

**H0040R05 – TECHNICAL DATA SHEET RAPIHYDROL
REV. 05 05/17**

CHEMICAL NATURE

1K waterborne fast drying acrylate synthetic enamel.

PRINCIPALI CARATTERISTICHE

- Technology with very low solvent content (VOC < 50 < 60 gr/litre).
- No suits to the uses following Normative 2004/42/CE - Dlgs 161/06
- High glossy look.
- Characteristic for fast and balanced drying since the deeper layers of paints.
- Good resistance to atmospherically agents and to the temperatures changings during the year.
- Appropriate for internal and external use.
- Suitable to be used even as DTM paint.

	0	1	2	3	4	5	6	7	8	9	10
Direct adhesion on pure ABS	█	█	█	█	█	█	█	█	█	█	█
Direct adhesion on iron and cast iron	█	█	█	█	█	█	█	█	█	█	█
Direct adhesion on PC/ABS (Polycarbonate/ABS)	█	█	█	█	█	█	█	█	█	█	█
Direct adhesion on sandpapered PRFV (fibreglass)	█	█	█	█	█	█	█	█	█	█	█
Electrostatic applications (equipments for waterborne paints)	█	█	█	█	█	█	█	█	█	█	█
Distension	█	█	█	█	█	█	█	█	█	█	█
Compactness/Fullness of the film	█	█	█	█	█	█	█	█	█	█	█
Hiding power of iron imperfections	█	█	█	█	█	█	█	█	█	█	█
Recovery of creasing brush/roller	█	█	█	█	█	█	█	█	█	█	█
Recovery overspray	█	█	█	█	█	█	█	█	█	█	█
Verticality (application with no dripping)	█	█	█	█	█	█	█	█	█	█	█
Polymerization reactivity at low temperatures (< 12 °C)	█	█	█	█	█	█	█	█	█	█	█
Polymerization reactivity at medium temperatures (20-25 °C)	█	█	█	█	█	█	█	█	█	█	█
Polymerization reactivity in oven (50-80 °C)	█	█	█	█	█	█	█	█	█	█	█
Resistance to water drops during the starting phases of polymerization.	█	█	█	█	█	█	█	█	█	█	█
Blocking	█	█	█	█	█	█	█	█	█	█	█
Surface hardness	█	█	█	█	█	█	█	█	█	█	█
Elasticity form	█	█	█	█	█	█	█	█	█	█	█
Abrasion resistance	█	█	█	█	█	█	█	█	█	█	█
Resistance to alcohol and detergents	█	█	█	█	█	█	█	█	█	█	█
Corrosion resistance (water, acids, alkali, salt fog, steam)	█	█	█	█	█	█	█	█	█	█	█
Oils and greases resistance	█	█	█	█	█	█	█	█	█	█	█
Hydrocarbons resistance (petrol, kerosene, diesel)	█	█	█	█	█	█	█	█	█	█	█
Bad weather resistance (rain, sun, wind)	█	█	█	█	█	█	█	█	█	█	█
Mechanical collisions resistance	█	█	█	█	█	█	█	█	█	█	█
Humidity resistance	█	█	█	█	█	█	█	█	█	█	█
Impact resistance	█	█	█	█	█	█	█	█	█	█	█
Colour and brilliance retention	█	█	█	█	█	█	█	█	█	█	█
Maintenance/over-coating after long time	█	█	█	█	█	█	█	█	█	█	█

	0	10	20	30	40	50	60	70	80	90	100
Glossy (gloss) angle 60°										█	█

	C2	C3	C4	C5-I	C5-M
Class of corrosion for direct applications on iron (UNI EN ISO 12944-6)	█	█			
	L M H	LM	H LM	H LM	H LM H

KIND OF USE

Painting of bottles, light metal frame works, lamps, tools machines, maintenance of old paints, plastic materials (ABS, mixture of polycarbonate/ABS and fiberglass), small agriculture machines, metal furniture, metal module containers, electrical engines, radiators, spare parts of agriculture machines, cranes.

