CHROMATIC EMBRACE

WATER-BASED PAINTS FOR CONTAINER GLASS

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VIDREA: UNLIMITED SOLUTIONS FOR PAINTING CONTAINER GLASS.

A wealth of experience in the formulation of water-based coating products has led the ICA Group R&D laboratories to create a special range of paints for flat and container glass: **VIDREA GLASS PAINTS**.

The **VIDREA** range of water-based paints for **container glass** offers high performance and both aesthetic and application advantages. They can be used for **standard spraying application, with an electrostatic turbodisc** or with a rotary bell.
This range includes **clear, colored, pigmented and metallic two-component and thermosetting** water-based paints (also without adhesion promoter). There is an unlimited and flexible color range with ample customization options, which also allows screen printing with the most common standard or UV-curing inks.
More than 2,300 colors to choose from on the **ICA, RAL, NCS** and other color charts, all accurately reproduced with the **ICA COLOR** tintometric system, in addition to **specially developed samples** for customers with rapid formulation.

The water-based products for container glass are non-flammable, and can be diluted in water making them simple to prepare and use. They have a minimal volatile organic compound content and zero hazardous carcinogenic or toxic substances, in line with regulations on the limitation of atmospheric solvent emissions.

EVERYTHING IS EASIER WITH VIDREA.

Characteristics & advantages.

- Most of the **VIDREA** paints for container glass were designed to have **products that are safe to use**.
- **They make it possible to meet any production requirement.** The thermosetting paints meet high productivity demand: thanks to their stability and versatility during application they are used on rapid and automated systems. For complete drying, the temperature must be between 160°C and 180°C. On the other hand, two-component paints require the use of a hardener and can therefore be used in all drying conditions.
- Products in the **VIDREA** range for container glass can be applied using all leading systems **for standard spraying application, with an electrostatic turbodisc or with a rotary bell**.
- It is possible to obtain **unlimited colors and special effects** and to create a wide range of colors independently with the **ICA COLOR** tintometric system.
- **Reduced environmental impact.**

HIGHLIGHTS.

THERMOSETTING WATER-BASED PAINTS
Water-based paints for the creation of **transparent or opaque colors** on flat or container glass. They can be colored using the products from the **CNA** and **CG** series and can be pigmented with **PA**-series products. The drying temperature may vary between 140°C and 180°C.

WATER-BASED SAFETY PAINT
GPSAFEPACK is a clear or colored water-based product that can be applied by spraying or curtain-coating and that enables glass and mirrors to be made safe. It forms a thin film that, if the glass or mirror cracks, holds all of the shards in place, thereby preventing dangerous cuts or other accidents. This product, which has been subject to pendulum impact testing as per the EN 12600:2004 standard, is categorized in class 2(B)2. As such, it falls within the safety parameters for single flat panes of glass for use in construction.

BINDERS FOR METALLIC PAINTS
The water-based binders of the **GPW1109T** series, specially developed for the creation of a metallic finish on container glass, enable a very wide range of effects.

GOLD EFFECT
The **GPGOLD24K** water-based paint represents an important evolution in the creation of a **gold effect**. It enables creation of extremely high-sheen surfaces with excellent adhesion on glass.
The container-glass painting cycles with **GPGOLD24K**, protected with ICA transparent products, pass the G1 solution-resistance test and that for standard dishwasher cycles.

WATER-BASED UV PAINT FOR CONTAINER GLASS
ICA has developed a specific, innovative water-based UV product for container glass that can be used as both primer and top coat. It is also available in metallic versions.

HIGHLIGHTS.

VIDREA BIO PAINTS

The revolutionary new range of **BIO products** for container glass has arrived. Two-component water-based paints formulated with renewable raw materials derived from innovative processes for refining "waste" plant substances that are not fit for human consumption. This process is rooted in circular-economy principles. Available in gloss (**GPW3107T99BIO**) and matt (**GPW3107T10BIO**) versions, they offer excellent technical characteristics and are developed with complete respect for the environment and the health of end users.
They have the same hardness, chemical resistance, transparency and industrial workability as the equivalent ICA products of fossil origin.

Watch the **VIDREA BIO** video: **BIO paints for glass**

vidrea bio

EXCELLENT PERFORMANCE.

The **VIDREA paints for container glass** are formulated according to standard tests and clients' specifications for the homeware, perfumery and F&B markets.
Below is a list of some of the tests performed on our products.

