ISOFLEX

Series 0411

Glossy, polyurethane enamel for industrial use

TECHNICAL FEATURES

2K, glossy, industrial, polyurethane enamel based on hydroxylated alkyd resins characterized by good filling power, fast drying and high gloss. The enamel is suitable for applications on products intended for interior use.

APPLICATION FIELD

Industrial polyurethane enamel ideal for industrial machinery, machine tools, carpentry structural works and metal structures where high gloss, body effect and fast drying are required.

GENERAL INFORMATION

System: *Two pack - 2K*
Nature: *Solvent-based*
Packages: *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	25'' - 45'' Ford Cup 4	1,4 - 1,7 mm	3,5 - 4 bar	-
AIRMIX	Depending on application parameters	9 - 11	60 - 100 bar	-
ELECTROSTATIC	-	-	-	Contact technical assistance to decide the suitable antistatic additive

CATALYSIS

SERIES	HARDENER	CATALYSIS	USE	POT LIFE AT 20°C	PACKAGE
0941	AROMATIC PUR HARDENER	50% by weight (100 + 50)	For interior use	3 hours	0,5 kg - 2 kg - 5 kg
0935	PUR MIXED AROMATIC/ALIPHATIC HARDENER	50% by weight (100 + 50)	For interior and exterior use	4 hours	0,5 kg - 2 kg - 5 kg
1392	HS PLUS 420 HARDENER	20% by weight (100 + 20) or 4:1 by volume	HS, slow for exterior use	3 hours	1 l - 2,5 l

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ENVIRONMENTAL CONDITIONS

ENVIRONMENT TEMPERATURE	SUBSTRATE TEMPERATURE	RELATIVE HUMIDITY	SHELF LIFE
5°C - 35°C	5°C - 35°C	60 %	Store 2 years in original sealed packaging at +5/+35°C.

TECHNICAL DATA

THEORETICAL AVERAGE SPREADING RATE	APPLICATION	DILUTION	GLOSS	WET FILM THICKNESS EACH COAT	DRY FILM THICKNESS EACH COAT	N° OF COATS	TOTAL DRY FILM THICKNESS	THEORETICAL AVERAGE CONSUMPTION
10,2 m²/kg each coat at the dry film thickness of 40 µ	Spray	5-10% with PUR Thinner Series 0988	88 - 98 gloss	90 µ	40 µ	1 or 2 coats to achieve the total desired thickness	70 µ	98 g/m²

DRYING

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

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 product is limitedly resistant to solvents generally intended as temporary contact and limited in time.*
- *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 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.*
- *For indoor use, the catalysis with Aromatic Pur Hardener Series 0941 is suggested. For internal/external uses it is possible to use the Pur Mixed Aromatic/Aliphatic Hardener Series 0935 with a catalysis ratio by weight of 50% (100+ 50). In this case, white colors and shade derived from white, if exposed outdoors, can yellow and flake over time.*

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SUPPLY TECHNICAL DATA

Composition: *Modified polyurethane*
Reference color: *White*
% solid content by weight: *62 ± 2%*
% solid content by volume: *52 ± 2%*
VOC: *429 ± 2 g/l*
VOS: *38 ± 2%*

PARAMETER	DATA	TEST METHOD
VISCOSITY	1000 - 2000 mPa.s (20°C) Rod 4 Speed 20	ISCOL 1
GLOSS	88 - 98 gloss 60°	ISCOL 6
SPECIFIC WEIGHT	1.1 - 1.3 g/ml	ISCOL 2

MIXING RATIO A+B

Specific weight after catalysis (A+B): *1.09 ± 0,05 g/ml*
% solid content by weight (A+B): *54 ± 2%*
% solid content by volume (A+B): *44 ± 2%*
VOC (A+B): *497 ± 2 g/l*
VOS (A+B): *46 ± 2%*

METHOD	0941	0935	1392
A+B BY WEIGHT	100 + 50	100 + 50	100 + 20
A+B BY VOLUME	100 + 55	100 + 60	4:1

TINTING SERVICE

BASE	BASE PACKAGING	COLORED PACKAGING	% MIXING RATIO
BINDER	3 kg 15 kg	4 kg 20 kg	75 - 25

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, different from those suggested 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.*
- *The times related to pot life and drying intervals refer to a standard temperature of 20°C, except when it is expressly indicated.*
- *The data relating to section mixing ratio A+B are to be considered refering 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.*

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