

POXYTOOLS DTM

Series 0440

DTM, high building, epoxy enamel for machine tools and aggressive atmospheres



TECHNICAL FEATURES

Semi-glossy, epoxy-polyamide-amine final coat with high thickness and surface tolerant characteristics, based on zinc phosphates. Direct to metal particularly suitable for applications where good resistance to mineral oils, water and aliphatic hydrocarbons is required. Since it can be used as a single product, the production cycle is speeded up. Compared to the classic 2K epoxy systems, it can be applied up to a temperature of +5°C. If used as a primer, it can be covered with the standard 2K epoxy, acrylic and polyurethane systems.

APPLICATION FIELD

Epoxy enamel direct to metal ideal as final coat for iron, light alloys or galvanized iron where good chemical and mechanical resistance are required. Particularly suitable for chemical plants, pumps, industrial plants, and heavy carpentry. The product is ideal for machine tools thanks to its chemical resistance to hydraulic oils.

Classified according to EC Regulation 2004/42/EC - Dlg 161/06 -Cat. j-BS) two-pack performance coatings. EC LIMIT VALUE 500 g/l (2010) - CONTENT 382 g/l

GENERAL INFORMATION

System: Two pack - 2K

Nature: Solvent-based

Packages: 20 kg

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

Suitable Substrates: Iron, Cast iron, Galvanized surfaces, Light alloys, Aluminum, Cement, Prepainted surfaces - coil, Sandblasted Iron - Sandblasting Sa 1-2, Sandblasted Iron - Sandblasting Sa 2,5-3, Hot-dip galvanization

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

SUBSTRATE PREPARATION

The surface pre-treatment process, to be carried out prior to the application of the coating product, is of considerable importance in order to obtain and guarantee optimal and long-lasting results and performance over time. The substrate must be perfectly clean, dry, degreased and free from rust and/or calamine. It is also advisable to make sure that the substrate is free from particles and other paints that are not perfectly adherent or incompatible with the coating of paint that will be applied. For the purpose of a correct and complete preparation, it is recommended to consult, where necessary, the explanatory notes attached to the technical data sheet, the painting manual and the technical assistance service of the Research & Development Laboratory. The explanatory notes, specifically, depending on the type of surface and the result to be obtained, indicate different pre-treatment methods such as degreasing, manual and mechanical cleaning using special equipment, mechanical preparations (scraping, sanding, tapping, brushing), light or accurate sandblasting, shot blasting, shot peening and wet sandblasting (or hydro sandblasting).

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 - 1,8 mm	3,5 - 4 bar	-
AIRLESS	F&K technical assistance	F&K technical assistance	F&K technical assistance	F&K technical assistance
AIRMIX	Depending on application parameters	13 - 15	60 - 100 bar	-

POXYTOOLS DTM Series 0440

CATALYSIS

SERIES	HARDENER	CATALYSIS	USE	POT LIFE AT 20°C	PACKAGE
1640	HARDENER FOR POXYTOOLS DTM	20% by weight (100 + 20)	For surface tolerant paints	4 hours	4 kg

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
AVERAGE
SPREADING RATE

2,8 m²/kg
each coat at the
dry film thickness
of 150 µ



APPLICATION

Spray



DILUTION

Ready to be
used; max 5%
with Epoxy
Thinner
Series 0981



GLOSS

60 - 70 gloss



WET FILM
THICKNESS
EACH COAT

236 µ



DRY FILM
THICKNESS
EACH COAT

150 µ



N° OF COATS

1 or 2 coats to
achieve the total
desired thickness



TOTAL DRY FILM
THICKNESS

200 µ



THEORETICAL
AVERAGE
CONSUMPTION

357 g/m²

DRYING



OVERCOATING
INTERVAL

4 - 36 hours



AIR DRYING

20°C



DUST-FREE
DRYING

50 - 90 minutes



DRY TO TOUCH

2 - 3 hours



DRY THROUGH

36 - 48 hours



FULL CURE

28 days



FLASH OFF

-



STOVING DRYING

-



RESISTANCE TO
TEMPERATURE

80°C

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Series 0440

WARNINGS AND RECOMMENDATIONS

- If exposed to UV rays it tends to chalk and yellow, without losing its essential characteristics.
- The product can be applied directly, without the aid of a primer, only in the presence of not extremely shiny and new galvanized steel.
- The system has limited resistance to aromatic solvents or strong solvents (ketones) and to highly acidic or alkali materials. Thanks to the anticorrosive nature of the product, it can be used in systems with 2K acrylic, polyurethane and epoxy finishes.
- It is advisable to wait 8-10 days before the dried film comes into contact with oils.
- Being a Direct To Metal product, it does not require prior application with a suitable primer.
- The degree of gloss can be influenced by the chosen color and the thickness applied. Unlike glossy final coat, resistance to scratching and polishing is lower.
- 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.
- 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 DTM, one coat, low opacity colored products (yellow, orange, red), to check the shade, apply two coats of 100 μ w.f.t. of the product.
- Shelf Life Component B: the shelf life of the hardener used with Component A is 24 months.
- Do not apply the product at temperatures below 5°C; it is important that the product and the surface to be treated are within this temperature limit.
- For the best dispersion of the colorants Series 0615 and maximum color accuracy, it is mandatory to mix the product (Binder/or White Base) with Cowles disperser after adding the colorants.
- 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 final aesthetic finish.

SUPPLY TECHNICAL DATA

Composition: Epoxy
Reference color: White
% solid content by weight: 81.5 $\pm$ 2%
% solid content by volume: 67 $\pm$ 2%
VOC: 286 $\pm$ 2 g/l
VOS: 17.5 $\pm$ 2%

PARAMETER	DATA	TEST METHOD
VISCOSITY	7000 - 8000 mPa.s (20°C) Rod 4 Speed 20	ISCOL 1
SPECIFIC WEIGHT	1.5 - 1.6 g/ml	ISCOL 2
GLOSS	60 - 70 gloss 60°	ISCOL 6

MIXING RATIO A+B

Specific weight after catalysis (A+B): 1.47 $\pm$ 0,05 g/ml
% solid content by weight (A+B): 74 $\pm$ 2%
% solid content by volume (A+B): 63 $\pm$ 2%
VOC (A+B): 382 $\pm$ 2 g/l
VOS (A+B): 25.2 $\pm$ 2%

METHOD	1640
A+B BY WEIGHT	100 + 20
A+B BY VOLUME	100 + 35

TINTING SERVICE

BASE	BASE PACKAGING	COLORED PACKAGING	% MIXING RATIO
BINDER	16 kg	20 kg	80 - 20

POXYTOOLS DTM Series 0440

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 gloss indicated and tested may change during the application phase because it can be influenced by the following factors: realized color, thickness, number of coats, environmental conditions, thinner and hardener used if different from those established in the technical data sheet.
- 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 in the section technical data sheets of the download area is to be considered the only ones to consult as reference.

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