCOSITY       | 1000 - 2000 mPa.s (20°C)<br>Rod 3 Speed 20 | ISCOL 1     |
| GLOSS           | 88 - 98 gloss 60°                          | ISCOL 6     |
| SPECIFIC WEIGHT | 1 - 1.5 g/ml                               | ISCOL 2     |



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### MIXING RATIO A+B

|                                                                   | METHOD        | 0929     | 0941     | 0935     | 1383     | 1392                                    | 1392                                                   |
|-------------------------------------------------------------------|---------------|----------|----------|----------|----------|-----------------------------------------|--------------------------------------------------------|
| <b>Specific weight after catalysis (A+B):</b><br>1.22 ± 0,05 g/ml | A+B BY WEIGHT | 100 + 50 | 100 + 50 | 100 + 50 | 100 + 50 | 100 + 25                                | 100 + 25                                               |
| % solid content by weight (A+B): 57 ± 2%                          | A+B BY VOLUME | 100 + 75 | 100 + 70 | 100 + 75 | 100 + 70 | 4:1                                     | 3:1                                                    |
| % solid content by volume (A+B): 47 ± 2%                          |               |          |          |          |          |                                         |                                                        |
| VOC (A+B): 478 ± 2 g/l                                            |               |          |          |          |          |                                         |                                                        |
| VOS (A+B): 42 ± 2%                                                |               |          |          |          |          | For the shades realized from the binder | For the white color and all colors realized from white |

### TINTING SERVICE

| BASE       | BASE PACKAGING             | COLORED PACKAGING     | % MIXING RATIO |
|------------|----------------------------|-----------------------|----------------|
| BINDER     | 0,65 kg<br>2,6 kg<br>13 kg | 1 kg<br>4 kg<br>20 kg | 65 - 35        |
| WHITE BASE | 0,95 kg<br>3,8 kg<br>19 kg | 1 kg<br>4 kg<br>20 kg | 95 - 5         |

### NOTES

**Cleaning tools:** At the end of the application, carefully wash the spray guns, the painting systems and the containers with a suitable thinner and store the tools dry to avoid encrustations.

**Sanitary labelling:** Handle the product with care. Make reference to the MSDS and respect the national and local regulations in force concerning personal and environmental safety.

**Additional notes:**

- The data reported in this data sheet have been obtained using only Franchi&Kim production materials (coatings, hardeners, thinners) applied in accordance with the specifications described. The improper use of thinners and/or hardeners, other than those mentioned or not manufactured by Franchi&Kim, can compromise application features, performances and final curing of the product. Therefore, in case of mixed coating systems with Franchi&Kim and other brand products, the conformity of the results with the parameters indicated in the technical data sheet cannot be granted.
- All times indicated in the drying section are to be intended at the temperature of 20°C, unless otherwise specified.
- The data relating to section mixing ratio A+B are to be considered referring only to the first recommended catalyst.
- The spreading rates are theoretical, indicative and intended per coat as they can be influenced by the color and the application system. Practical application test is suggested.
- Pot Life times have been defined at the temperature of 20°C, therefore higher or lower temperatures, hardeners, environmental conditions and humidity different from the standard can influence in defect or in excess the duration of the Pot Life.

The information contained in this technical document is correct and accurate to the best of our knowledge, and should therefore be considered reliable. In any case, they cannot imply a guarantee on our part, as certain factors such as the preparation of the product and the substrate, the conditions of use, application, drying and overcoating, as well as the state of conservation of the products, are outside our strict control. It is responsibility of the user to verify the suitability of the products for the specific use, as well as the correct and precise execution of the work in accordance with the content of the technical data sheet, the recommended coating system and preparation of the support. For further information regarding the method of application and conditions of use, it is recommended to contact our technical support service. It should be noted that the packaging image could have a placeholder purpose and could therefore be an indicative reference. The packages indicated may vary according to the additions or changes of the annual price lists. This document replaces all previous versions. In any case, it is advisable to refer to the annexes with the explanatory notes to better understand and deepen the parameters of the technical data sheet. The updated edition, available on the website [www.franchi-kim.com](http://www.franchi-kim.com) in the section technical data sheets of the download area is to be considered the only ones to consult as reference.

ESTALIA Performance Coatings Spa

Via Giacomo Matteotti, 160 - 25014 Castenedolo - Brescia - Italia - Tel. +39 030 21 35 55 - Fax +39 030 27 31 664 - [www.franchi-kim.com](http://www.franchi-kim.com) - [www.estaliacoatings.com](http://www.estaliacoatings.com)