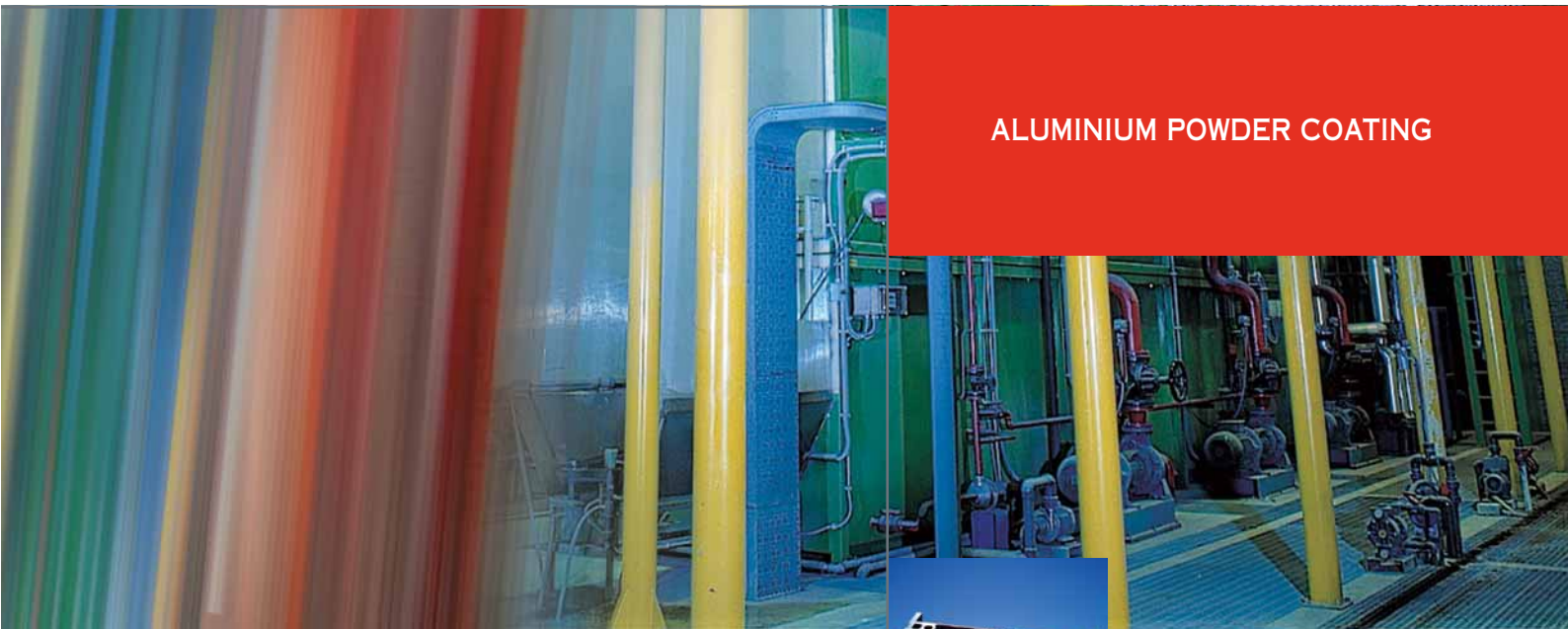
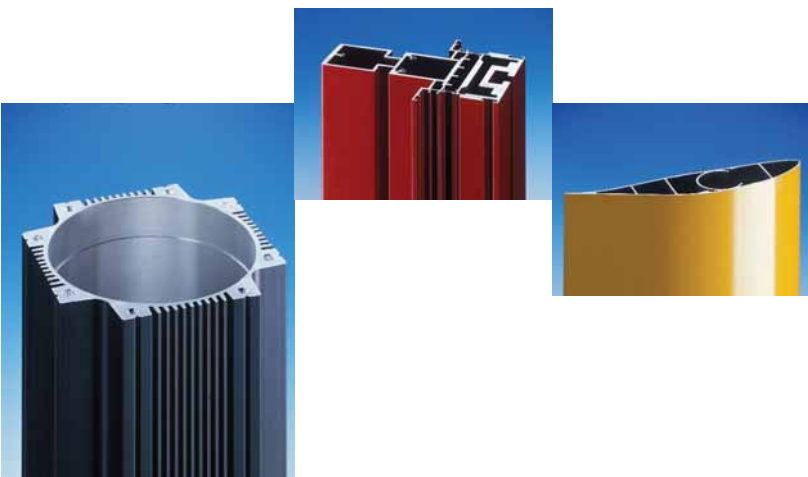




ALUMINIUM POWDER COATING





## **ALUMINIUM AND ITS COLOURS**

### **ALLUMINIO A COLORI**

*PANDOLFO ALLUMINIO IS RENOWNED FOR THE QUALITY OF ITS ALUMINIUM SURFACE TREATMENTS, NOT LEAST BY VIRTUE OF THE COMPANY'S 20 YEARS EXPERIENCE IN POWDER COATING.*

