

Technical Information

NCS POOLCOAT 73 NAT PA E

NDS079/180REV04

HIGH PERFORMANCE SURFACE COAT FOR SWIMMING POOL APPLICATIONS SUMMER/EXPORT VERSION

DESCRIPTION

NCS POOLCOAT 73 NAT PA E is a clear, pre-accelerated, thixotropic unsaturated polyester surface coat based on Isophthalic Acid and Neopentyl Glycol designed for use as a protective, decorative layer directly onto the glass reinforced laminate layers in the relining and repair of swimming pools.

FEATURES	BENEFITS
Thixotropic	Minimal drainage with excellent levelling properties
Pre-accelerated	Requires only the addition of suitable catalyst
Fast-curing	Tack-free finish in less than one hour
High gloss	Attractive smooth protective surface
UV-stabilised	Improved weather resistance
Low water absorption	Excellent water resistance

OTHER VERSIONS

NCS POOLCOAT 73 P1075 PA E	Summer/Export Iso/NPG White Poolcoat
NCS POOLCOAT 73 P3038 PA E	Summer/Export Iso/NPG Pool Blue Poolcoat
NCS POOLCOAT 73 NAT PAE	Summer/Export Iso/NGP Clear Poolcoat
NCS POOLCOAT 73 P1075 PA	Winter Iso/NPG White Poolcoat
NCS POOLCOAT 73 P3038 PA	Winter Iso/NPG Pool Blue Poolcoat

TYPICAL LIQUID PROPERTIES

PROPERTY	SPECIFICATION	NCS TEST METHOD
Viscosity @ 25°C, mPa.s	25 000 - 40 000	5.3
Geltime @ 25°C, 2 phs* BUTANOX M50, minutes	9 – 15	8
Tack-free time @ 35°C, 2 phs* BUTANOX M50, minutes	60 maximum	25B
Stability in the dark @ 25°C, months	6 minimum	4.1
*phs - parts per hundred surface coat		

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CURING CHARACTERISTICS

NCS POOLCOAT 73 NAT PA E is pre-accelerated and requires the addition of one to two parts of MEKP type catalyst per hundred surface coat immediately prior to application to start the curing reaction.

It should be noted that the addition of monomers, fillers and/or pigments may affect the geltime, cure characteristics and tack-free time of this product.

NCS POOLCOAT 73 NAT PA E is thermosetting and therefore should not be processed at temperatures below 15°C. The Poolcoat should also not be applied if the air temperature in direct sunlight is above 32°C and the pool surface temperature is greater than 45°C.

It is essential to thoroughly mix the catalyst into the surface coat.

The minimum recommended catalyst addition is one part per hundred surface coat.

The ambient temperature and the amount of catalyst control the geltime of the gelcoat. In colder temperatures, Butanox M60 is recommended and in warmer temperatures, Butanox LPT. The levels of catalyst can be approximately determined from the table below which shows the geltime of 100 parts by mass of NCS ULTRAGEL 73 NAT PAE, containing 1 to 3 phr catalyst.

GELTIME

Parts of M60 to 100 parts UG 73 NAT PAE	1	1.5	2	2.5	3
Geltime @ 15°C, minutes	161	98	35.5	28	23
Geltime @ 20°C, minutes	51.5	37	22	16	13.5

Parts of M50 to 100 parts UG 73 NAT PAE	1	1.5	2	2.5	3
Geltime @ 20°C, minutes	98	60	23	17	13.5
Geltime @ 25°C, minutes					
Geltime @ 30°C, minutes	22.5	13	10	9	9
Geltime @ 35°C, minutes	17	12	7.5	6	5.5

Parts of LPT to 100 parts UG 73 NATPAE	1	1.5	2	2.5	3
Geltime @ 30°C, minutes	63	36	25	20	15
Geltime @ 35°C, minutes	35	26	18	14	10
Geltime @ 40°C, minutes	29	20	12	10	8

APPLICATION

NCS POOLCOAT 73 NAT PA E is formulated to be applied by brush application. The thixotropy has been optimised so that it does not drain when applied to a vertical surface.

