

H0155R01 – TECHNICAL DATA SHEET NEUTRO FOSFACRIL

REV. NUM. 1 01/11

1. CHEMICAL NATURE

Glossy, anticorrosive , high solid (ALL IN ONE) poly-acrylic enamel.

2. MAIN CHARACTERISTICS

- High Solid technology with low content of solvent (VOC < 420 gr/litre).
- ALL IN ONE. The product is primer-top coat
- Very good overspray recovery .
- Also for high thickness applications, it doesn't present paint dripping
- High glossy (minimum 85 gloss) and very good retention of brilliance during the time also in very aggressive environments (chemical and environmental).
- Very good adherence on metals like galvanized sheet iron and aluminium making a treatment before the painting in order to improve the anchoring (steel wool).
- Excellent brilliance look and hiding power
- Very fast drying and final hardness
- The product provides extremely hard, compact and elastic films .
- Resistant to detergents, oils, greases , alkali and petrol.
- Good resistance to the impacts and abrasions
- Excellent colour retention
- Fantastic resistance to chemical aggressions in industrial environments , water and vapour for extended periods of time.
- The product is suitable to be applied by electrostatic kind applications .

3. KIND OF USE

Every time it is necessary to work with a single coat application (primer-top coat) for the painting of light and heavy metal frame work, industrial body (wagons, chassis, trucks boards) agriculture, building , forest and tools machines , gift and fancy goods, small household appliance, radiators, restoration of rail and tram.

4. SURFACE PREPARATION AND APPLICATION

It is absolutely essential that the support surface be thoroughly cleaned and free of oil and grease. Depending on the condition of the surface a phosphor degreasing or an alkali degreasing treatments can be made (particularly suitable for carbon steel or galvanized sheet iron); in case of very bad metal surface conditions (oxidations or rust) it is always recommended to submit the metal under a process of chemical conversion , pickling (very addressed for aluminium and fusion cast iron) , or mechanical cleaning by sandpapering, steel wool treatment, brushing or sandblasting (anchoring profile from 25 to 50 microns corresponding to grade SA 2,5). When it couldn't be possible to follow one of the above mentioned recommendations , we suggest a manual treatment by the cleaning with degreasing thinner suitable for all the kind of metal surfaces (elimination of working greases or anti-oxidant protective oils).

KIND OF SURFACE TO COVER –IMPURITIES TO ELIMINATE	SURFACE TREATMENT RECOMMENDED
New carbon steel with presence of working greases and/or antioxidant protective oils	Nozzle alkali degreasing with IDRONET or sandblasting grade SA 2,5
Old carbon steel with the presence of calamine, oxidations or compact layers of rust	Apply the rust converter POLITAN, sandpaper, brushing or sandblasting grade SA 2,5
Aluminium	Nozzle phosphor-degreasing IDROPHOS, sandpapering with fine abrasive or steel wool treatment
Fusion cast iron with presence of calamine, oxidations or compact layers of rust	Apply the rust converter POLITAN, sandpaper, brushing or sandblasting grade SA 2,5
Galvanized sheet iron (electrozincing) with light presence of residuals from the zincing process	Nozzle phosphor-degreasing IDROPHOS, sandpapering, steel wool treatment, or very light sandblasting.
Galvanized sheet iron (hot- rolled zincing) with strong presence of residuals from the zincing process	Nozzle alkali degreasing with IDRONET steel wool treatment, or lightly sandblasting
Welding on carbon steel with presence of oxidations	Brushing and application of rust converter POLITAN
Old painting with presence of covering parts during the loss of adherence or bubbles rust.	Lightly sandpapering, steel wool treatment, brushing or sandblasting till the grade SA 2,5

In order to receive most detailed information about the cleaning treatments above described we recommend to look the technical data sheets of every single product listed. When the surface cleaning treatment above mentioned is considered finish, we recommend to never leave the metal uncovered for more than 12h without the application of a temporary protective process or a rustproof coat in order to avoid the formation of oxidations that can damage the quality of the painting products subsequently applied.

5. RUSTPROOF / PRIMERS RECOMMENDED AS PRIMER COAT FOR INDOOR OR OUTDOOR

As described before the product FOSFACRYL, given its technical characteristics, can be directly applied on all kind of metal surface providing a great adherence on the support. No primer is recommended.