*HAVING ACQUIRED CONSIDERABLE KNOW-HOW IN PROCESS DESIGN AND MANAGEMENT, AND CONTINUOUSLY UPGRADED ITS SYSTEMS, PANDOLFO ALLUMINIO IS ABLE TO OFFER A SURFACE FINISH EQUAL TO EVERY EXPECTATION.*

*THE POWDER-COATING PROCESS IS RUN ON AN ADVANCED AUTOMATED VERTICAL SYSTEM AT THE PANDOLFO ALLUMINIO MANUFACTURING PREMISES IN FELTRE, WHICH OFFERS AN ANNUAL OUTPUT CAPACITY OF 2.7 MILLION SQUARE METRES. ALL STEPS OF THE PROCESS ARE CLOSELY CONTROLLED, GUARANTEEING QUALITY AND REPEATABILITY OF THE FINISH. THE POWDER-COATING PROCESS HAS RECEIVED THE EUROPEAN QUALICOAT CERTIFICATION.*



LA CURA DELLA SUPERFICIE DI ALLUMINIO È UNO DEI PUNTI DI FORZA DI PANDOLFO ALLUMINIO CHE DA PIÙ DI 20 ANNI È ATTIVA NEL SETTORE DELLA VERNICIATURA A POLVERI.

LA LUNGA ESPERIENZA NELLA MESSA A PUNTO DEI PROCESSI E L'AMMODERNAMENTO CONTINUO DEGLI IMPIANTI CONSENTE DI OFFRIRE UNA SUPERFICIE CHE RISPONDE AL MASSIMO DELLE ASPETTATIVE.

IL PROCESSO DI VERNICIATURA VIENE REALIZZATO DA UN AVANZATO IMPIANTO AUTOMATICO DI TIPO VERTICALE DISLOCATO NELLO STABILIMENTO PANDOLFO ALLUMINIO DI FELTRE, CON UNA CAPACITÀ ANNUA DI 2.7 MILIONI DI M<sup>2</sup>. TUTTE LE FASI OPERATIVE SONO GESTITE ACCURATAMENTE DA UN SOFTWARE DEDICATO CHE GARANTISCE QUALITÀ E RIPETIBILITÀ DEI TRATTAMENTI. IL PROCESSO DI VERNICIATURA HA RICEVUTO IL MARCHIO DI QUALITÀ QUALICOAT.

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## PRESENTATION AND SALES INFORMATION

THIS CATALOGUE ILLUSTRATES THE POWDER COATING SERVICE OFFERED BY PANDOLFO ALLUMINIO FOR ALUMINIUM PROFILES, AND ALUMINIUM COMPONENTS IN GENERAL.

### INFORMATION

ALL ENQUIRIES FOR TECHNICAL AND SALES INFORMATION RELATING TO PRODUCTS SHOWN IN THE CATALOGUE SHOULD BE ADDRESSED TO THE SALES DIVISION OF PANDOLFO ALLUMINIO IN ITALY.

### PANDOLFO ALLUMINIO

SALES DEPARTMENT

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**E-MAIL** EXPORT@PANDOLFOALLUMINIO.COM

### ORDERS

ALL ORDERS SHOULD BE FAXED TO THE SALES DEPARTMENT ON THE NUMBER INDICATED, AND MUST SHOW THE FOLLOWING INFORMATION:

- PANDOLFO ALLUMINIO PROFILE CODE  
(ALTERNATIVELY, ATTACH A DRAWING OF THE PROFILE, SHOWING THE SECTION TO BE COATED)
- PANDOLFO ALLUMINIO CODE FOR THE SELECTED COLOUR, AND THE THICKNESS OF THE COATING
- ALLOY, BAR LENGTH AND QUANTITY OF MATERIAL TO BE COATED

**FAX ORDERS TO** +39 049 82 26 030

**PRESENTATION AND SALES INFORMATION**

**SUPPLY CONDITIONS**

MAXIMUM LENGTH OF BARS	7200 MM	
MAXIMUM WEIGHT OF BARS	40 KG	(FOR HEAVIER WEIGHTS, CONTACT THE SALES DEPARTMENT)
DEPTH OF POWDER COATING	60 MICRONS MINIMUM	
FINISHES	GLOSS	GLOSS 71 TO 100 UNITS
	SATIN	GLOSS 31 TO 70 UNITS
	MATT	GLOSS 0 TO 30 UNITS

**QUALITY TESTING**

THE PROTECTIVE FILM PROVIDED BY POWDER COATING UNDERGOES QUALITY CONTROL PROCEDURES IN CONFORMITY WITH QUALICOAT SPECIFICATIONS AND WITH EUROPEAN STANDARDS EN 12206-1.

**GUIDED TOUR OF THE POWDER COATING PROCESS**

PANDOLFO ALLUMINIO TECHNICAL STAFF WILL BE PLEASED TO PROVIDE CUSTOMERS WITH A DEMONSTRATION OF THE FEATURES AND POTENTIAL OFFERED BY THE COMPANY'S POWDER COATING FACILITIES. A VISIT CAN BE ARRANGED SIMPLY BY CONTACTING THE SALES DEPARTMENT.