TECHNICAL INFO

LOOK	Viscous fluid
SPECIFIC WEIGHT (ISO 2811-1:2011)	1,050-1,240 gr/ml (depending on the colour done)
SOLID CONTENT (ISO 3521:1997)	50% in weight
DYNAMIC VISCOSITY (ISO 2884:1:2003)	1750-2250 cPs R2 10 rpm
VOC MIXTURE READY TO USE (Normative 1999/13/CE)	> 50 < 60 gr/litro (depending on the colour done)
FILM LOOK	Film plate, clean, compact and free of imperfections
GLOSSY (ISO 2813:2014)	Minimum 85 gloss (directly on carbon steel)

For all information about technological characteristics, chemical and mechanical resistance, certifications available, we recommend to consult or request to our laboratory the document so called H0059R05 - CERTIFICAZIONI E DATI TECNICI (CERTIFICATIONS AND TECHNICAL DATA)

SURFACE PREPARATION

The main recommended methods to do the best surface preparation before painting, are well described in the guide B01R00 – SURFACE PREPARATION BEFORE PAINT APPLICATION

RUSTPROOFS/PRIMERS RECOMMENDED AS PRIMER COAT FOR EXTERNAL OR INTERNAL

In order to increase the corrosion resistance for surface like galvanized sheet iron or other light alloys or under strong mechanical solicitations or action of chemical/atmospheric agents, we suggest the application of primer coat making the right choice in function of the final destination of the subject to paint

	Carbon Steel	Sandblasted carbon steel	Laminated Aluminium	Cast Iron	Galvanized sheet iron	Old paint	Recommended process for external	Recommended process for internal	Minimal Time of overcoating
HYDROCAR FZ 2K	●	●	●	●	●	●	●	●	4 ore (25 °C)
HYDROFER	●	●	●	●	●	●	●	●	2 ore (25 °C)
HYDROFOND	●	●	●	●	●	●	●	●	2 ore (25 °C)
HYDROPOX	●	●	●	●	●	●	●	●	4 ore (25 °C)
HYDROZINC GENIUS	●	●	●	●	●	●	●	●	60 min (25 °C)

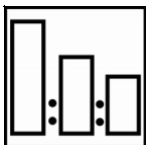
- = VERY SUITABLE
- = EVALUATION CASE BY CASE
- = NOT RECOMMENDABLE

For the painting of no metal surface it is recommended the application of an anchoring primer suitable to the characteristics of the surface to paint before proceed with the application of the top coat RAPIHYDROL. In all the cases, we always suggest to proceed by preliminary tests or get contact with our laboratory

EQUIPMENTS AND GENERAL RECOMMENDATIONS FOR THE PRODUCT APPLICATIONS

DILUTION :

8-10% spraying application with air mix spraygun
 8-10% spraying application with airmix spraygun HVLP
 6-8% spraying with low pressure pump
 2-3% spraying with airless pump
 2-3% spraying with airmix pump
 10-12% by dipping
 6-8% by short-aired brush or roller



MIXING RATIO

PARTICULARLY APPROPRIATE

THINNER : DEMINERALIZED WATER



MIXTURE INDUCTION TIME *Not applicable*



POT LIFE MIXTURE (200 gr at 25 °C) *Not applicable*



	APPARECCHIATURA METODO APPLICAZIONE	DISTANZA DI SPRUZZATURA	PRESSIONE ARIA INGRESSO	PRESSIONE FLUIDO	PRESSIONE ARIA	VOLUME ARIA	VISCOSITA' APPLICAZIONE	DIAMETRO UGELLO	EFFICIENZA TRASFERIMENTO
	MISTO ARIA	18-23 cm	max 5 bar	3-10 bar	4,5 bar	0,15-0,30 m ³	25-35 sec	1,4-1,7 mm	20%-60%
	AEROGRAFO HVLP	10-15 cm	max 2 bar	max 0,7 bar	0,7 bar	0,45-0,90 m ³	25-35 sec	1,4-1,7 mm	65%-90%
	BASSA PRESSIONE	15-20 cm	2,2 bar	2,0-2,5 bar	1,8 bar	0,03-0,12 m ³	40-50 sec	1,3-1,8 mm	30%-50%
	AIRLESS	20-30 cm	-	100-250 bar	-	-	80-120 sec	0,28-0,38 mm	60%-70%
	AIRMIX	10-23 cm	max 8 bar	20-150 bar	0,5-2,5 bar	0,15-0,45 m ³	80-120 sec	0,28-0,38 mm	70%-75%
	IMMERSIONE	-	-	-	-	-	20-30 sec	-	100%
	PENNELLO/RULLO	-	-	-	-	-	30-40 sec	-	90-100%