6. EQUIPMENTS AND GENERAL RECOMMENDATIONS FOR THE PRODUCT APPLICATIONS

	MIXING RATIO	<p>CATALYSIS: 20% weight – 25% volume HARDENER: PUR HARDENER 60.100 (Cod L0025) THINNER: ACRYLIC THINNER(Cod D0020) POLYURETHANE THINNER DILUTION: 5-10% by spraying with air mix spray gun 5-10% by spraying with airmix spraygun HVLP 5-7% by spraying with membrane pump 0-5% by spraying with air mix pump 0-5 % by spraying with high pressure pump</p>
	INDUCTION TIME	5/10 minutes
	POT LIFE MIXTURE (200 gr a 25 °C)	2/3 h depending on the room temperature
	VISCOSITY OF APPLICATIONS Ford cup 4 at 25°C	<p>20-25 seconds by air mix spray gun 20-25 seconds by air mix spray gun HVLP 30-40 seconds by membrane pump 40-60 seconds by airmix pump 40-60 seconds by high pressure pump</p>
	EQUIPMENT	<p>Air mix spray gun , nozzle 1,4-1,6 mm Airmix HVLP nozzle 1,4-1,6 mm membrane pump nozzle 1,1-1,3 mm Airmix pump 0,23-0,25 mm High pressure pump 0,8-1,0 mm</p>
	PRESSURE	<p>2,5-3,5 bar with airmix spray gun 2,0-2,5 bar (air) and 0,7-1,2 bar (nozzle) with airmix spray gun HVLP 3,0-4,0 bar (air) and 1,0-2,0 bar (material) spraying membrane pump. 2,0-3,0 bar (air) and 100 bar (material) airmix pump 2,0-3,0 bar (air) and 100 bar (material) high pressure pump</p>
	NUMBER OF COATS	<p>1 soft + 1 full, or 2 full within 30 minutes each other depending on the kind of equipment and the method of application used, and on the structure of the object to paint. Maximal interval of over-painting 4-6 hours; over that time it need a sandpaper treatment.</p>
	THICKNESS	<p>Humid Film = 100-120 microns Dry Film = 40-50 microns</p>
	FLASH OFF	10-15 minutes wait, then possible to be over-painted with a second coat
	THEORETICAL YIELD	<p>4-5 m²/Kg (apparent loss 30% included) 200-220 gr/m² (thickness 100 humid microns) 4-5 m²/lt (apparent loss 30% included) 200-220 ml/m² (thickness 100 humid microns)</p>

	AIR DRYING	<p>Out of dust after 15-20 minutes Out of touch after 20 minutes Out of mark after 2 hours Complete hardness after 4 hours</p>
	OVEN DRYING	<p>At 50 °C completely dry after 1 h At 80 °C completely dry after 30 minutes Dry in depth after 2 hours</p>
	EMPLOY CONDITIONS	<p>Room temperature = 12-35 °C Surface temperature = at least 5 °C and surface free of condensate Environment humidity = 50-70% max</p>

APPLICATION

- 1) 1) for electrostatic applications mix with hardener and thin the product in the methods described and add 0,5-2,0% of ADDITIVO ELETTROSTATICO (Cod. C0033- additive for electrostatic)

SURFACE LOOK

- 2) In order to make very light changes to the glossy look of the product, let add our matting universal pasta UNIMATT (Cod. J0001)
- 3) in order to obtain a top coat with texture effect add to the product 7-10% of ADDITIVO TESTURIZZANTE GRANA FINE (Cod. C0058 – fine grain texture additive), or ADDITIVO TESTURIZZANTE GRANA GROSSA (Cod. C0059- texture gross grain)
- 4) in order to make the look of the product semi-glossy or completely matt, add MATT POWDER OK 500 (Cod. C0039)



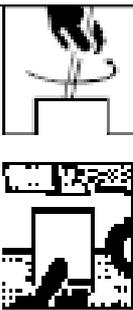
NOTE

AIR DRYING

- 1) in order to quick the drying time of the general system, add 0,5-1,0% of ACCELERANTE PER POLIURETANICI (Cod. G0010- accelerator for polyurethane)

ADDITIONAL INFO

- 1) in order to reduce the final cost of the product, add to the final enamel 5-10 % of UNISOL FILLER (Cod. J0085)



SUGGESTIONS

- 1) stirring with care the pigment pasta and the converter before the use
- 2) carry out the colour comparison with the standard match before the final application (it's better with the product already catalysed)