## BRIEF INTRODUCTION TO POWDER COATING

### **POWDER COATING**

POWDER COATING CONSISTS ESSENTIALLY IN DEPOSITING PIGMENTS AND BINDERS (IN THE FORM OF POWDERS) ONTO THE SURFACE OF ALUMINIUM, WHICH THEN FORM A CLOSE BOND WITH THE SURFACE WHEN SUITABLY DRIED AND OVEN CURED. THIS PRODUCES A UNIFORM AND HOMOGENEOUS PAINT FILM OVER THE SURFACE OF THE METAL, WHICH ON THE ONE HAND PROVIDES OPTIMUM PROTECTION AGAINST CORROSION FROM WEATHERING AND CHEMICAL ATTACK, AND ON THE OTHER AFFORDS A PRACTICALLY LIMITLESS RANGE OF COLOUR OPTIONS AND "SPECIAL EFFECTS". THIS COMBINATION OF ATTRIBUTES HAS MADE POWDER COATING THE PROCESS OF CHOICE IN MANY SECTORS, SUCH AS BUILDING, WHERE STRUCTURAL OR DECORATIVE MEMBERS OFTEN EXPOSED TO THE ELEMENTS ARE REQUIRED TO RETAIN HIGH VISUAL QUALITY.

THE USE OF POWDERS IN PLACE OF LIQUIDS HAS BEEN STANDARD PRACTICE NOW IN THE PAINT INDUSTRY FOR MANY YEARS, GIVEN THE NOTABLE ADVANTAGES OF THE DRY PROCESS: POWDERS ARE IMMEDIATELY READY FOR USE; LOSSES OF MATERIAL DURING THE APPLICATION PROCESS ARE MINIMAL; THE RESULTING PAINT FILM PRESENTS A HIGHER DEGREE OF POLYMERIZATION, AND SO FORTH... THE POWDER COATING PROCESS USED BY PANDOLFO ALLUMINIO IS CERTIFIED BY LEADING MANUFACTURERS OF POWDERS AS BEING APPROPRIATE FOR THE CORRECT AND RELIABLE APPLICATION OF THEIR PRODUCTS.

ESSENTIALLY TWO TYPES OF POWDERS ARE USED: POLYESTER FOR OUTDOOR APPLICATIONS, AND EPOXY-POLYESTER FOR INDOOR.

### **COLOUR**

THE POWDER-COATING PROCESS CAN BE SET UP TO REPRODUCE ALL COLOURS OF STANDARD INTERNATIONAL SCALES (RAL, NCS, ETC.); IN ADDITION, POWDER-COATINGS CAN BE CUSTOMIZED IN A MORE OR LESS INFINITE RANGE OF COLOURING AND SHADING NUANCES. EACH COLOUR IS FINALIZED IN COLLABORATION WITH THE POWDER MANUFACTURER AND IDENTIFIED BY A UNIQUE DESIGNATION CODE; IN THIS WAY, THE PROCESS CAN ALWAYS BE GUARANTEED TO TURN OUT ITEMS WITH A STABLE AND REPEATABLE COLOUR FINISH.



## BRIEF INTRODUCTION TO POWDER COATING

### **BRIGHTNESS**

THE BRIGHTNESS OF THE PAINT FINISH REPRESENTS THE CAPACITY OF THE SURFACE TO REFLECT LIGHT. IN OTHER WORDS, MAKING THE SURFACE “BRIGHT” TO A GREATER OR LESSER DEGREE. DEGREES OF BRIGHTNESS ARE DIVIDED GENERALLY INTO THREE CATEGORIES:

CATEGORY 1 (MATT)	FROM 0 TO 30 UNITS (GLOSS)
CATEGORY 2 (SATIN)	FROM 31 TO 70 UNITS
CATEGORY 3 (GLOSS)	FROM 71 TO 100 UNITS

THE BRIGHTNESS OF THE PAINT IS MEASURED APPLYING STANDARD EN ISO 2813, TO GUARANTEE CONFORMITY WITH CUSTOMER SPECIFICATIONS.

### **FINISHES**

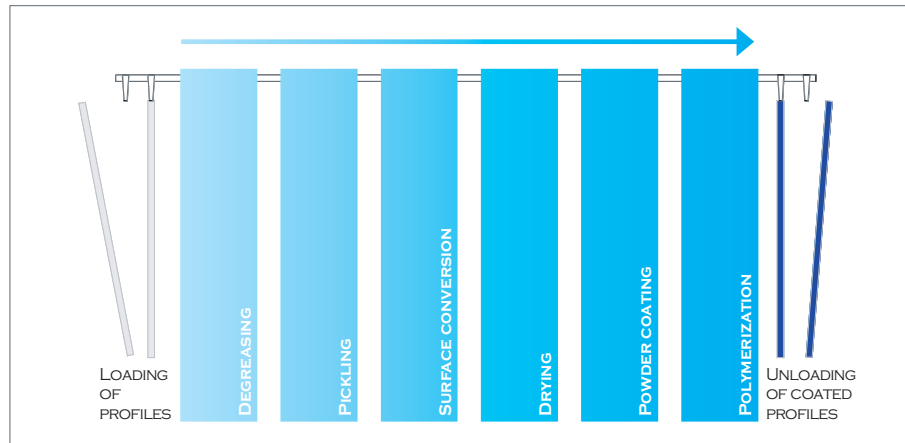
USING POWDERS OF THE APPROPRIATE TYPE, SURFACES CAN BE PRODUCED WITH SPECIAL FINISHES. AMONG THOSE OFFERED IN THE PANDOLFO ALLUMINIO RANGE ARE METALLIC, SABLE AND OTHER SPECIAL EFFECTS.



