

# CHALLENGER PRO CLEAR MATT

70P.690

## Description

Two component premium, matt polyurethane acrylic clearcoat, with excellent aesthetic finish and UV stability.

## Use

Matt clearcoat for coating solid colour, metallic or pearl basecoats, as part of a base/clear coating systems or where a matt transparent finish is required. Can be mixed together with Challenger Pro Clear to adjust the gloss levels.

## Informations

Finish	Matt (nearly 20 gloss at 60°)	
Colours	.100 Colourless	
Pack	1l - 2 l	
Solids by Volume	45 ± 2%	ISO 3233-2
Specific Gravity	1.0 g/cm <sup>3</sup>	ISO 2811-1
Flash Point	23 - 55 °C	ISO 3679
VOC	352 g/l	Calculated
Shelf Life	Comp. A 36 months Comp. B 24 months	

## Application

### SURFACE PREPARATION

All surfaces must be perfectly clean, dry and free of oil and contaminants before application of recommended products. Existing paint/materials must be dry, undamaged and compatible. Sanding sequence should be followed to achieve maximum gloss and image distinction. Avoid skipping more than 100µm between sanding grade steps. Start with manual sanding/cornering, followed by mechanical sanding with an orbital sander 2 mm or 3 mm. Recommended roughness after sanding is 5 - 7µm (Rz). Supplied air for surface preparation and cleaning must be dry and clean.

### NEW BUILD & MAINTENANCE

**Challenger Pro 2L or Challenger Pro SE:** follow the recoating intervals indicated at the Boero Technical Specification.

**Challenger Pro Clear/reclear:** Challenger Pro Clear must be cured before sanding: at 20°C, minimum drying time 3 days, recommended 7 days, allow 14 days of curing for maximum DOI performance. Abrade it uniformly with sandpaper grade P320-P400. Testing on a non-critical area should be carried out to test compatibility.

**Wood:** clean, dry and undamaged wood. Abrade it uniformly with sandpaper grade P220-P320. Dilute the first coat to improve the product penetration, if needed. Abrade subsequent coats uniformly with P320-P400, taking care of cleaning the surface before each application. Final coats to be abraded with P400 - P500.

**Polishing:** not suitable for polishing.

## How to Apply

Standard		Brush
Conventional Spray		Pressure 3,5 bar Nozzle 1,3 mm
Pressure pot		Pressure 3,5 bar Nozzle 0,7 - 1,1 mm

# CHALLENGER PRO CLEAR MATT

70P.690

## Film Thickness per Coat

DFT	Recommended: 40 µm Standard application range: 30 - 50 µm
WFT	Recommended: 100 µm Standard application range: 80 - 120 µm

## Additional Application Information

Theoretical spreading rate	Application range at the recommended thickness: 40 µm - 11 m <sup>2</sup> /l
Thinner	15 - 25 °C Thinner PRO 698 (50-70% max) 22 - 35 °C Thinner PRO slow 697 (50-70% max)
Number of Coat Recommended	N°2 wet on wet coverage with intermediate "flash-off"
Hardener	P690.999 HARDENER PRO CLEAR & TOPCOAT
Mixing ratio by volume	3:1
Mixing ratio by weight	75:25
Pot-life at 20 °C	2 h

## Compatibility

### Previous Coat

Challenger PRO SE, Challenger PRO 2L

### Subsequent Coat

N.A.

## Application notes

To achieve a uniform opacity, apply Challenger Pro Clear Matt homogeneously and in a constant thickness. During refit or reapplication, application of the complete system (basecoat and clearcoat) will be necessary. Different opacity degrees can be achieved by mixing Challenger Pro Clear Matt 690.100 with Challenger Pro Clear 690.200. Mixed material must be filtered before application. Typically apply 2 coats wet on wet, to achieve the total recommended thickness and uniform coverage. Contact your local Boero office or representative for further information.

