

# LET'S TALK / PERFORMANCE



**aliancys**  
QUALITY RESINS

# LET'S TALK/ PERFORMANCE



COMPOSITES ARE THE MATERIAL SYSTEMS OF PREFERENCE FOR MANY APPLICATIONS, BECAUSE OF THEIR FAVORABLE DURABILITY, STRENGTH, INHERENT LOW WEIGHT AND POTENTIAL TO BE EASILY SHAPED. OBVIOUSLY, THIS PERFORMANCE IS GREATLY INFLUENCED BY HAVING SELECTED THE RIGHT RESIN SYSTEM FOR THE COMPOSITE FORMULATION. THIS GUIDE HELPS YOU TOGETHER WITH THE SPECIALISTS FROM ALIANCYS TO DETERMINE THE BEST RESIN FOR MANUFACTURING COMPOSITE PARTS IN LINE WITH YOUR SPECIFIC REQUIREMENTS.

## **STRENGTH AND DURABILITY**

The combination of fiber and resin into one composite system takes advantage of the positive contributions of the individual constituents. The fibers bring elevated mechanical strength and stiffness. The resins bring resistance to elevated temperatures, durability and protection against aggressive environments (including water and chemicals). This translates into structural integrity, a continued operation capability, and minimized maintenance during part life.

## **DESIGN FLEXIBILITY**

Composite materials can be easily formed. They bring designers, engineers, and architects the unique capability to personalize part shape and aesthetics, while having the benefit of tailoring part functionality to the application. Compared to traditional materials like steel and concrete,



using composites solutions enables in many cases the integration of multiple components and functions.

#### **ENVIRONMENTALLY SOUND**

Associated with the low weight and long life durability of composite components and their limited requirement for maintenance, the lifetime cost and ecological footprint are highly beneficial. Resin formulation fine-tuning and formulation improvement can further improve the environmental profile of composites.

#### **LIGHT WEIGHT CAPABILITY**

Unlike steel and concrete, composites feature high strength, stiffness and inherent low weight at the same time. This allows to design lighter and thinner, translating for instance into lower fuel emissions for cars, and faster installation for building and infrastructure components.



# ALIANCYS EXPERTISE

## **DELIVERING INNOVATION**

Aliancys can help you to push the limits of composite part performance and component manufacturing. Taking an integral approach to new product development, we use our full expertise in quality resins, material science, testing and certification, and composite component manufacturing in order to shape new composites applications.

Through building strong relations in the supply chain, we help you to explain composites benefits to key decision makers. We know that co-creation and information sharing help to significantly reduce time-to-market. So let's talk performance and help you to increase your competitive advantage and business success.

## **QUALITY RESINS**

Manufacturing high quality composite components is a prerequisite for your business success. You need consistent and reliable input materials. Resins that meet your specifications day after day, resulting in consistent part performance and a predictable volume output even in a large production series. Delivering to you peace-of-mind in your production process.

Reducing safety factors in design, which translate into weight savings and reduced cost.



Aliancys can provide you with products of high quality consistency so you know your parts perform in the right way. Rather than fixing challenges in your operations, you can focus on your own business, keeping your hands free to build trust with your customers.

### DSM HERITAGE

Aliancys can build on a 50 year track record of supplying composite resins. Previously serving the market under the name DSM Composite Resins, Aliancys has a heritage of quality, innovation and sustainability.



In close collaboration with its customers, Aliancys has demonstrated that it makes composite innovations happen delivering novel material solutions that provide benefits in terms of people, planet and profit. You can rely on us for your business today. Together we create a successful business tomorrow.

### ENGAGE PROFESSIONALS

Aliancys wants to fully understand your business and works closely together with you to meet the needs of your customers. Besides providing you with low hassle and great service, we optimize the quality and output of your processes.



Our technical service team and great material testing capabilities help you to enhance composite part performance and will support you in mitigating eventual process interruptions, so that you can be sure to deliver to your customers the components they need, in the quantities they need.

### NEW PRODUCT INTRODUCTIONS

With the broadening use of composites in construction and industrial applications, Aliancys has been at the forefront of introducing new resin systems for a range of manufacturing processes. These include systems for high speed manufacturing, solutions for use with glass and carbon fibers, low profile systems for superior surface finish, and solutions that can operate in elevated temperature environments.

