

**SELAC ANTIGRAFFITI POLYURETHANES FOR OUTDOOR
SERIES : P510 AGP XPRAY**

Glossy - Semiglossy - Metallic and tridimensional effect

DESCRIPTION

Thermosetting powder coatings based on hydroxylated polyester resins crosslinked with aliphatic isocyanates caprolactame-free , exempt from heavy metals and from dangerous substances .
These products can be used for general outdoor purpose and show good corrosion resistance , good colour stability and good gloss retention , as well as good aesthetic properties .
The extremely high crosslinking density of **Selac AGP X-PRAY** results in outstanding chemical resistances against many chemicals agents .
This property avoids the deep penetration of inks and colouring dies and allows an easy removal of any type of graffiti by the simple use of common cleaners and solvents , with no alteration of coated surface .
The application is possible with corona and tribo electrostatic systems (if mentioned)
Formulations having special characteristics according with the specific final use or with particular application conditions can be developed on demand .

GENERAL PROPERTIES

Excellent mechanical properties
Very high surface hardness
Good resistance to ageing in outdoor environments
Good corrosion resistance
Good or very good aesthetic properties

PRODUCT RANGE

P510 AGP XPRAY : special antigraffiti versions

COLOURS AND EFFECTS

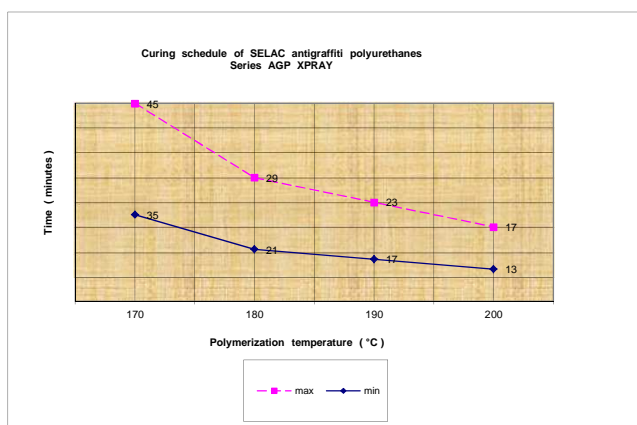
Possibility of a complete colour range
Gloss range from 50 up to 95 gloss
Smooth , fine textured , orange peel finish
Metallic effects possible in dry-blend or bonded versions
Neutral clearcoat
Wide possibility of taylor-made versions on demand

CURING CONDITIONS

Drafts interpretation

To obtain functional , optical and aesthetic properties mentioned in TDS the curing schedule adopted for the products must be in any point of the draft area comprised between the curves of minimum and maximum .

Times always refer to object temperature (PMT) , being the heating time variable from item to item and from plant to plant .



Minimal conditions (PMT)

35' @ 170°C - 21' @ 180°C - 17' @ 190°C - 13' @ 200°C

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SUPPORT PREPARATION

Painting must be done on clean support , free from oil , grease , oxidation , residuals of working , welding and rinsing processes , and any contaminating agent must be avoided
Iron and steel : iron or zinc salts phosphatization
Aluminium : cromatation or chrome-free pretreatment are recommended
Hot dipping galvanized steel : according with the item adopt mechanical treatment , phosphatization or chromatation process .

THICKNESS

Minimal recommended thickness is 60 microns , but in any case the coating layer must completely cover any surface roughness , especially in case of sandblasted supports .
For fine textured products the minimal suggested thickness is 80 micron .
For orange peel products the minimal suggested thickness is 100 micron .

**APPLICATION METHODS
AND RECYCLE**

The application is possible with manual or automatic electrostatic devices , both corona and tribo (if specified) .
Overspray can be recycled in the fresh powder and re-used , but the use of integral recycle is not recommended at all ; do not exceed 25% and maintain a constant feeding of fresh powder .
On metallic products an indicative ratio is 10% , but an unproper management of the recycle may result in remarkable variations of the effect , therefore it must be evaluated in each single case ; please contact arsonsisi s.p.a. and refer to the technical informative note about application of metallic .

TECHNICAL FEATURES

Specific gravity : 1,3 to 1,7 g/cc , according colour and formula
Theoretical yield at 60 micron : 13 to 10 sqm/kg
according colour and formula
Brilliance range at 60° : 50 to 95
Average particle size (laser Malvern) : 32 - 45 micron
X99 particle size (laser Malvern) : 95 - 150 micron
******* NOTE** : **taylor-made particle size distributions
are possible on demand**

**MECHANICAL
PROPERTIES**

Test conditions : trials are made on normalized UNI 5961 panels 0,6 mm thick , degreased with solvent , coated with 70 - 80 micron of powder completely cured .
Mentioned results are obtained under controlled lab conditions ; therefore these values are merely indicative and must be confirmed in the actual use conditions under the responsibility of each single user .