## BRIEF INTRODUCTION TO POWDER COATING

### THE PROCESS

POWDER COATING IS CARRIED OUT EMPLOYING A PROCESS THAT INCLUDES KEY STEPS PRECEDING AND FOLLOWING THE ACTUAL COATING OPERATION.



EACH OF THESE STEPS IS VERY IMPORTANT IN ENSURING THAT THE COATING WILL BE VISUALLY ACCEPTABLE AND STAY TECHNICALLY RELIABLE OVER TIME. WITH CONTINUOUS MONITORING AND SCHEDULED MAINTENANCE CARRIED OUT ON THE PROCESS BY PANDOLFO ALLUMINIO, THE QUALITY OF THE POWDER COATED PRODUCT IS GUARANTEED.

### DEGREASING

THIS STEP SERVES TO REMOVE THE DIRT AND POLLUTANTS DEPOSITED ON THE SURFACE DURING THE COURSE OF UPSTREAM PROCESSING OPERATIONS, TRANSPORT AND STORAGE. IF RESIDUES ARE NOT REMOVED, THEY CAN NEGATE THE ACTION OF THE SUBSEQUENT PICKLING STEP AND FAVOUR THE EMERGENCE OF DEFECTS AND CORROSION. DEGREASING IN THE PANDOLFO ALLUMINIO PROCESS IS ACCOMPLISHED USING SUITABLE CHEMICAL AGENTS AT A TEMPERATURE OF 50 °C, FOLLOWED BY RINSING.



## BRIEF INTRODUCTION TO POWDER COATING

### PICKLING

THE FUNCTION OF THIS STEP IS TO REMOVE THE OXIDE LAYER THAT FORMS NATURALLY ON THE SURFACE, WHICH IF NOT ELIMINATED CAN PREVENT THE SUBSEQUENT PASSIVATION STEP FROM ACTING HOMOGENEOUSLY ACROSS THE WHOLE OF THE AREA TO BE COATED.

THE CRITERIA FOR QUALICOAT CERTIFICATION SPECIFY THE REMOVAL OF AT LEAST 1 GRAM/M<sup>2</sup> OF ALUMINIUM FROM THE SURFACE IN ORDER TO GUARANTEE ITS COMPLETE DEOXIDATION.

THE METHOD SELECTED BY PANDOLFO ALLUMINIO IS ONE OF USING ACID BATHS SUCH AS WILL PROVIDE FAULTLESS CONTROL OVER THE DEGREE TO WHICH MATERIAL IS REMOVED FROM THE SURFACE, BY REGULATING THE CONCENTRATION OF FLUORIDES.

### SURFACE CONVERSION (PASSIVATION)

THIS IS A PIVOTAL STAGE OF THE PROCESS THAT SERVES TO “CONVERT” A LAYER OF THE SURFACE INTO A COATING SUCH AS WILL GUARANTEE RESISTANCE TO CORROSION, AND AT THE SAME TIME PROVIDE A GOOD KEY TO WHICH THE POWDERS CAN ANCHOR FIRMLY. TO UNDERScore THE IMPORTANCE OF THIS STEP, ONE NEED ONLY MENTION THAT WHEN COATINGS ARE APPLIED TO MATERIALS WHICH HAVE BEEN BOTH DEGREASED AND PASSIVATED, THEIR CORROSION RESISTANCE IN SALT FOG (THE APPROVED TEST FOR VERIFYING THE RESISTANCE OF COATING FILMS – SEE CHAPTER ON CONTROLS) INCREASES FROM 300 TO MORE THAN 1000 HOURS.



## BRIEF INTRODUCTION TO POWDER COATING

### POWDER COATING

ALUMINIUM PROFILES ARE POWDER COATED IN MOST INSTANCES ADOPTING AN ELECTROSTATIC PROCESS WHEREBY THE PARTICLES OF DRY PAINT POWDER ARE CHARGED ELECTROSTATICALLY AND THEN SPRAYED FROM SPECIAL GUNS ONTO THE PROFILES, THESE BEING CONNECTED ELECTRICALLY TO EARTH. THE DIFFERENCE IN ELECTRICAL POTENTIAL CAUSES THE POWDER TO ADHERE UNIFORMLY TO THE SURFACE OF THE PROFILE, EVEN IN CORNERS AND TIGHT SPACES.