### GLOBAL SUPPORT CAPABILITIES

Aliancys has two R&D centers supporting supporting our customers, one based in Zwolle (Netherlands) and one in Nanjing (China). Both have state-of-the-art equipment and support facilities, including mechanical property testing capabilities, and an analytical laboratory.

For physical property testing equipment like dynamic mechanical analysis (DMA) and differential scanning calorimetry (DSC) is available. In addition, Aliancys has a team of technical experts on the road that can support customers either at their site or at endcustomers.

# HOW TO USE THIS GUIDE?

IN THE FOLLOWING PAGES YOU CAN FIND THE MOST IMPORTANT RESINS FROM ALIANCYS SOLD FOR SPECIFIC COMPOSITES APPLICATIONS AND TRANSFORMATION PROCESSES. PER RESIN SOME KEY PHYSICAL PROPERTIES ARE LISTED TO HELP YOU IN MAKING A CHOICE BETWEEN PRODUCT OPTIONS.

Additional information (incl. specific curing conditions for sample preparation) is available through product-specific Product Datasheets and Regulatory Datasheets. Please consult your Aliancys Technical

Service representative to select the best resin system for your specific requirements.

For our newest product innovations and application updates, also check out [www.aliancys.com](http://www.aliancys.com).

NAME	CHEMICAL NATURE	DESCRIPTION	HDT (°C) ISO 75-A	ELONGATION AT BREAK (%) ISO 527-2	TENSILE STRENGTH (MPa) ISO 527-2	TENSILE MODULUS (GPa) ISO 527-2	VISCOSITY 100 S <sup>-1</sup> (MPa.s) TM 2013	GEL TIME (MIN) TM 2625	TIME TO PEAK (MIN) TM 2625	PEAK TEMPERATURE (°C) TM 2625
------	-----------------	-------------	-------------------	-----------------------------------	----------------------------------	---------------------------------	---	------------------------	----------------------------	-------------------------------

## CHEMICAL RESISTANCE

<b>ATLAC® 430</b>	VE Bisphenol A	Multi-purpose, chemical resistance (alkali), Lloyds approval	105	6.1	95	3.6	470	13	20.5	150
<b>ATLAC® 580</b>	VE Urethane	Multi-purpose, chemical resistance, easy processing, Lloyds approval	115	4.2	83		450	38	54	123
<b>ATLAC® 590</b>	VE Novolac	High temperature applications, chemical resistance (solvents, strong acids)	140	4	90	3.5	245	24	31	160
<b>ATLAC® 5200 FC</b>	VE Bisphenol A	Chemical resistance, food contact applications, GMP	105	6.1	95	3.6	470	13	20.5	150
<b>ATLAC® E-NOVA FW 2045</b>	VE Urethane	High temperature applications, chemical resistance (solvents), easy processing	145	3.5	90	3.5	400	19	27	165
<b>ATLAC® PREMIUM 600</b>	VE Bisphenol A	Lining of tanks, styrene-free, enhanced resistance against organic chemicals	103	2.5	66	3.3	1,400 (20 s <sup>-1</sup> )	17	27	143

## FOOD CONTACT & DRINKING WATER

<b>PALATAL® P69-02 FC</b>	Orthophthalic	Multi-purpose, flexible, potable water, high HDT	90	3.4	75	3.8	700	14	25	165
<b>ATLAC® 5200 FC</b>	VE Bisphenol A	Elevated chemical resistance, food contact applications, GMP	105	6.1	95	3.6	470	13	20.5	150
<b>SYNOLITE™ 0270-N-2</b>	Isophthalic	High quality Iso-NPG gelcoat base resin, low color and yellowing	100	4	85	3.7	2,100	5.7	16	150

NAME	CHEMICAL NATURE	DESCRIPTION	HDT (°C) ISO 75-A	ELONGATION AT BREAK (%) ISO 527-2	TENSILE STRENGTH (MPA) ISO 527-2	TENSILE MODULUS (GPA) ISO 527-2	VISCOSITY 100 S <sup>-1</sup> (MPA.S) TM 2013	GEL TIME (MIN) TM 2625	TIME TO PEAK (MIN) TM 2625	PEAK TEMPERATURE (°C) TM 2625
------	-----------------	-------------	-------------------	-----------------------------------	----------------------------------	---------------------------------	---	------------------------	----------------------------	-------------------------------