CHEMICAL AND PHYSICAL TESTS

OVERALL MIGRATION	MIN. DECREE 21/03/1973; REG. (EC) no. 2023/2006
PB SPECIFIC MIGRATION	MIN. DECREE 21/03/1973; REG. (EC) no. 2023/2006
MECHANICAL DISHWASHING RESISTANCE	UNI EN ISO 12875-1:2005
RESISTANCE TO ALKALIS (NaOH 3% 90 min at 70°C)	Internal method
PERFUME SIMULANT TEST IMMERSION (Maculation test 4h*)	QAC-MC-828 K paragraph 5.5.2. Case no. 1 (Test 2)
RESISTANCE TO G1 SPRAY TEST	INS011
RESISTANCE TO G1 IMMERSION (24h + adhesion)	INS013
RESISTANCE TO G1 IMMERSION (4h at 55°C + adhesion)	INS013
RESISTANCE TO H2O IMMERSION (24h + adhesion)	INS015
RESISTANCE TO H2O IMMERSION (4h at 55°C + adhesion)	INS015
ADHESION	INS008
TRANSPORTATION TEST	Internal method
PASTEURIZATION (30 min at 80°C)	Internal method
TEMPERATURE CHANGES	ASTM C149/2014

**Draft requirements UNI/CT 054/GL 01 (flat glass for exterior construction use)*

TWO-COMPONENT WATER-BASED PAINTS

CODE	CHARACTERISTICS	CAN BE COLORED WITH CNA-SERIES DYES	CAN BE COLORED WITH CG-SERIES DYES	CAN BE COLORED WITH PA-SERIES PASTES	FOOD CONTACT (Italian Ministerial Decree of 21/03/1973; Regulation [EC] no. 2023/2006)	MECHANICAL DISHWASHING RESISTANCE (UNI EN 12875- 1:2005)	L'OREAL TEST	NO DANGER LABEL	PROPOSITION 65 (Safe Drinking Water and Toxic Enforcement Act)
GPW3101T99	Transparent gloss, over 2,300 ready-to-use ICA, RAL, NCS and other formulations	✓	✓	✓	✓	✓	✓	✓	✓
GPW3101B99	WHITE GLOSS, OVER 2,300 READY-TO-USE ICA, RAL, NCS AND OTHER FORMULATIONS	✓	✓	✓	✓	✓	✓	✓	✓
GPW3102B99	Extra-covering white gloss, over 2,300 ready-to-use ICA, RAL, NCS and other formulations	✓	✓	✓	✓	✓	✓	✓	✓
GPW3103T5	Transparent matt	✓	✓	✓	✓	✓	✓	✓	✓
GPW3107T99BIO	BIO gloss	✓	✓	✓	✓	✓	✓	✓	✓
GPW3107T10BIO	BIO matt	✓	✓	✓	✓	✓	✓	✓	✓

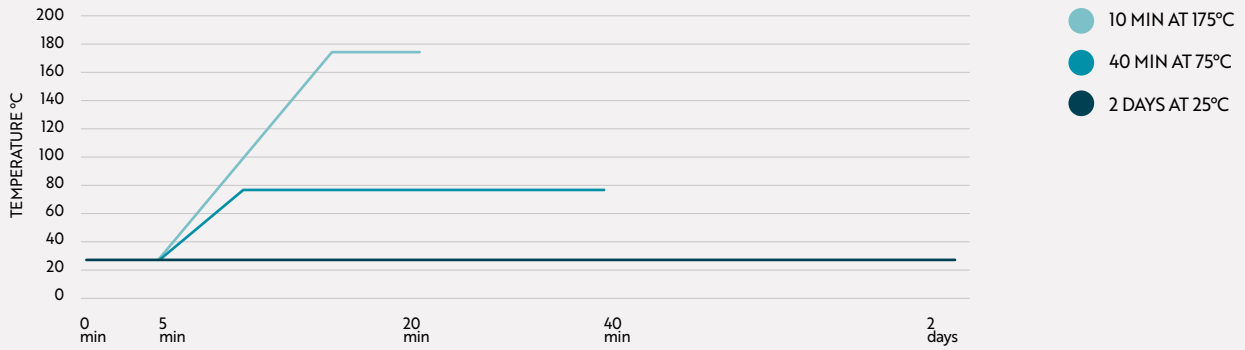
PREPARATION

- Open the can and mix the products until uniform.
- Take the amount needed for use.
- Weigh the CA517 hardener and the AD33 adhesion promoter (2%) as indicated in the Technical Data Sheet.
- Add the hardener and the adhesion promoter slowly using a mechanical stirrer.
- Adjust the viscosity with demineralized water (standard spraying 25–35" DIN4, with turbodisc or rotary bell 15–20" DIN4).