Minimal polymerization conditions (PMT)

Depending on the series (see above drafts)

Thickness : 70 - 80 micron .

Direct impact : min. 30 Nm (ISO 6272)

Erichsen embossing (ISO 1520) : min. 4 mm

Cylindrical mandrel (ISO 1519/73) : pass 3/16" = 5 mm

Adhesion (ISO 2409) : GT 0/1

Buchholz hardness (ISO 2815) : min. 85

Pencil hardness (ASTM D3363) : H - 2H

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CORROSION AND DURABILITY

Test conditions : trials are made on normalized UNI 5961 panels 0,6 mm thick , treated by microcristalline zinc salts phosphatization , or on AA 5005-H24 chromatated aluminium panels , coated with 70 - 80 micron of powder completely cured .

Mentioned results are obtained under controlled lab conditions ; therefore these values are merely indicative and must be confirmed in the actual use conditions under the responsibility of each single user .

Salt spray test (ISO 3768 / ASTM B117)

Support UNI 5961 steel treated by zinc phosphate
After 500 hours rust penetration at the cross-hatch : max. 4 mm

Saline-acetic spray test (ISO 9227)

Support UNI 5961 steel treated by zinc phosphate
After 500 hours rust penetration at the cross-hatch : max. 16 mm

Humidostatic test (ISO 6270)

Support UNI 5961 steel treated by zinc phosphate
After 1000 hours no film variation

Exposure in sulphur dioxide according " Kesternich test " (ISO 3231)

After 24 hours no blistering , no colour variation , no gloss variation

Exterior durability

After 12 months of outdoor exposure the coating film shows moderate variations ; a slight lowering of the brilliance and some slight discoloration are acceptable .

Chemical resistances at room temperature (25+/-3°C)

Generally very good versus diluted acids and diluted alkalis
Excellent resistance versus aliphatic solvents , good versus aromatic
Sufficient versus ketons and alogenated .
The behaviour versus very aggressive or concentrated agents or under different conditions must be verified by the user

IMPORTANT NOTE

Metallic or tridimensional effect products may not grant same performances due to the metallic pigments or to the particular structure

CHEMICAL RESISTANCES

The table shows the results obtained after contact or rubbing with certain chemicals used in the removal of the dirt from the painted surface , or which result particularly aggressive .
The test is performed on plates subjected to complete polymerization .

RESISTANCE TO CHEMICALS	50 double rubs	CONTACT TIME				
		5 min.	10 min.	20 min	1 hour	2 hours
Acetone	2	1	2	3	N.T.	N.T.
MEK	2	1	2	3	N.T.	N.T.
Perchloroethylene	0	0	0	0	N.T.	N.T.
Commercial ethanol	0	0	0	0	N.T.	N.T.
Commercial nitro thinner	0	0	1	2	N.T.	N.T.
Butyl acetate	0	0	1	2	N.T.	N.T.
Commercial graffiti remover	0	0	0	0	N.T.	N.T.
Sodium hydroxide 30%	N.T.	0	0	0	0	0
Chlorhydric acid 5%	N.T.	0	0	0	0	0
Lead-free gasoline	0	0	0	0	1	1
Engine oil	N.T.	0	0	0	0	0
DOT4 brake fluid	N.T.	0	0	0	0	0

LEGENDA N.T. = Not tested 0 = Film unchanged 1 = Surface haze 2 = Surface matting 3 = Film softening

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STORAGE AND STABILITY

Products must be stored in the original sealed packagings , in a cool and dry place and at a temperature not exceeding 30°C .

In these conditions products **SELAC P polyurethanes** are stable for a period of 24 months .

Always consult the specific TDS of each single product or contact arsonsisi s.p.a.

RECOMMENDATIONS

These informations are given on the base of our best experience as well as the one of specialized laboratories and they are continuously updated , nevertheless the user has the complete responsibility to apply and to experiment the products according its own specific necessities .

This document has the intention to describe and summarize the main properties of arsonsisi products , but in no case it can be considered as a warranty for them .

Further informations about application of metallic effects , maintenance of goods coated with homologated polyesters or availability of special versions are mentioned in specific technical integrative notes .