## SMC/ BMC

ATLAC® XP 810 X	VE Urethane	Chemical resistance, thickenable	145	3.5	81	3.6	2,250	2.7	3.5	270
BEYONE™ 805-N-01	VE Bisphenol A	Styrene-free	-	-	-	-	2,250	1.1	1.6	-
BEYONE™ 806-H-01	PVAC	Styrene-free LP additive	-	-	-	-	3,300	-	-	-
BEYONE™ 820-H-01	Polystyrene	LS additive, fully pigmentable plus zero shrinkage, high gloss	-	-	-	-	4,250	-	-	-
BEYONE™ 875-H-01	PVAC	LP additive with low viscosity for reduced smell and emissions	-	-	-	-	2.25	-	-	-
PALAPREG® H2681-01	Polyester	Top Class A LP-additive	-	-	-	-	1,500	-	-	-
PALAPREG® H2700-01	Polyester	Top Class A additive with enhanced mechanical properties and lower emissions	-	-	-	-	2,900	-	-	-
PALAPREG® H814-01	Polystyrene	Multi-purpose LS-Additive, good pigmentability	-	-	-	-	5,400	-	-	-
PALAPREG® H852-03	Polyester	Class A LP-Additive with excellent flow for low-pressure SMC	-	-	-	-	163	-	-	-
PALAPREG® H860-01	Polyester	Class A LP-Additive, good pigmentability in combination with Palapreg® H 814-01	-	-	-	-	400	-	-	-
PALAPREG® P0030-03	Orthophthalic	Flexible resin, wet press moulding	-	-	-	-	255	2	2.8	255
PALAPREG® P0423-02	Maleic	Resin for LP and Class A applications	145	1.7	55	-	1,325	1.6	2.5	288
PALAPREG® P17-02	Orthophthalic	Multi-purpose	125	1.7	60	-	1,400	1.5	2.2	278
PALAPREG® P18-03	Maleic	Class A applications	140	1.5	50	-	1,790	0.9	1.7	283
PALAPREG® P152-02 X	Isophthalic	Improved chemical resistance, UV stabilized, water tanks	-	-	-	-	1650	1.7	2.4	280
PALAPREG® P2273-01	Orthophthalic	Multi-purpose LS/LP applications, homogeneous pigmentability	120	2.4	70	-	2,450	1.7	2.3	280
PALAPREG® PREMIUM G24-01 LE	System	Premium Class A system plus special peroxide for low emissions	-	-	-	-	900	4.6	5.5	275

## SPECIALTY RESINS

ATLAC® 382 POWDER	MF resin	Powder resin, electrical insulation. chemical resistance, heat resistance, multi-purpose	-	-	-	-	-	-	-	-
PALATAL® P51-01	Tetrahydro-phthalic	Multi-purpose bonding resin, resistant to cracks and styrene attack	84	7	75	-	1,000	14.5	18	175
SYNOLITE™ 1835-N-0	Flexibilizer	Powder resin, free-flowing molding powders, hot press	-	-	-	-	-	-	-	-
SYNOLITE™ 5011-N-1	UP special	High filler loading capability (ATH), very low smoke density	108	2.2	70	3.8	40	5	8	190

## GELCOAT RESINS

PALATAL® E 220-01	Flexibilizer	Flexibilizing resin. Particular when chemical resistance is critical	-	42	13	0.1	73	17.5	37	73
SYNOLITE™ 0270-N-2	Isophthalic	High quality Iso-NPG gelcoat base resin, low color and yellowing	100	4	85	3.7	2,100	5.7	16	150

NAME	CHEMICAL NATURE	DESCRIPTION	HDT (°C) ISO 75-A	ELONGATION AT BREAK (%) ISO 527-2	TENSILE STRENGTH (MPA) ISO 527-2	TENSILE MODULUS (GPA) ISO 527-2	VISCOSITY 100 S <sup>-1</sup> (MPA.S) TM 2013	GEL TIME (MIN) TM 2625	TIME TO PEAK (MIN) TM 2625	PEAK TEMPERATURE (°C) TM 2625
<b>SYNOLITE™ 0271-N-2</b>	Isophthalic	High quality Iso-NPG gelcoat base resin, low color and yellowing, Lloyds approval		-	-	-	2,000	6	16	145
<b>SYNOLITE™ 4120-N-1</b>	Isophthalic	Flexibilizing resin. Particular when chemical resistance is critical	20	90	-	-	-	22	-	65
<b>SYNOLITE™ 8515-N-0</b>	Flexibilizer	Pigment paste resin		-	-	-	255	-	-	-

