CERAMIC PRO BRAVO

PRODUCT IDENTIFICATION

PRODUCT NAME	Ceramic Pro Bravo
PRODUCT VERSION	V1.0
PRODUCT CODE	4.2H-B
DOCUMENT REVISION	V1.0-R3
ISSUE DATE	2026-09-01
MANUFACTURER	Nanoshine Group Corp.
COUNTRY OF MANUFACTURE	Taiwan (R.O.C.)

PRODUCT DESCRIPTION

TECHNICAL DESCRIPTION	Ceramic Pro Bravo is a permanent, multi-layer nano-ceramic protective coating based on the Ceramic Pro 9H platform and optimized for marine environments. It forms a clear, durable protective layer with enhanced resistance to salt exposure, environmental contaminants, oxidation, corrosion, and UV radiation, while providing hydrophobic properties and surface gloss. Multiple layers may be applied to increase coating thickness and overall protective performance.
PRODUCT CLASS	Layer-Forming Protective Coating / Hydrophobic Surface Treatment
FORMULATION SYSTEM	Solvent-Based
SOLVENT / CARRIER TYPE	Hydrocarbon-Based
COMPONENT CONFIGURATION	Single-Component (1K)
TECHNOLOGY	Nano-Ceramic Coating Technology
SYSTEM ROLE	Stand-Alone Coating / Base Coat
LAYERING TYPE	Single-Layer Coating / Multi-Layer Coating
CURING MODE	Ambient Cure / IR-Assisted Cure
COATING PERMANENCE	Permanent
PRIMARY FUNCTIONS	Chemical Resistance / Environmental Contaminant Protection / Oxidation

Protection / Corrosion Protection / UV Protection / Scratch / Mar Resistance / Stain Resistance / Hydrophobic Performance / Water Repellency / Contaminant Repellency / Self-Cleaning Performance / Reduced Surface Adhesion / Easier Maintenance / Surface Slickness / Gloss Enhancement / Visual Depth Enhancement / Color Enhancement

TYPICAL TECHNICAL PROPERTIES

PROPERTY	VALUE	TEST METHOD / STANDARD
AS SUPPLIED		
Density	0.94-0.96 g/cm³ at 25 °C	ASTM D1475
Viscosity	<5 mPa·s at 20 °C	ASTM D2196
CURED COATING		
Coating Thickness	1 micron	ASTM B487
Water Contact Angle	110°	ASTM D7334
Pencil Hardness	9H	ASTM D3363

APPEARANCE

LIQUID APPEARANCE	Clear, colorless, homogeneous liquid, free from visible particles or sediment
CURED APPEARANCE	Clear and transparent; Gloss

INTENDED USE

INTENDED USE DESCRIPTION	Ceramic Pro Bravo is primarily intended for the protection of above-waterline surfaces on boats, yachts, and other marine vessels, particularly gelcoat and painted surfaces where both environmental resistance and visual appearance are important. It may also be used on other compatible marine-exposed surfaces requiring durable protection against salt, UV exposure, oxidation, corrosion, and environmental contamination while maintaining a clean, high-quality finish.
APPLICATION AREAS	Transportation / Marine / Industrial / Architectural / Infrastructure / Professional Equipment
SUITABLE SUBSTRATES	

Painted & Coated Surfaces	Gelcoat / Clear Coat / Painted Surfaces / Powder-Coated Surfaces / Factory-Applied Coatings / Refinished Surfaces
Metal Surfaces	Bare Metal / Coated Metal / Polished Metal / Brushed Metal
Polymer Surfaces	Plastics / Acrylic / Polycarbonate / Other Polymer Surfaces
Composite Materials	Carbon Fiber / Fiberglass / Other Composite Materials
Protective Films & Flexible Surface Materials	PPF / Vinyl / Other Surface Films
Leather & Leather-Like Materials	Natural Leather / Synthetic Leather
Wood-Based Surfaces	Natural Wood / Finished Wood / Wood-Based Materials
Rubber & Elastomeric Materials	Rubber / Elastomers
SURFACE FINISH COMPATIBILITY & RETENTION	Gloss — Preserved; Satin — Application-Dependent; Matte — Application-Dependent
USE ENVIRONMENT	Interior & Exterior
APPLICATION LEVEL	Professional Use Only

RESTRICTIONS AND LIMITATIONS

SUBSTRATE DEFORMATION LIMITATIONS	Not suitable for substrates subject to significant stretching or repeated elongation.
EXISTING SURFACE TREATMENT LIMITATIONS	Do not apply over existing waxes, sealants, hydrophobic treatments, or protective coatings unless specifically approved.