AT PANDOLFO ALLUMINIO, POWDER COATING TAKES PLACE IN TWO SPRAY BOOTHS, ONE FOR WHITES, AND ONE FOR ALL COLOURS OTHER THAN WHITE. OPERATING IN EACH BOOTH IS A SPRAY ROBOT EQUIPPED WITH 16 GUNS. A SPECIALLY DESIGNED SYSTEM FOR REPLACING THE WALLS AND CLEANING THE EXTRACTION EQUIPMENT ENSURES THAT CHANGEOVERS FROM ONE COLOUR TO ANOTHER ARE PARTICULARLY SWIFT.

### POLYMERIZATION

AFTER BEING COATED, THE PROFILES ARE TRANSFERRED TO THE CURING OVENS WHERE THEY REMAIN FOR AROUND 30 MINUTES AT AN AVERAGE TEMPERATURE OF 180 °C.

THIS STEP SERVES TO STABILIZE THE BOND BETWEEN THE PAINT MOLECULES AND TO ANCHOR THE PAINT FULLY TO THE SURFACES OF THE PRODUCT.

IT IS PARTICULARLY IMPORTANT THAT A UNIFORM TEMPERATURE BE APPLIED OVER THE ENTIRE PROFILE, AND MONITORED CONTINUOUSLY TO GUARANTEE THE QUALITY OF THE END RESULT.

ON EXITING THE OVENS, THE PROFILES ARE COOLED AND THEN CONVEYED TO THE UNLOADING PLATFORM FOR PACKAGING OR FOR FURTHER PROCESSING.



## BRIEF INTRODUCTION TO POWDER COATING

### CONTROLS

THERE ARE NUMEROUS TYPES OF QUALITY CONTROL SERVING TO VERIFY PARTICULAR CHARACTERISTICS OF THE POWDER COATING; MOREOVER, THESE ARE CONDUCTED IN ACCORDANCE WITH EUROPEAN AND INTERNATIONAL STANDARDS AND CERTIFIED BY RECOGNIZED QUALITY LABELS. THERE ARE SUBSTANTIALLY TWO TYPES OF CONTROL:

**PROCESS CONTROL:** ALL CHARACTERISTICS AND PARAMETERS OF THE COATING PROCESS ARE VERIFIED TO ENSURE THEIR CONSISTENCY IN TERMS OF TECHNOLOGY, PROCEDURE AND INSTRUMENTATION, TO ENSURE THAT THE QUALITY OF THE COATING PRODUCED RESPONDS TO SET STANDARDS.

**PRODUCT CONTROL:** SPECIMENS OF POWDER COATED PRODUCTS UNDERGO LABORATORY TESTS TO VERIFY THE QUALITY, RELIABILITY AND STRENGTH OF THE POWDER COATING.

LISTED BELOW ARE THE MAIN TESTS CONDUCTED AT FACILITIES OPERATED BY THE PANDOLFO ALLUMINIO GROUP, TOGETHER WITH THE PERTINENT REFERENCE STANDARDS.



## BRIEF INTRODUCTION TO POWDER COATING

### **BRIGHTNESS**

BRIGHTNESS IS MEASURED WITH A GLOSSMETER DIRECTING LIGHT AT AN INCIDENT ANGLE OF 60°. THE VALUE MEASURED MUST BE WITH +/- 5 UNITS (GLOSS) OF THE VALUE SPECIFIED FOR CATEGORY 1 (MATT), +/- 7 FOR CATEGORY 2 (SATIN) AND +/- 10 FOR CATEGORY 3 (GLOSS). THE TEST MUST BE CONDUCTED IN ACCORDANCE WITH STANDARD EN ISO 2813.

### **FILM THICKNESS**

THIS IS MEASURED BY THE INDUCED CURRENTS METHOD. THE THICKNESS IS SAMPLED AT A NUMBER OF POINTS (AT LEAST 5) ON A SIGNIFICANT SURFACE. THE AVERAGE MUST BE HIGHER THAN THE SPECIFICATION VALUE AND NO SINGLE POINT MEASURED MUST EVER BE LESS THAN 80% OF THE EXPECTED THICKNESS. THE MINIMUM THICKNESS OF A POWDER COATING FILM IS 60 MICRONS. THE TEST MUST BE CONDUCTED IN ACCORDANCE WITH STANDARD EN ISO 2360.

### **ADHESION**

THIS TEST IS CONDUCTED BY MAKING A NUMBER OF SPACED INCISIONS IN THE COATING, WHEREUPON ADHESIVE TAPE IS APPLIED OVER THE SURFACE AND THEN PULLED OFF AT A STROKE, CHECKING THAT NONE OF THE COATING IS LIFTED BY THE TAPE.

THE TEST MUST BE CONDUCTED IN ACCORDANCE WITH STANDARD EN ISO 2409.

### **IMPRESSION RESISTANCE**

THIS IS GAUGED BY MEASURING THE RESISTANCE OFFERED BY THE PAINT FILM TO PENETRATION BY A SPECIAL TEST TOOL.

THE TEST MUST BE CONDUCTED IN ACCORDANCE WITH STANDARD EN ISO 2815.

## BRIEF INTRODUCTION TO POWDER COATING

### **BENDING RESISTANCE**

A SPECIMEN OF COATED MATERIAL IS FLEXED SO AS TO TEST THE RESPONSE OF THE PAINT FILM TO BENDING STRESS.