## MARINE

<b>ATLAC® 580 AC 300</b>	VE Urethane	Infusion, low shrinkage, low exotherm, excellent hydrolysis resistance, Lloyds/ RINA approval	107	3.4	78	3	150	70	87.5	140
<b>ATLAC® 580 ACT</b>	VE Urethane	Thixotropic and preaccelerated, low shrinkage, tie coat, Lloyds/ RINA approval	115	4.2	83	3.5	550	28.5	47.5	140
<b>ATLAC® E-NOVA MA 6215</b>	VE Bisphenol A	Enhanced flow for infusion processes, RINA approval	105	2.5	70	4	85	46	76	120
<b>ATLAC® E-NOVA MA 6325</b>	VE Bisphenol A	Low styrene content, tie coat for Marine applications, RINA approval	110	2.5	70	4	575	28	38	140
<b>PALATAL® P4 TV-128</b>	Orthophthalic	Multi-purpose HLU, thick laminates, Lloyds/ DNV approval	63	2	70	-	350	27	56	80
<b>PALATAL® U541 TV-03</b>	Orthophthalic	Multi-purpose HLU, thin laminates, LSE, DNV approval	63	2	70	-	350	30	45	100
<b>PALATAL® U569 TV-01</b>	Orthophthalic	HLU, thin laminates, LSE, high HDT, DNV approval grade 1, Lloyds approval	90	3.4	75	3.8	380	24	36	165
<b>PALATAL® U570 TV-01 V</b>	Orthophthalic	LSE, fast green strength, Lloyds/ DNV approval	90	2.4	90	4.4	525	25	47	135
<b>PALATAL® U570 TV-04 V</b>	Orthophthalic	HLU, thick laminates, LSE, higher HDT, Lloyds approval	90	2.4	80	-	450	25.5	47.5	77
<b>SYNOLITE™ 0288-L-1</b>	Isophthalic	Multi-purpose HLU, thick laminates, good retention of properties, Lloyds approval	75	2.5	80	4.1	400	26	55	95
<b>SYNOLITE™ 1408-P-1</b>	Orthophthalic	HLU, thin and thick laminates, LSE, DNV approval	72	2.5	70	3.9	360	25	45	75
<b>SYNOLITE™ 1408-P-2</b>	Orthophthalic	HLU, LSE, thin and thick laminates, improved throughcure at lower temperature, DNV approval	72	2.5	70	3.9	380	12.5	28	95
<b>SYNOLITE™ 3720-I-1</b>	Isophthalic	HLU, enhanced mechanical properties	105	3.5	60	2.7	475	26	45	155
<b>SYNOLITE™ 8388-I-1</b>	DCPD	Multi-purpose HLU, low print-through, RINA approval	85	2.2	70	3.7	420	16	28	130
<b>SYNOLITE™ 8388-I-2</b>	DCPD	Multi-purpose hand lay-up, low print-through, RINA approval	70	2.5	55	3.2	130	24	34	130
<b>SYNOLITE™ 8388-L-7</b>	DCPD	Multi-purpose HLU, short demoulding, RINA	85	2.2	70	3.7	335	20	55	60
<b>SYNOLITE™ 8388-P-1</b>	DCPD	Multi-purpose HLU, thick laminates, low shrinkage, LSE, DNV approval	85	2.2	70	3.7	355	24	45	110
<b>SYNOLITE™ 8388-P-2</b>	DCPD	Multi-purpose hand lay-up, thick laminates, low shrinkage, LSE, DNV approval	85	2.2	70	3.7	335	34	55	105
<b>SYNOLITE™ 8488-G-1</b>	DCPD	Low exotherm, infusion resin, great throughcure, DNV approval	85	2.2	70	3.7	130	24	38	120
<b>SYNOLITE™ 8488-G-11</b>	DCPD	Infusion resin, excellent surface on very large GRP parts, DNV approval	85	2.2	70	3.7	140	55	85	52



NAME	CHEMICAL NATURE	DESCRIPTION	HDT (°C) ISO 75-A	ELONGATION AT BREAK (%) ISO 527-2	TENSILE STRENGTH (MPa) ISO 527-2	TENSILE MODULUS (GPa) ISO 527-2	VISCOSITY 100 S <sup>-1</sup> (MPa.S) TM 2013	GEL TIME (MIN) TM 2625	TIME TO PEAK (MIN) TM 2625	PEAK TEMPERATURE (°C) TM 2625
------	-----------------	-------------	-------------------	-----------------------------------	----------------------------------	---------------------------------	---	------------------------	----------------------------	-------------------------------

