

## Technical Information

# NCS ULTRAGEL 22 P1075 PA E

NDS1209/074REV02

**DURABLE WHITE  
BRUSH GELCOAT  
LLOYDS APPROVED**

### DESCRIPTION

NCS ULTRAGEL 22 P1075 PA E is an isophthalic, durable white polyester gelcoat specially formulated to give excellent levelling and air release properties. The gelcoat is thixotropic and preaccelerated, with its viscosity and thixotropy having been optimised so that it flows evenly and sagging is minimised on inclined and vertical surfaces.

NCS ULTRAGEL 22 P1075 PA E is a resilient and impact-resistant gelcoat suitable for general mouldings where excellent durability and weather resistance are a requirement. The rheology of NCS ULTRAGEL 22 P1075 PA E ensures that it can be brush applied readily without the typical drag resistance and brush marks.

NCS ULTRAGEL 22 P1075 PA E is suitable for use on boat hulls that are subjected to long term immersion in water, and displays good resistance to a variety of chemical environments.

FEATURES	BENEFITS
Thixotropic	Eliminates drainage
Pre-accelerated	Requires only the addition of the recommended catalyst
UV-stabilised	Improved weather resistance
Specially promoted	Rapid cure
Improved rheology	Excellent flow and levelling with low porosity
Pre-pigmented	Excellent yellowing resistance

### OTHER VERSIONS

NCS ULTRAGEL 22 NAT PA E	Natural brush viscosity version
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The information herein is to assist customers in determining whether our products are suitable for their applications. Our products are intended for sale to industrial and commercial customers. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute any other warranty expressed or implied, including any warranty of merchantability or fitness, nor is protection from any law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of our materials, and in no event shall we be liable for special, incidental, or consequential damages. Our standard conditions of contract will apply to all sales.

## TYPICAL LIQUID PROPERTIES

PROPERTY	SPECIFICATION	NCS TEST METHOD
Viscosity @ 25°C, mPa.s.	45 000 – 60 000	5.5
Geltime @ 25°C, 2 phg* BUTANOX M50, minutes	15 - 22	8
Tack-free time (film), hours	15 minimum	25
Liquid appearance	Opaque White	2
Stability in the dark @ 25°C, months	6 minimum	4.1
<b>*phg = Parts per hundred gelcoat, by mass</b>		

## CURING CHARACTERISTICS

NCS ULTRAGEL 22 P1075 PA E is supplied preaccelerated, needing only the addition of catalyst to start the curing reaction.

Curing should not be carried out at temperatures below 15°C. NCS ULTRAGEL 22 P1075 PA E must be allowed to attain workshop temperature (23°C) before being used. Catalyst levels below 1% and above 3% are not recommended.

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 22 P1075 PA E, containing 1 to 3 phr catalyst.

## GELTIME

Parts of <b>M60</b> to 100 parts UG 22 P1075 PAE	1	1.5	2	2.5	3
Geltime @ 15°C, minutes	130.5	88	46	43	40
Geltime @ 20°C, minutes	90	58	28	24	19
Geltime @ 25°C, minutes	48	32	17	14	12

Parts of <b>M50</b> to 100 parts UG 22 P1075 PAE	1	1.5	2	2.5	3
Geltime @ 20°C, minutes	131	90	49	36	23
Geltime @ 25°C, minutes	60	40	19	17	14.5
Geltime @ 30°C, minutes	34	23	12	10	9
Geltime @ 35°C, minutes	25	17.5	9	7	6.5

Parts of <b>LPT</b> to 100 parts UG 22 P1075 PAE	1	1.5	2	2.5	3
Geltime @ 30°C, minutes	81	57	34	28	23
Geltime @ 35°C, minutes	52	36	20.5	17	13
Geltime @ 40°C, minutes	50	33	16	13	11.5

**APPLICATION**

NCS ULTRAGEL 22 P1075 PA E is designed for application by brush. For normal mouldings, the wet gelcoat thickness should be controlled between 0,5mm and 0,6mm. As a guide, 550g to 650 g/m<sup>2</sup> of NCS ULTRAGEL 22 P1075 PA E, when applied, will give the required thickness.

The use of glass or synthetic fibre surface tissues will enhance the surface appearance and service life of the gelcoat.

NCS ULTRAGEL 22 P1075 PA E has been carefully formulated to give excellent brushing properties, designed to enhance levelling which promotes the uniformity of the gelcoat film thickness which translates into efficient utilisation of material. The thixotropy has been adjusted to eliminate sag on inclined and vertical surfaces. NCS ULTRAGEL 22 P1075 PA E exhibits rapid film curing characteristics resulting in short backup times, typically one hour for a gelcoat of cured film thickness of 0,5 mm cured with 2 phg BUTANOX M50 at 25°C. This short backup time facilitates achieving fast production rates and shorter overall mould turn-around times, without detracting from the smooth finish of the moulding.

The gelcoat is important for adhesion of the backing laminate. Modification of the gelcoat is not recommended as this will affect the properties which have been optimised.

**STORAGE  
AND  
HANDLING**

To ensure maximum stability and maintain optimum properties, polyester resin 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.  
Bulk supplies can be delivered by road tanker.

**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.

<b>PLEASE READ AND UNDERSTAND THE MATERIAL SAFETY DATA SHEET BEFORE WORKING WITH THIS PRODUCT</b>
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<b>WARNING:</b> 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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NCS RESINS BRANCHES AT:

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