IN PRACTICE, THIS MEANS CHECKING THAT THE COATING NEITHER CRACKS NOR LIFTS WHEN THE TEST SPECIMEN IS BENT OVER A SPECIAL MANDREL.

THE TEST MUST BE CONDUCTED IN ACCORDANCE WITH STANDARD EN ISO 1519.

### **MACHU TEST**

THIS IS AN ACCELERATED CORROSION TEST DESIGNED TO TEST THE ADHESION OF A PAINT UNDER DAMP CONDITIONS.

AN INCISION IS MADE IN THE SPECIMEN, WHICH IS THEN IMMERSED FOR 48 HOURS IN A SALINE/ACETIC ACID SOLUTION.

### **ACID SALT SPRAY TEST**

THIS IS AN ACCELERATED TEST SIMULATING EXTREME ATMOSPHERIC CONDITIONS (ACID AND SALT). AN INCISION IS MADE IN A SPECIMEN, AND THE SPECIMEN THEN EXPOSED TO AN ARTIFICIAL ACID SALT FOG FOR 1000 HOURS.

THESE ARE SOME OF THE METHODS MOST COMMONLY USED TO TEST THE QUALITY OF POWDER COATED PRODUCTS. OTHER TYPES OF TESTS ARE CONDUCTED ROUTINELY TO CHECK THE QUALITY PARAMETERS STATED IN THE SUPPLY SPECIFICATION.



## BRIEF INTRODUCTION TO POWDER COATING



### QUALITY LABELS

IN ADDITION TO THE STANDARDS PUBLISHED BY CEN, EUROPEAN MARKETS ALSO OBSERVE THE QUALICOAT SYSTEM, DEvised BY EUROPEAN ASSOCIATIONS OF POWDER COATING ENTERPRISES DURING THE 1980s. THE PURPOSE OF THIS LABEL IS TO ESTABLISH A HIGH LEVEL OF QUALITY FOR POWDER COATINGS APPLIED TO ALUMINIUM COMPONENTS UTILIZED PARTICULARLY IN THE BUILDING SECTOR. QUALICOAT SPECIFICATIONS ARE BASED ON EXACTING AND STRINGENT INTERNATIONAL STANDARDS.

THE LABEL IS GRANTED ONLY FOR PLANTS AND INSTALLATIONS ABLE TO OPERATE IN TOTAL COMPLIANCE WITH THESE STANDARDS.

COMPANIES HOLDING A QUALICOAT LICENCE UNDERGO PERIODIC INSPECTIONS BY INDEPENDENT TESTING AGENCIES.

THE POWDER COATING PLANT INSTALLED AT THE PREMISES OF PANDOLFO ALLUMINIO IS HOLDER OF QUALICOAT LICENCE N° 720.

WITHIN THE SCOPE OF ITS QUALICOAT LICENCE, PANDOLFO ALLUMINIO ALSO HAS CERTIFICATION TO SEASIDE CLASS (MEETING QUALIMARINE SPECIFICATION), CONFIRMING PROCESS CAPABILITY IN RESPECT OF THIS SPECIAL PRETREATMENT UTILIZED ON SURFACES THAT WILL BE EXPOSED TO THE RISK OF FILIFORM CORROSION, TYPICALLY THE CASE WITH ALUMINIUM PROFILES INSTALLED IN PARTICULARLY AGGRESSIVE ENVIRONMENTS SUCH AS COASTAL AND SEAFRONT LOCATIONS.

THIS PARTICULAR APPLICATION IS AVAILABLE ON REQUEST.



## STANDARD COLOURS AND EFFECTS

THE FOLLOWING PAGES ILLUSTRATE THE PROGRAMME OF STANDARD COLOURS AND EFFECTS OFFERED BY PANDOLFO ALLUMINIO. THIS PRESENTATION OF THE COMPANY'S POWDER COATING RANGE IS NOT EXHAUSTIVE, BUT SERVES TO PROVIDE A GENERAL OVERVIEW OF THE MOST POPULAR COLOURS. MANY OTHER COLOUR AND SHADING OPTIONS ARE AVAILABLE ON REQUEST.