## CONTINUOUS LAMINATION

<b>SYNOLITE™ 8085-X-2</b>	Orthophthalic	Multi-purpose resin, medium reactive, UV-stabilized	65	2	70	4.2	570	8	16	152
---------------------------	---------------	---	----	---	----	-----	-----	---	----	-----

## MOULD BUILDING/ TOOL MAKING

<b>NEOMOULD® 1982-S-1</b>	DCPD	Low exotherm, zero shrink, easy processing	-	-	-	-	650	23.5	34	145
---------------------------	------	--	---	---	---	---	-----	------	----	-----

## INFUSION/ RTM

<b>SYNOLITE™ 1967-G-1</b>	DCPD	Low exotherm, thin and thick laminates, injection with rigid top-mould, DNV	70	2.3	70	3.8	207	8.5	18	130
<b>SYNOLITE™ 1967-G-9</b>	DCPD	Low exotherm, thin and thick laminates, injection with rigid top-mould	85	2.3	70	3.8	170	45.5	61	130
<b>SYNOLITE™ 7412-G-1</b>	Isophthalic	Multi-purpose, improved chemical resistance	73	-	61	2.8	240	33	38	135
<b>SYNOLITE™ 8488-G-1</b>	DCPD	Low exotherm, good throughcure, DNV	85	3	66	3.5	130	24	38	120
<b>SYNOLITE™ 8488-G-2</b>	DCPD	Excellent surface quality on very large parts, low exotherm, DNV approval	64	3	66	3.5	85	47	85	53
<b>PALAPREG® P 0423-02</b>	Maleic	Resin for LP and Class A applications	145	1.7	55	-	1,325	1.6	2.5	288

## HAND LAY-UP/ SPRAY-UP AND MULTI-PURPOSE

<b>ATLAC® PREMIUM 100</b>	VE Bisphenol A	Styrene-free, tack-free curing	101	3.9	61	3.1	470	20	22.5	142
<b>DARON® 45</b>	VE Bisphenol A	High temperature resistance	210	2.5	70	3.2	200	24	27	165
<b>PALATAL® A 410-01</b>	Isophthalic	ISO/ NPG, chemical resistance, adhesion to PVC, Lloyds approval	107	4.4	85	3.6	1,200	11	19	175
<b>PALATAL® P 4-01</b>	Orthophthalic	Multi-purpose, medium reactive, Lloyds approval	63	2	70	-	575	18.5	26	145
<b>PALATAL® U 541 TV-05</b>	Orthophthalic	Fast de-molding	63	2	70	-	120	21	34	120
<b>PALATAL® U 541 TV-08 V</b>	Orthophthalic	Slow trough-cure, prolonged time for edge removal/ trimming	63	2	70	4.3	390	21	38	73
<b>SYNOLITE™ 8388-P-1</b>	DCPD	Multi-purpose HLU, thick laminates, LSE, DNV approval	85	2.2	70	3.7	355 (20 s <sup>-1</sup> )	24	45	110
<b>SYNOLITE™ 8388-P-7</b>	DCPD	Multi-purpose, thick laminates in one shot, low shrinkage, low styrene emission (LSE), DNV approval	85	2.2	70	3.7	345	26	55	105

## PIPES & TANKS

<b>ATLAC® 382 FLAKES</b>	MF resin	Flakes, dissolving in styrene required. Chemical resistance, heat resistance, multi-purpose	-	-	-	-	-	-	-	-
<b>ATLAC® 430</b>	VE Bisphenol A	Multi-purpose, chemical resistance (alkali), Lloyds approval	105	6.1	95	3.6	470	13	20.5	150
<b>ATLAC® 5200 FC</b>	VE Bisphenol A	Chemical resistance, food contact applications, GMP	105	6.1	95	3.6	470	13	20.5	150
<b>ATLAC® 580</b>	VE Urethane	Multi-purpose, chemical resistance, easy processing, Lloyds approval	115	4.2	83	3.5	450	38	54	123