	Mixing by weight	Mixing ratio by volume with 690. 999	Thinning P698 on catalysed	Gloss GU 60°
690.100	100	3:1	50%	20
690.100/690.200	95/5	3:1	50%	30
690.100/690.200	90/10	3:1	50%	50
690.100/690.200	85/15	3:1	50%	55
690.100/690.200	80/20	3:1	50%	65

The high dilution rate allows for uniform application without shading.

The opacity can vary greatly by thickness. To have gloss uniformity it is necessary to apply thickness between 40 and 50 microns.



# CHALLENGER PRO CLEAR MATT

70P.690

## General notes

Prepare the painting by mixing the components in the correct proportions. It is recommended to mix complete kits to avoid a wrong mixing ratio that may reduce the paint designed protection. If less paint is needed, smaller amount may be prepared in a mixing ratio cup. Dilute the mixed product, not the components separately. Thinner type and proportion are related with temperature and relative humidity conditions during application and drying. Different thinner types can be mixed in recommended proportions to achieve the proper viscosity and sprayable properties. Total thickness per coat to be achieved in 2 wet on wet coats.

Contact your local Boero office or representative for further information.

## Drying Time

	10 °C		15 °C		20 °C		30 °C	
	Min	Max	Min	Max	Min	Max	Min	Max
Wet on wet overcoating interval	N.A.	N.A.	30'	180'	20'	120'	15'	60'
Sanding	N.A.	N.A.	78 h	78 h	48 h	48 h	36 h	36 h
Complete curing			7 days	7 days	7 days	7 days	7 days	7 days

N.B. The drying times and the overcoating intervals increase with higher thickness of the applied paint film. Always check the existing paint film is dry before applying any further product coats.

## Conditions during application

During application and curing:

Ambient temperature: minimum 15 °C, maximum 35 °C. Painting at higher temperatures may lead to a poor film formation.

Substrate temperature: minimum 15 °C, maximum 35 °C.

Avoid the formation of condensation, the surface temperature should be at least 3 °C above dew point.

Relative humidity: minimum 35%, maximum 70%.

Painting area should be well ventilated during application and drying/curing.

## Storage

It is recommended to avoid exposure to air and extreme temperatures. To maximize the shelf life in the can, check that the container is closed during the storage and the temperature is between 5 °C and 35 °C.

Avoid exposure to direct sunlight.

## Safety Rules

Comply with the provisions set by the local health and safety at work regulations. Avoid contact with the skin, operate in well-ventilated places and, if in closed areas, use vacuum cleaners, fans and air conveyors. During the application use appropriate PPE - Personal Protections Equipment (masks, gloves, glasses, etc.). Before using, read sections 7-8 of the SDS

### INSTRUCTIONS FOR THE DISPOSAL OF THE BIOCIDAL PRODUCTS AND PACKAGING

Empty packaging containing biocidal products: disposal of empty packaging according to the requirements of the waste disposal law, for example by taking them to the recycling centre. Packages containing the unused biocidal product: Dispose of the product not used in accordance with the law of disposal of such waste, for example by taking it to a recycling centre, recycling of packaging is prohibited in this case. Do not empty into drains or watercourses.

### INSTRUCTIONS FOR THE SAFETY SECURITY OF THE BIOCIDAL PRODUCTS AND PACKAGING

Empty containers and containers still containing the biocidal product: Packaging must be disposed of as hazardous waste under the full responsibility of the holder of such waste. Do not empty into drains or watercourses.

# CHALLENGER PRO CLEAR MATT

70P.690



## Disclaimer

The values indicated in the present technical sheet can have slight variations from one batch to another. The applied product must not come in contact with water, chemicals or subjected to mechanical stress before the curing is complete. The wet film thickness refers to the undiluted product. In case of dilution, this value increases. The above information is the result of accurate laboratory tests and practical experience, however, since the product is predominantly used outside the manufacturer's control, Boero Bartolomeo S.p.A. can only guarantee their quality. The information contained in this sheet may be subject to revision by the Company. For clarification, updates or further information, it is recommended to contact Boero Bartolomeo S.p.A. directly. The present datasheet annuls and replaces every other precedent to this one.