	CODE	RAL	DESCRIPTION	BRIGHTNESS	POWDER
<b>WHITES</b>	312	1013	BIANCO PERLA	GLOSS	POLYESTER
	342	1013	BIANCO PERLA	SATIN	POLYESTER
	565	1013	BIANCO PERLA	MATT	POLYESTER
	487	1014	AVORIO	GLOSS	POLYESTER
	343	1015	AVORIO CHIARO	GLOSS	POLYESTER
	341	1019	BEIGE GRIGIO	GLOSS	POLYESTER
	484	9001	BIANCO CREMA	GLOSS	POLYESTER
	311	9001	BIANCO CREMA	SATIN	POLYESTER
	383	9002	BIANCO GRIGIO	GLOSS	POLYESTER
	434	9003	BIANCO SEGNALE	GLOSS	POLYESTER
	301	9010	BIANCO PANDOLFO	GLOSS	POLYESTER
	310	9010	BIANCO	GLOSS	POLYESTER
	459	9010	BIANCO PANDOLFO	SATIN	POLYESTER
	578	9010	BIANCO PANDOLFO	MATT	POLYESTER
	447	9016	BIANCO TRAFFICO	GLOSS	POLYESTER
	460	9016	BIANCO TRAFFICO	SATIN	POLYESTER
	557	9016	BIANCO TRAFFICO	MATT	POLYESTER
	364		BIANCO BOX	GLOSS	EPOXY POLYESTER
	440		BIANCO 21	SATIN	POLYESTER
	494		BIANCO AZZURRATO	SATIN	POLYESTER
	497		BIANCO 210	GLOSS	POLYESTER
	594		BIANCO CAMPER	GLOSS	POLYESTER
	<b>GREYS</b>	306	7001	GRIGIO ARGENTO	GLOSS
595		7001	GRIGIO ARGENTO	MATT	POLYESTER
337		7002	GRIGIO OL.	GLOSS	POLYESTER
553		7004	GRIGIO SEGNALE	GLOSS	POLYESTER
376		7005	GRIGIO TOPO	GLOSS	POLYESTER
453		7010	GRIGIO TENDA	GLOSS	POLYESTER
469		7011	GRIGIO FERRO	GLOSS	POLYESTER
372		7012	GRIGIO BASALTO	GLOSS	POLYESTER
359		7015	GRIGIO ARDESIA	GLOSS	POLYESTER
329		7016	GRIGIO ANTRACITE	SATIN	POLYESTER
483		7016	GRIGIO ANTRACITE	GLOSS	POLYESTER
626		7021	GRIGIO SCURO	MATT	POLYESTER
607		7022	GRIGIO UMBRO	MATT	POLYESTER
338		7023	GRIGIO CALCESTRUZZO	GLOSS	POLYESTER
442		7024	GRIGIO GRAFITE	GLOSS	POLYESTER
585		7024	GRIGIO GRAFITE	MATT	POLYESTER
373		7026	GRIGIO GRANITO	GLOSS	POLYESTER
458		7030	GRIGIO PIETRA	GLOSS	POLYESTER
429		7032	GRIGIO SILICE	GLOSS	POLYESTER
305		7035	GRIGIO LUCE	GLOSS	POLYESTER
414		7036	GRIGIO PLATINO	GLOSS	POLYESTER
438		7037	GRIGIO POLVERE	GLOSS	POLYESTER
629		7037	GRIGIO POLVERE		POLYESTER
377		7038	GRIGIO AGATA	GLOSS	POLYESTER
339		7039	GRIGIO QUARZO	GLOSS	POLYESTER
422		7040	GRIGIO FINESTA	GLOSS	POLYESTER
388		7042	GRIGIO TRAFFICO	GLOSS	POLYESTER
503		7043	GRIGIO TRAFFICO		EPOXY POLYESTER
505		7044	GRIGIO SETA		POLYESTER
634		7045	TELEGRIGIO	MATT	POLYESTER
375			GRIGIO RAGGRINZATO		EPOXY POLYESTER
550			GRIGIO MANGANESE	MATT	EPOXY POLYESTER