NAME	CHEMICAL NATURE	DESCRIPTION	HDT (°C) ISO 75-A	ELONGATION AT BREAK (%) ISO 527-2	TENSILE STRENGTH (MPa) ISO 527-2	TENSILE MODULUS (GPa) ISO 527-2	VISCOSITY 100 S <sup>-1</sup> (MPa.S) TM 2013	GEL TIME (MIN) TM 2625	TIME TO PEAK (MIN) TM 2625	PEAK TEMPERATURE (°C) TM 2625
ATLAC® 580 ACT	VE Urethane	Thixotropic and preaccelerated, low shrinkage	115	4.2	83	3.5	550 (20 s <sup>-1</sup> )	28.5	47.5	140
ATLAC® 590	VE Novolac	High temperature applications, chemical resistance (solvents, strong acids)	140	4	90	3.5	245	24	31	160
ATLAC® E-NOVA FW 2045	VE Urethane	High temperature applications, chemical resistance (solvents), easy processing	145	3.5	90	3.5	400	19	27	165
ATLAC® E-NOVA FW 2245	VE Urethane	Filament winding, easy processing, thixotropic, increased flexibility, chemical resistance	145	3.5	90	3.5	425	32	65	140
PALATAL® P 61-01	Orthophthalic	Multi-purpose, high HDT	90	2.8	85	4.4	800	18	22	175
PALATAL® P 61-02	Orthophthalic	Multi-purpose, filament winding	90	2.8	85	4.4	150	22	40	150
PALATAL® P 61 V-12 V	Orthophthalic	Multi-purpose, filament winding	90	2.8	85	4.4	800	10	15	170
PALATAL® P 69-02	Orthophthalic	Multi-purpose, filament winding, increased flexibility	90	3.4	75	3.8	165	14	25	165
PALATAL® P 80-02	Orthophthalic	Multi-purpose, high reactivity, high HDT, easy processing	108	4.2	80	3.7	330	16	22.5	180
PALATAL® A 400-01	Isophthalic	Multi-purpose, Lloyds approval	93	4.6	90	3.7	1,000	9	19	160
SYNOLITE™ 1717-N-1	Isophthalic	Multi-purpose, chemical resistance, filament winding	105	3.5	60	2.7	375	24	42	145

## POLYMER CONCRETE & CASTING

SYNOLITE™ 0328-A-1	Orthophthalic	Clear casting, figurine casting	55	1.6	-	-	-	21	-	45
SYNOLITE™ 0564-A-1	Orthophthalic	Castings with low color, solid surface	75	2.1	70	4	1,150	13	31	120
SYNOLITE™ 1862-N-1	Isophthalic/ NPG	Solid surface	-	-	-	-	-	14	-	170
SYNOLITE™ 2155-N-1	Orthophthalic	High temperature, good mechanicals	110	2	60	-	275	5	11	195
SYNOLITE™ 5750-A-3	DCPD	Shower tray casting (behind gelcoat or PMMA)	82	1.5	40	3.3	180	9	14.5	130
SYNOLITE™ 5758-A-2	DCPD	Shower tray casting (behind gelcoat or ABS)	43	3.8	47	1.6	185	7	12	110
SYNOLITE™ 8388-V-1	DCPD	Excellent filler wetting, high filler loads, good throughcure	83	2.2	70	3.8	210	10	15.5	127.5

## PUTTY RESINS

PALATAL® K775 V-02	VE Bisphenol A	Enhanced chemical resistance, pre-accelerated with amine	105	6.1	95	-	440	6.5	9.5	133
SYNOLITE™ 0432-U-1	Orthophthalic	Multi-purpose, wood, rigid	80	2.1	72	4.2	1170	7.5	10	168
SYNOLITE™ 0542-U-2	DCPD	Multi-purpose, wood, semi-rigid	56	11	55	2.5	710	8.5	11.5	140
SYNOLITE™ 2710-U-2	Tetrahydro-phthalic	Binder for highly filled knifing fillers for metal wood and minerals, high flexibility	-	56	9	-	495	6.7	9.75	110
SYNOLITE™ 6494-U-2	DCPD	Multi-purpose binder for fillers and putties, balanced adhesion, excellent sandability	30	33	19	0.79	685	6.2	10	115.5
SYNOLITE™ 7259-U-2	Tetrahydro-phthalic	Binder for highly filled putties with excellent adhesion to galvanized steel	-	-	-	-	650	7	10	120

## PULTRUSION

ATLAC® 430	VE Bisphenol A	Multi-purpose, chemical resistance (alkali), carbon fiber capability	105	6.1	95	3.6	470	13	20.5	150
------------	----------------	--	-----	-----	----	-----	-----	----	------	-----