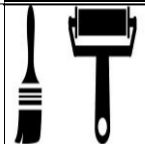


RECOMMENDED NOZZLE FOR APPLICATIONS BY PRESSURE PUMP

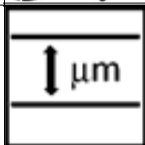
GRACO FFA512/FFA514/PAA515
 KREMLIN 06-114/06-154/09-114/09-154/12-114/12-154
 LARIUS SFC11-40/SFC13-60/SFC15-60
 OPTIMA ON511/ON513/ON515/ON611/ON613/ON615
 TAITEK TTU511/TTU513/TTU515/TTU611/TTU613/TTU615
 WAGNER WGM511/WGM513/WGM515/WGM611/WGM613/WGM615



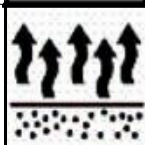
NUMBER OF COATS *1 soft + 1 crossed full, or 2 crossed full*



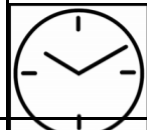

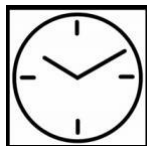
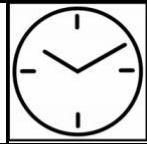


NUMBER OF COATS *1 or 2, depending of the level of covering and the level of final uniforming requested*

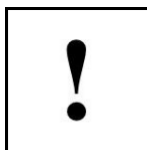


RECOMMENDED FINAL THICKNESS
*Wet film = 80-100 microns
 Dry film = 30-40 microns*



FLASH OFF *10-15 minutes wait, then possible to be over-painted with a second coat*

	TIME OF OVERPAINTING	From a minimal time of 20-30 MINUTES, TILL TO A MAX OF 2H
	THEORETICAL YIELD	9 m ² /lt (thickness 50 microns dry) (apparent loss not included)
	AIR DRYING (20-25 °C)	Fuori polvere dopo 15-20 minuti Fuori tatto dopo 1 ora Fuori impronta dopo 4-6 ore Secco in profondità dopo 3 giorni Dust free 15-20 minutes Touch free after 1 h Mark free after 4-6 h Dry in depth after 3 DAYS
	OVEN DRYING	At 50 °C completely dried after 2h , but not suitable to be packable/pileable A 80 °C completely dried after 1h , but not suitable to be packable/pileable
	EMPLOY CONDITIONS	Room temperature = 12-35 °C Surface temperature = at least 5 °C and surface free of condensate Environment humidity = 50-70% max
	MAINTENCE CHARACTERISTICS	After the complete hardness, before apply the possible second coat, the film need a mechanical preparation (sandpapering, steel-wood papering).



- 1) Some colours (yellow and red lead free) stretch to bleach if exposed to atmosphere containing chlorides;
- 2) Strictly follow ways of times of over painting to don't occur to phenomenon of removal or wrinkling up of the below layer of paint. This can be happened if the next coats are applied over the mentioned intervals;
- 3) suitable to be used following the normative 2004/42/CE - Dlgs 161/06;
- 4) Colours with poor hiding power (orange, white, yellow, red) will induce to a high thickness application (sometimes the double than the recommended thickness) provoking drippings, popping, and film matting. In these cases , to face this situation we suggest to get in contact with our laboratory to receive the most
- 5) the Colorificio Damiani S.p.A. doesn't answer of anomalies or defects caused by the use of hardeners and thinners supplied by other producers or by mixed painting process composed by products not fully supplied by our company;
- 6) the film of paint, after the complete drying, may support a resistance to temperature leaps from -15°C to +110°C. Over these values, the paint is subject to problems of cracking, flacking and colour change;
- 7) in order to increase the over-spraying absorbing and the paint distension in case of wide surfaces, add ADDITAL WET (Cod. C0765) 0,5-2,0%;
- 8) for application on plastic surfaces or fibreglass, proceed by preliminary tests on samples piece of support to evaluate the adherence.

CLEANING OF EQUIPEMENT and TOOLS / POSSIBLE PAINT-STRIPPING

During the working day, it is recommended the washing of spraying equipment and others. The times of washing depend on the numbers of paintings, room temperature and the interruptions done. After the painting , clean immediately with WATER all the equipments and the surfaces recovered. In order to remove the paints to the equipments or to the surfaces, use CLEANER A immediately after or till to 4-5 hours since the paint application. Over that time it is necessary the dipping in to the stripper.

STORAGE

The product must be preserved in the original closed can protected from excessive cold and warm conditions (Temperature from +5°C to 35°C) 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 laws.



• All the information mentioned in this document have been written based on the technical knowledge gathred during the years and on laboratory tests .