Any alteration of the product could result in the poolcoat not performing satisfactorily.

During and immediately after application of NCS POOLCOAT 73 NAT PA E, the work area must be free of moisture and contamination.

It is recommended that a swimming pool coated with NCS POOLCOAT 73 NAT PA E should be allowed to stand empty for 5 to 6 days in hot weather and 7 to 10 days in cool weather.

NCS POOLCOAT 73 NAT PA E must not be considered as a paint, nor must it be applied independently without the prior use of suitable glass reinforcements.

Effect of Temperature

NCS Poolcoat should not be applied onto a surface whose temperature is above 45°C. This is equivalent to an air temperature of 32°C in direct sunlight. The surface will remain slightly tacky and will go white when the pool is filled with water.

For further details refer to NCS Resins 'Suggestions for Lining Swimming Pools with Glass Reinforced Polyester Resins' reference APP030/0.

PIGMENTS & FILLERS

The addition of fillers, solvents or thixotropic additives may downgrade the product and is not generally recommended. The same consideration applies to pigments, but when absolutely necessary, NCS POOLCOAT 73 NAT PA E may be pigmented by the addition of up to 5% of pastel NCS POLYCHROME PIGMENT PASTE. NCS POOLCOAT 73 NAT PA E should not be pigmented to a very dark shade for use as a pool coating, as light patches may appear contrast against the dark colour of the poolcoat. A phenomenon which commonly occurs when the poolcoat is undercured or when the pool is filled too soon with water. This phenomenon also commonly occurs when the poolcoat is applied in hot weather and in direct sunlight when the surface temperature is above 45°C. (Equivalent to an air temperature of 32°C in direct sunlight) The Poolcoat will remain permanently undercured and may turn white when the pool is filled with water. Since darker colours absorb more heat from the sun than lighter shades the surface temperature of the darker colours will be considerably higher than the lighter shades.

It is recommended that, where mouldings are produced as sub-components of larger structures, or are simply large structures, that sufficient resin and pigment paste are mixed to enable the entire job to be completed, thus ensuring an exact colour match. Similarly, if coloured gelcoat is used, it is recommended that the same batch of material is used throughout the application as well as for sub-components. Thorough stirring of the mix shortly before use is recommended to ensure that the pigment is fully dispersed and that no separation has occurred, Care must be taken not to introduce air into the system. Users are reminded that the final colour of the cured gelcoat and laminate can be affected by the curing system or the colour of the gelcoat or which the pigment paste is added, particularly when heavily filled systems are used, and therefore the colour samples here are intended purely for guidance and exact matching to the final laminate colour cannot be guaranteed. Users are advised to consult application bulletins which deal with the methods of use and scope of application of NCS Resins pigment pastes.

STORAGE AND HANDLING

To ensure maximum stability and maintain optimum properties, surface coat should be stored in closed containers, maintained below 25°C and away from heat sources and sunlight. All storage should conform to local fire and building codes. Drum stock should be kept to a reasonable minimum with first-in, first-out stock rotation.

Where bung-in-head containers are stored outside, it is recommended that these be stored in a horizontal position to avoid the ingress of water.

STANDARD PACKAGE

Non-returnable metal drums.

MATERIAL SAFETY DATA SHEET

A Material Safety Data Sheet is available from your NCS Resins' representative. Make certain that you obtain a copy of this guide to the safe handling of unsaturated polyester resins and resin systems.

WARNING: CARE MUST BE TAKEN TO AVOID DIRECT MIXING OF ANY ORGANIC PEROXIDE (CATALYST) WITH METAL SOAPS, AMINE OR ANY OTHER POLYMERISATION ACCELERATOR OR PROMOTER, AS VIOLENT DECOMPOSITION WILL RESULT!

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