ADDITIONAL INFO

- 1) strictly follow methods and times of over painting to avoid to incur in phenomenon of removal or wrinkling up of the below layer paint. These problems can happen if the times of painting are not respected.
- 2) Some colours (yellow and red lead free) stretch to bleach if exposed to atmosphere containing chlorides.
- 3) Colours with lead stretch to bleach if exposed to atmosphere containing sulphides.
- 4) Colours with poor hiding power (orange, white, yellow, red) will induce to an high thickness application (sometimes the double than the recommended thickness) provoking drippings, popping, and film matting. In these cases , to face this situation, it's necessary to reach the grade of covering applying many coats
- 5) Suitable to uses of the normative 2004/42/CE - Dlgs 161/06

7. CLEANING OF EQUIPEMENT / POSSIBLE PAINT-STRIPPING

Immediately after the application and till 4-5 hours use DILUENTE NITRO EXTRA (NITRO THINNER) after that equipment or painted handmade need the paint-stripper.

8. STORAGE

The product must be preserved in the original closed can protected from excessive cold and warm conditions. Once the product is thinned, must be used within few days. Information about labels and manipulation are available in the safety data sheet. Liquid or solid contents must be disposed following the local law

9. TECHNICAL DATA

LOOK	Viscous fluid
SPECIFIC GRAVITY (ISO 2811-1:1997)	0.960-0,980 gr/ml
SOLID CONTENT (ISO 3521:1993)	53.25% in weight -56% in volume
VISCOSITY FLOW TIME (ISO 2431:1993)	130-150 seconds cup Ford 4 mm
DYNAMICAL VISCOSITY (ISO 2884:1:1999)	500-700 cPs
V.O.C. (THEORETICAL CALCULATION)	< 420 gr/litre
FILM LOOK	Plate, clean, compact and imperfections free film.
ADHERENCE (ISO 2409:1992)	Gt 0 (direct on carbon steel)
GLOSSY (ISO 2813:1994)	Minimum 85 gloss
SURFACE HARDNESS (ISO 2815:2003)	92 Buchholz
ELASTICITY (ISO 1519:2002)	Distance between breaking point and mandrel extremity 0 mm
IMPACT TEST (ISO 6272-1:2002)	Direct breaking 60 cm (weight 1Kg) – Indirect breaking 90 cm (weight 2Kg)
SALT FOG (ASTM B 117-97)	After 400 h blistering 1 and penetration grade 1 mm
QUV TEST (ISO 4892-1:1999)	after 200 h 10% loss of brilliance
WATER RESISTANCE (ISO 2812-2:1993)	After 300 h no change from the beginning condition
ACIDS RESISTANCE (ISO 2812-1:1993)	After 300 h no change from the beginning condition
ALKALY RESISTANCE (ISO 2812-1:1993)	After 300 h no change from the beginning condition
BAD WEATHER RESISTANCE (ISO 2810:2004)	After 1 year 4% loss of brilliance and 0,7% colour change
LUBRICANT RESISTANCE (ISO 2812-1:1993)	no change from the beginning condition
SOLVENTS RESISTANCE (ISO 2812-1:1993)	Resistant (film matting without remotion)

All tests have been made on a grey colour sample (close to RAL 7001) for direct applications on carbon steel (thickness 10/10) after 7 days of storage at room temperature

Parameters of reference used to determine technical data:

SURFACE HARDNESS	< 60 Buchholz = soft, 60-80 Buchholz = average, > 80-100 Buchholz = hard, > 100 Buchholz = very hard
ELASTICITY	< 1 mm = elastic, 1-3 mm = average, > 3-4 mm = stiff > 5 mm = very stiff
IMPACT TEST	0-40 cm = stiff, 40-80 cm = average, > 80 cm = elastic
SALT FOG (blistering maximal 2 and maximal grade of penetration 2 mm)	0-50 h = poor, 50-150 h = discrete, 150-350 h = average, 350-500 h = good, 500-800 h = perfect, > 800 h = very anticorrosive
QUV TEST (200 h)	0-10% = perfect, 10-20% = good, > 20% = poor
ACIDS RESISTANCE	Sulphuric acid solution 5%
ALKALY RESISTANCE	sodium hydroxide solution 5%
LUBRICANT RESISTANCE	Hydraulic Oil kind OSO 36
BAD WEATHER RESISTANCE	0-5% = perfect, 5-15% = good, > 15% = poor
SOLVENT RESISTANCE	Acetone

All the information mentioned in this document have been written based on the technical knowledge gathed during the years and on laboratory tests. Anyway they can't be used as form of our responsibility or excuse for contestations deriving from the inappropriate employ of the product as the conditions of application can't be under our direct control.