DRYING

VIDREA two-component paints for container glass are suitable for all painting systems. They can be dried at room temperature (2 days), at 80°C (40 min) and at 140°C (20 min).

DRYING EXAMPLES FOR TWO-COMPONENT PAINTS (also applicable for binders for metallic paints)



READY-TO-USE THERMOSETTING WATER-BASED PAINTS
(without adhesion promoter)

CODE	CHARACTERISTICS	CAN BE COLORED WITH CNA-SERIES DYES	CAN BE COLORED WITH CG-SERIES DYES	CAN BE COLORED WITH PA-SERIES PASTES	FOOD CONTACT (Italian Ministerial Decree of 21/03/1973; Regulation [EC] no. 2023/2006)	MECHANICAL DISHWASHING RESISTANCE (UNI EN 12875- 1:2005)	L'OREAL TEST	NO DANGER LABEL	PROPOSITION 65 (Safe Drinking Water and Toxic Enforcement Act)
GPW5101T99	Transparent gloss	✓	✓	✓	✓	✓	✓	✓	✓
GPW5101B99	White gloss	✓	✓	✓	✓	✓	✓	✓	✓
GPW5102T99	Transparent gloss	✓	✓	✓	✓	✓	✓	✓	✓
GPW5101T10	Transparent matt	✓	✓	✓	✓	✓*	✓	✓	✓

*Only available in pigmented version.

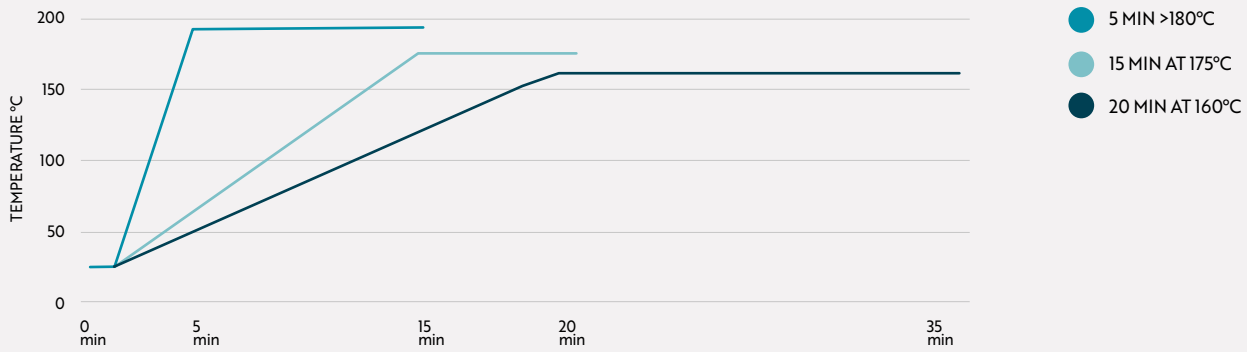
PREPARATION

- Open the can and mix the products until uniform.
- Take the amount needed for use.
- Adjust the viscosity with demineralized water according to the type of application (standard spraying 25–35" DIN4, with turbodisc or rotary bell 15–20" DIN4).

DRYING

VIDREA thermosetting paints for container glass must reach a temperature of at least 160°C. The standard cycle includes a flash-off time of 2–3 minutes at ambient temperature and a temperature ramp from 25°C to 160–180°C, which is maintained for 10–20 minutes.

DRYING EXAMPLES FOR READY-TO-USE THERMOSETTING PAINTS



THERMOSETTING WATER-BASED PAINTS

CODE	CHARACTERISTICS	CAN BE COLORED WITH CNA-SERIES DYES	CAN BE COLORED WITH CG-SERIES DYES	CAN BE COLORED WITH PA-SERIES PASTES	FOOD CONTACT (Italian Ministerial Decree of 21/03/1973; Regulation [EC] no. 2023/2006)	MECHANICAL DISHWASHING RESISTANCE (UNI EN 12875- 1:2005)	L'OREAL TEST	NO DANGER LABEL	PROPOSITION 65 (Safe Drinking Water and Toxic Enforcement Act)
GPW4101T10	Transparent thin etched, over 2,300 ready-to-use ICA, RAL, NCS and other formulations	✓	-	✓	✓	✓*	✓	✓	✓
GPW4102T10	Transparent textured etched, over 2,300 ready-to-use ICA, RAL, NCS and other formulations	✓	-	✓	✓	✓*	✓	✓	✓
GPW4101T99	Transparent gloss	✓	✓	✓	✓	✓	✓	✓	✓
GPW4102T99	Transparent gloss, over 2,300 ready-to-use ICA, RAL, NCS and other formulations	✓	✓	✓	✓	✓	✓	✓	✓
GPW4102B99	White gloss, over 2,300 ready-to-use ICA, RAL, NCS and other formulations	✓	✓	✓	✓	✓	✓	✓	✓

*Only available in pigmented version.