SURFACE REQUIREMENTS

SURFACE CLEANLINESS	Fully Clean / Free from Oils, Grease, Silicone, Waxes, Polishing Residues, Existing Coatings (unrelated to the current build), and Other Contaminants
SURFACE MOISTURE CONDITION	Fully Dry
SURFACE TEMPERATURE	Recommended range: 10–30 °C
EXISTING COATING / PAINT CONDITION	Fully Cured / Fully Dried and Ready for Service / At the Required Layering Stage

For complete substrate preparation procedures and product-specific preparation steps, refer to the current Installation Manual.

APPLICATION CONDITIONS

APPLICATION METHOD	Applicator Application / Spray Application / Dip Application / Wipe Application
RECOMMENDED AMBIENT TEMPERATURE	25 °C
RECOMMENDED RELATIVE HUMIDITY	50% RH
APPLICATION ENVIRONMENT	Clean, Dust-Free Indoor Area / Clean Controlled Area
RECOMMENDED LAYERS	2+
CONSUMPTION PER LAYER	10-15 ml/m² per layer

APPLICATION & CURING REFERENCE CONDITIONS

The application and curing times stated in this document are provided as reference values based on an ambient temperature of 25 °C, 50% relative humidity, and the typical coating thickness specified in this TDS. Actual timing may vary depending on substrate type and absorbency, application method, applied product quantity, final layer thickness after leveling, environmental conditions, and installer technique. The stated values should therefore be used as a technical reference rather than absolute process limits. During application, coating behavior should be observed and timing adjusted where necessary to achieve the intended result.

APPLICATION TIMING

FLASH TIME	30-60 seconds after application
LEVELING / WIPE-OFF WINDOW	approximately 60 seconds
MINIMUM INTERCOAT INTERVAL	40 minutes
MAXIMUM INTERCOAT INTERVAL	60 minutes

CURING

TACK-FREE TIME	1 hour
WATER CONTACT RESTRICTION	24 hours
RELEASE FOR SERVICE / DELIVERY	24 hours
TIME BEFORE WASHING	7 days

FULL CHEMICAL CURE	7 days

For accelerated or alternative curing procedures (if available), refer to the current Installation Manual.

STORAGE AND SHELF LIFE

STORAGE TEMPERATURE	5–25 °C
STORAGE CONDITIONS	Store in a dry place. Do not freeze, overheat, or expose to direct sunlight.
SHELF LIFE — UNOPENED	2 years in sealed packaging
AFTER OPENING	Use as soon as possible after opening.

PACKAGING

SECONDARY PACKAGING	Rigid Presentation Box
PRIMARY CONTAINER	Glass Bottle
AVAILABLE VOLUMES	50 ml

HEALTH AND SAFETY

GENERAL SAFETY	Chemical product. Handle and use in accordance with the current Safety Data Sheet (SDS) and product label.
SAFETY DATA SHEET	Refer to the current product Safety Data Sheet (SDS) for complete information on hazards, safe handling, personal protective equipment, first aid, storage, disposal, transport, and emergency measures.

TECHNICAL DATA BASIS

The technical data stated in this document are based on internal laboratory testing, third-party testing where applicable, and current technical knowledge of the product.

Unless otherwise specified, all stated values are typical values obtained under controlled test conditions and are provided for technical reference. They should not be interpreted as guaranteed specification limits for every individual production batch.

Actual results may vary depending on substrate type and condition, application method, applied quantity or coating thickness, environmental conditions, curing conditions, and other application-specific factors.

Where a specific test method, standard, substrate, or test condition is relevant to the interpretation of a reported value, it should be stated together with that value.

LEGAL & TECHNICAL DISCLAIMER

The information and recommendations contained in this Technical Data Sheet are based on current product knowledge and the technical data available at the time of publication.

Actual product performance may vary depending on substrate type and condition, surface preparation, application method, environmental conditions, curing conditions, subsequent maintenance, and conditions of use. The product must be applied in accordance with the specified requirements and the current Installation Manual.

Users are responsible for verifying product suitability for the intended substrate and application, particularly where materials, conditions, or uses fall outside those specifically described or validated by the manufacturer.

This Technical Data Sheet does not replace the applicable Safety Data Sheet (SDS). Refer to the current product SDS for complete information regarding hazards, safe handling, personal protective equipment, first aid, storage, disposal, and emergency measures.

For complete surface preparation, application, curing, and installation procedures, refer to the current Ceramic Pro Installation Manual applicable to the product.

Always refer to the most recent published version of this Technical Data Sheet. Product specifications, formulations, recommendations, and supporting documentation may be updated as part of ongoing product development and technical review.

This document does not modify or replace any applicable product warranty terms or other contractual conditions.