## STANDARD COLOURS AND EFFECTS

	CODE	RAL	DESCRIPTION	BRIGHTNESS	POWDER	
<b>BLACKS</b>	327	9005	NERO PROFONDO	GLOSS	POLYESTER	
	399	9005	NERO PROFONDO	SATIN	POLYESTER	
	357	9005	NERO PROFONDO	MATT	POLYESTER	
	454	9005	NERO BUGNATO	SATIN	EPOXY POLYESTER	
<b>YELLOWS</b>	457	1003	GIALLO SEGNALE	GLOSS	POLYESTER	
	307	1004	GIALLO ORO	GLOSS	POLYESTER	
	308	1007	GIALLO CROMO	GLOSS	POLYESTER	
<b>REDS</b>	425	1018	GIALLO ZINCO	GLOSS	POLYESTER	
	413	2001	ROSSO ARANCIO	GLOSS	POLYESTER	
	314	3000	ROSSO FUOCO	GLOSS	POLYESTER	
	316	3003	ROSSO RUBINO	GLOSS	POLYESTER	
	371	3005	ROSSO VINO	GLOSS	POLYESTER	
	317	3009	ROSSO OSSIDO	GLOSS	POLYESTER	
	464	3020	ROSSO SEGNALE	GLOSS	POLYESTER	
<b>BLUES</b>	325	5003	BLU ZAFFIRO	GLOSS	POLYESTER	
	323	5007	BLU BRILLANTE	GLOSS	POLYESTER	
	589	5008	BLU GRIGIO	MATT	POLYESTER	
	324	5010	BLU GENZIANA	GLOSS	POLYESTER	
	379	5012	BLU CHIARO	GLOSS	POLYESTER	
	328	5013	BLU COBALTO	GLOSS	POLYESTER	
	495	5013	BLU COBALTO	MATT	POLYESTER	
	416	5014	BLU COLOMBA	GLOSS	POLYESTER	
	348	5015	BLU CIELO	GLOSS	POLYESTER	
	424	5017	BLU SEGNALE	GLOSS	POLYESTER	
	374	5018	BLU TURCHESE	GLOSS	POLYESTER	
	481	5019	BLU CAPRI	GLOSS	POLYESTER	
	349	5021	BLU ACQUA	GLOSS	POLYESTER	
	392	5024	BLU PASTELLO	MATT	POLYESTER	
	<b>GREENS</b>	418	6000	VERDE PATINA	GLOSS	POLYESTER
302		6002	VERDE FOGLIA	GLOSS	POLYESTER	
303		6005	VERDE MUSCHIO	GLOSS	POLYESTER	
333		6005	VERDE MUSCHIO	SATIN	POLYESTER	
423		6009	VERDE ABETE	GLOSS	POLYESTER	
304		6011	VERDE RESENA	GLOSS	POLYESTER	
331		6012	VERDE SCURO	GLOSS	POLYESTER	
395		6013	VERDE CANNA	GLOSS	POLYESTER	
334		6015	VERDE OLIVA	GLOSS	POLYESTER	
437		6019	VERDE BIANCO	GLOSS	POLYESTER	
552		6028	VERDE PINO	GLOSS	POLYESTER	
405		6029	VERDE MENTA	GLOSS	POLYESTER	
<b>BROWNS</b>		390	8001	MARRONE OCRA	GLOSS	POLYESTER
		486	8003	MARRONE TERRA	GLOSS	POLYESTER
	452	8007	MARRONE CAMOSCIO	GLOSS	POLYESTER	
	318	8011	MARRONE N.	GLOSS	POLYESTER	
	566	8011	MARRONE NOCE	MATT	POLYESTER	
	320	8014	MARRONE SEPPIA	GLOSS	POLYESTER	
	586	8015	MARRONE CASTAGNO	GLOSS	POLYESTER	
	319	8016	MARRONE MOGANO	GLOSS	POLYESTER	
	321	8017	MARRONE CIOCCOLATO		POLYESTER	
	465	8017	MARRONE CIOCCOLATO	SATIN	POLYESTER	
	511	8017	MARRONE CIOCCOLATO	MATT	POLYESTER	
	322	8019	MARRONE GRIGIO	GLOSS	POLYESTER	
	461	8023	MARRONE ARANCIO	GLOSS	POLYESTER	
	394	8025	MARRONE PALL.	GLOSS	POLYESTER	

**STANDARD COLOURS AND EFFECTS**

	<b>CODE</b>	<b>RAL</b>	<b>DESCRIPTION</b>	<b>BRIGHTNESS</b>	<b>POWDER</b>
<b>METALLIC</b>	427	9006	ALLUMINIO METALLIZZATO	GLOSS	POLYESTER
	432	9006	ALLUMINIO METALLIZZATO	MATT	POLYESTER
	579	9006	GRIGIO	GLOSS	POLYESTER
	560	9006	ALLUMINIO	MATT	POLYESTER
	433	9007	ALLUMINIO METALLIZZATO	MATT	POLYESTER
	596	9007	GRIGIO ALLUMINIO	GLOSS	POLYESTER
	655	9007	GRIGIO ALLUMINIO	MATT	POLYESTER
<b>MOIRÉ</b>	443		BIANCO MAREZZATO	MATT	POLYESTER
	360		GRIGIO MAREZZATO	MATT	POLYESTER
	361		VERDE MAREZZATO	MATT	POLYESTER
	363		BORDEAU MAREZZATO	MATT	POLYESTER
	362		MARRON MAREZZATO	MATT	POLYESTER
	428		MARRONE MARMO ANTICO	MATT	POLYESTER
<b>MARBLE</b>	445		BIANCO MARMO ANTICO	MATT	POLYESTER
	439		GRIGIO MARMO ANTICO	MATT	POLYESTER
	444		VERDE MARMO ANTICO	MATT	POLYESTER
<b>SABLE</b>	627		GRIS 150 SABLE'		POLYESTER
	523		GRIS 400 SABLE'		POLYESTER
	540		GRIS 900 SABLE'		POLYESTER
	500		NOIR 100 SABLE'		POLYESTER
	541		NOIR 200 SABLE'		POLYESTER
	601		ROUGE 100 SABLE'		POLYESTER
	507		BLEU 600 SABLE'		POLYESTER
	518		BLEU 700 SABLE'		POLYESTER
	525		VERT 500 SABLE'		POLYESTER
<b>SPECIAL</b>	597		ALLUMINIO BONDABRITE	MATT	POLYESTER
	532		MANGANESE		POLYESTER
	504		MARRON D'INDE		POLYESTER
	531		ACIER		POLYESTER
	508		BALTIC		POLYESTER
	599		BRONZO SCURO BONDABRITE	MATT	POLYESTER
	402		BRONZO SCURO	MATT	POLYESTER
	534		CANON		POLYESTER
	533		CUIVRE		POLYESTER
	513		GALET		POLYESTER
	602		PETROL	MATT	POLYESTER
	646	9007	BRITEBOND	MATT	POLYESTER

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