

SELAC INDUSTRIAL POLYESTERS FOR GENERAL USE

SERIES : Y1 Y2 Y3 Y4 Y6 Y7 Y8

Glossy - Semiglossy - Semimatt - Matt - Metallic and tridimensional effect

DESCRIPTION

Thermosetting powder coatings based on carboxylated polyester resins crosslinked with non-toxic hardeners and exempt from any dangerous substances . These formulations are especially designed to optimize the ratio between the cost and the necessity to grant good colour stability , gloss retention and corrosion resistance . Some formulations (particularly in Y1 , Y6 , Y7 and Y8 versions) are especially designed to grant also the highest decorative standards . The application is possible with corona and tribo electrostatic systems . Formulations having special characteristics according with the specific final use or with particular application conditions can be developed on demand .

GENERAL PROPERTIES

Optimized cost / performance ratio
Excellent mechanical properties
Good resistance to ageing in outdoor environments
Good corrosion resistance
Good or very good aesthetic properties

PRODUCT RANGE

Y2 Y3 Y4 : standard formulation for general purposes
Y1 Y6 Y7 Y8 : specific formulation for particular applications

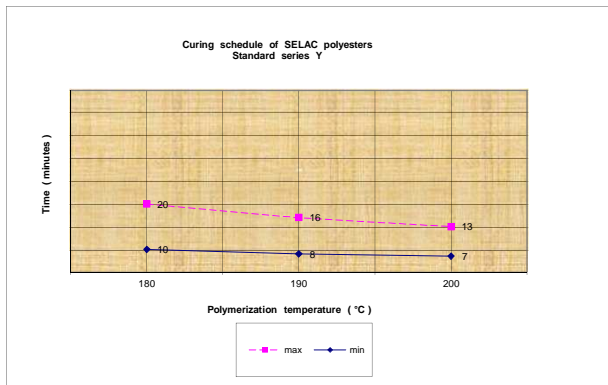
COLOURS AND EFFECTS

Possibility of a complete colour range
Gloss range from 20 up to 95 gloss
Smooth , fine textured , orange peel and arabesque finish
Metallic effects possible in dry-blend or bonded versions
Salt & pepa and mixcolor (Riflexion and Pixelite portfolios are available)
Neutral and shady clearcoats
Range of stock products , in metallic too
Wide possibility of taylor-made version on demand
Fast curing (FC) or ultrafast curing (XFC) versions available 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 .

STANDARD SERIES



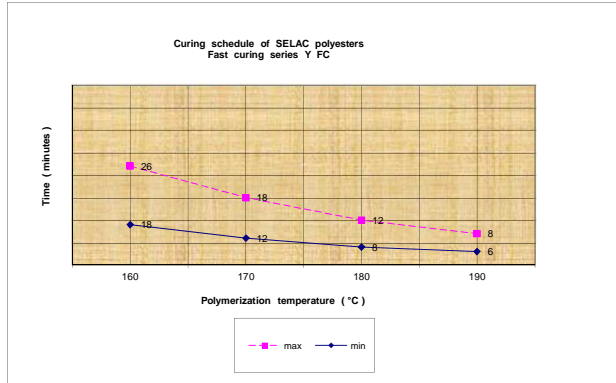
Minimal conditions (PMT)
10' @ 180°C - 8' @ 190°C - 7' @ 200°C

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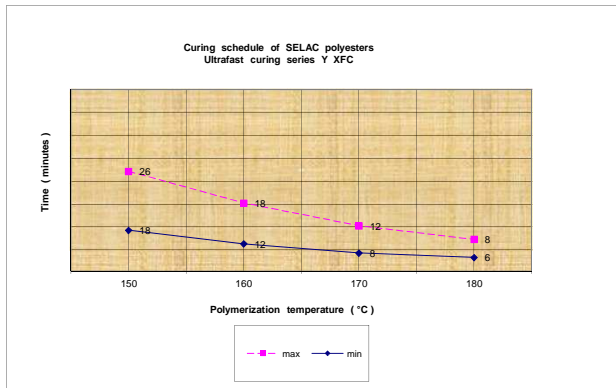
**FAST CURING
FC SERIES**



Minimal conditions (PMT)

18' @ 160°C - 12' @ 170°C - 8' @ 180°C - 6' @ 190°C

**ULTRAFAST CURING
XFC SERIES**



Minimal conditions (PMT)

18' @ 150°C - 12' @ 160°C - 8' @ 170°C - 6' @ 180°C

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 .

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**APPLICATION METHODS
AND RECYCLE**

The application is possible with manual or automatic electrostatic devices , both corona and tribo .
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 1,9 g/cc , according colour and formula
Theoretical yield at 60 micron : 13 to 9 sqm/kg
according colour and formula
Brilliance range at 60° : 20 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

**CORROSION
AND DURABILITY**

Test conditions : trials are made on normalized UNI 5961 panels 0,6 mm thick , treated by microcrystalline 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 good versus diluted acids and diluted alkalis

Sufficient versus aromatics , moderate 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

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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 polyesters** are stable for a period of 36 months .

Matt versions (4 in fourth position) are stable for a period of 12 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 .