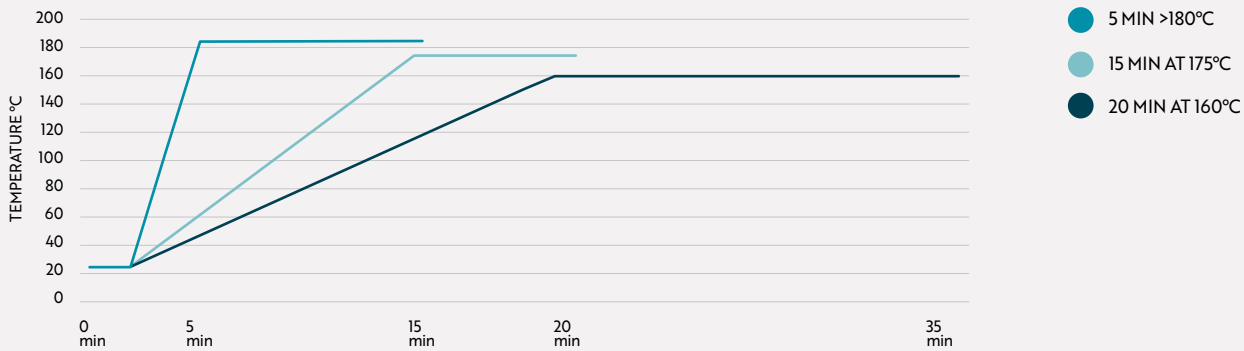
PREPARATION

- Open the can and mix the products until uniform.
- Take the amount needed for use.
- Weigh the AD33 adhesion promoter (2%) as indicated in the Technical Data Sheet.
- Add the adhesion promoter slowly using a mechanical stirrer.
- Adjust the viscosity with demineralized water according to the type of application (standard spraying 25–35" DIN4, with turbodisc or rotary bell 15–20" DIN4).

DRYING

VIDREA thermosetting paints for container glass must reach a temperature of **at least 160°C**. The standard cycle includes a flash-off time of 2–3 minutes at ambient temperature and a temperature ramp from 25°C to 160–180°C, which is maintained for 10–20 minutes.

DRYING EXAMPLES FOR THERMOSETTING PAINTS



THERMOSETTING WATER-BASED PAINTS

CODE	CHARACTERISTICS	CAN BE COLORED WITH CNA-SERIES DYES	CAN BE COLORED WITH CG-SERIES DYES	CAN BE COLORED WITH PA-SERIES PASTES	FOOD CONTACT (Italian Ministerial Decree of 21/03/1973; Regulation [EC] no. 2023/2006)	MECHANICAL DISHWASHING RESISTANCE (UNI EN 12875-1:2005)	L'OREAL TEST	NO DANGER LABEL
GPW6101T10	Transparent matt	✓	✓	✓	✓	✓	✓	✓
GPW6101T99	Transparent gloss	✓	✓	✓	✓	✓	✓	✓
GPW6102T99*	Super-transparent matt, very high chemical resistance	✓	✓	✓	✓	✓	✓	✓
GPW6102T10*	Super-transparent gloss, very high chemical resistance	✓	✓	✓	✓	✓	✓	✓

*Product recommended for high-transparency application with high chemical resistance.

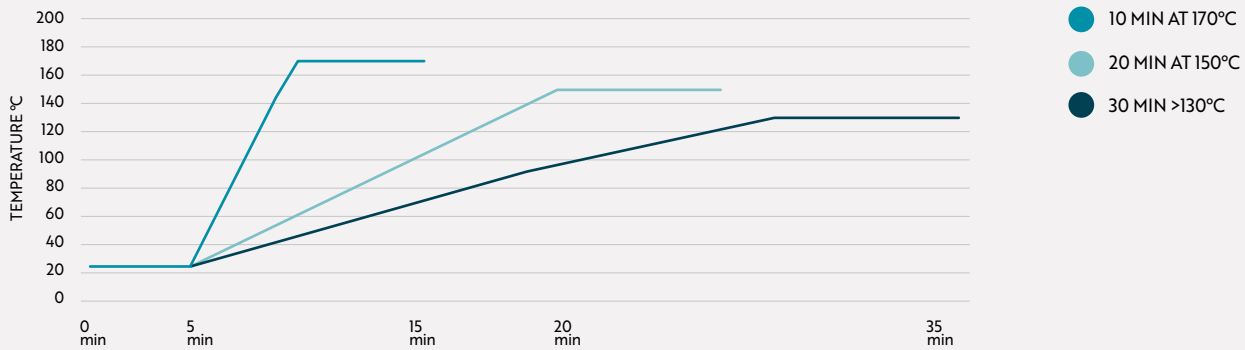
PREPARATION

- Open the can and mix the products until uniform.
- Take the amount needed for use.
- Weigh the AD33 adhesion promoter (2%) as indicated in the Technical Data Sheet.
- Add the adhesion promoter slowly using a mechanical stirrer.
- Adjust the viscosity with demineralized water (standard spraying 25–35" DIN4, with turbodisc or rotary bell 15–20" DIN4).

DRYING

VIDREA thermosetting paints for container glass must reach a temperature of **at least 130°C**. The standard cycle includes a flash-off time of 2–3 minutes at ambient temperature and a temperature ramp from 25°C to 130°C, which is maintained for 20–30 minutes.

DRYING EXAMPLES FOR THERMOSETTING PAINTS



BINDERS FOR METALLIC PAINTS

CODE	CHARACTERISTICS	CAN BE COLORED WITH CNA-SERIES DYES	CAN BE COLORED WITH CG-SERIES DYES	CAN BE COLORED WITH PA-SERIES PASTES	FOOD CONTACT (Italian Ministerial Decree of 21/03/1973; Regulation [EC] no. 2023/2006)	MECHANICAL DISHWASHING RESISTANCE (UNI EN 12875- 1:2005)	L'OREAL TEST	NO DANGER LABEL	PROPOSITION 65 (Safe Drinking Water and Toxic Enforcement Act)
GPW1109T	Binder for water-based metallic paints	-	-	-	✓	✓	✓	✓	✓

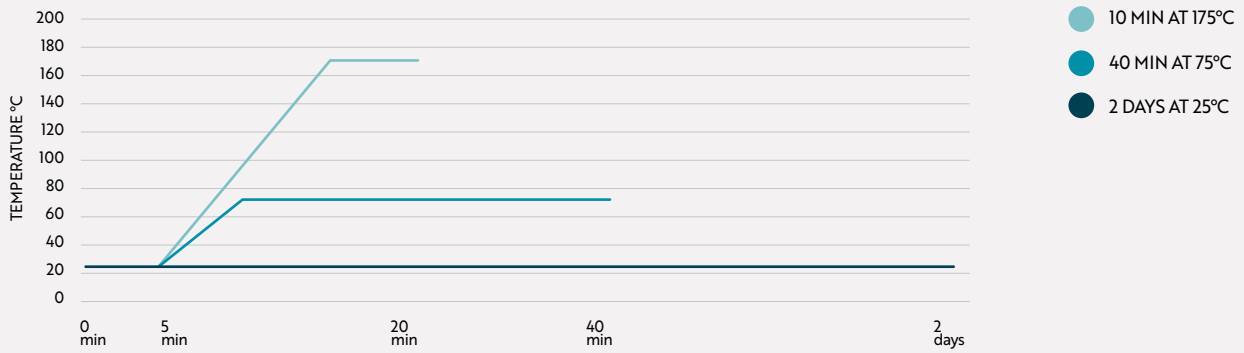
PREPARATION

- Open the can and mix the products until uniform.
- Take the amount needed for use.
- Weigh the AD33 adhesion promoter (2%) as indicated in the Technical Data Sheet.
- Add the adhesion promoter slowly using a mechanical stirrer.
- Adjust the viscosity with demineralized water according to the type of application (standard spraying 25–35" DIN4, with turbodisc or rotary bell 15–20" DIN4).

DRYING

Bases for **VIDREA** metallic paints for container glass are suitable for all painting systems. They can be dried at room temperature (2 days), at 80°C (40 min) and at 160°C (20 min).

DRYING EXAMPLES FOR BINDERS FOR METALLIC PAINTS (also applicable for two-component paints)

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