NAME	CHEMICAL NATURE	DESCRIPTION	HDT (°C) ISO 75-A	ELONGATION AT BREAK (%) ISO 527-2	TENSILE STRENGTH (MPA) ISO 527-2	TENSILE MODULUS (GPA) ISO 527-2	VISCOSITY 100 S <sup>-1</sup> (MPA.S) TM 2013	GEL TIME (MIN) TM 2625	TIME TO PEAK (MIN) TM 2625	PEAK TEMPERATURE (°C) TM 2625
ATLAC® 590	VE Novolac	High temperature applications, chemical resistance (solvents, strong acids)	140	4	90	3.5	245	24	31	160
ATLAC® E-NOVA FW 2045	VE Urethane	High temperature applications, chemical resistance (solvents), easy processing	145	3.5	90	3.5	400	19	27	165
ATLAC® 5200 FC	VE Bisphenol A	Elevated chemical resistance, food contact applications, GMP	105	6.1	95	3.6	470	13	20.5	150
DARON® 45	VE Bisphenol A	High temp. resistance, carbon fiber capability	210	2.5	70	3.2	200	24	27	165
PALATAL® A 410-01	Isophthalic/ NPG	Chemical resistance, adhesion to PVC, Lloyds approval	107	4.4	85	3.6	1,200	11	19	175
PALATAL® A 400-01 FC	Isophthalic	Food contact applications, Lloyds approval	93	4.6	90	3.7	1,000	9	19	160
PALATAL® E 220-01	Flexibilizer	Flexibilizing resin. Particular when chemical resistance is critical	-	42	13	0.1	73	17.5	37	73
PALAPREG® P 0423-02	Maleic	Resin for LP and Class A applications	145	1.7	55	-	1,325	1.6	2.5	288
PALAPREG® H 1080-01	PVAC	Low Profile additive	-	-	-	-	4,100	-	-	-
SYNOLITE™ 0152-N-2	Isophthalic	Chemical resistance, good mechanical performance	96	4.2	87	3.6	835	11	13	220
SYNOLITE™ 0175-N-1	DCPD	Good wetting (fibers, fillers), good mechanical performance	95	2.5	60	3.7	380	8	1.5	215
SYNOLITE™ 2155-N-1	Orthophthalic	High temperature, good mechanical performance	110	2	60	-	275	5	11	195
SYNOLITE™ 4120-N-1	Isophthalic	Flexibilizing resin. Particular when chemical resistance is critical	20	90	-	-	-	22	-	65
SYNOLITE™ 5011-N-1	UP special	High filler loading capability (ATH), very low smoke density	108	2.2	70	3.8	40	5	8	190

## RELINING

ATLAC® 590 T	VE Novolac	Relining, chemical resistance, industrial	140	4	90	3.5	700	43	47	185
ATLAC® E-NOVA RE 3475 X	VE Urethane	UV-cure, DIN 18820/5, 1310, MgO thickenable	145	3.5	81	3.6	700	-	5.5 (TM 2500)	190 (TM 2500)
ATLAC® PREMIUM 600	VE Bisphenol A	Hot cure, styrene-free, long pot-life	103	2.5	66	3.3	1,400 (20 s-1)	17 (TM 2259)	27 (TM 2259)	143 (TM 2259)
PALATAL® P 92 I-04	Isophthalic/ NPG	UV-cure, DIN18820/3, EN 13121/4, MgO thickenable	107	5.6	85	3.6	700	-	9 (TM 2500)	195 (TM 2500)
PALATAL® A 405 T-02	Isophthalic	Hot cure, semi-flex, pressure pipes (not for drinking water), low temperature (< 40 °C), thixotropic	51	9.5	67	3	840	19	25	155
PALATAL® A 408 T-01	Orthophthalic	Hot cure, standard gravity sewers, thixotropic	96	2.1	67	3.7	800	17	23	175
SYNOLITE™ 2103-Q-1	Orthophthalic/ NPG	UV-cure, DIN 18820/3, EN 13121/4, MgO thickenable	112	2.1	65	4	700	-	5.5 (TM 2500)	195 (TM 2500)
SYNOLITE™ 1035-T-1	Orthophthalic/ NPG	Hot cure, long pot-life, DIN 18820/3, EN 13121/4	102	2	57	3.5	775 (20 s-1)	17 (TM 2259)	23.5 (TM 2259)	145 (TM 2259)

### **Aliancys Europe**

Aliancys AG  
Stetterstrasse 28  
P.O. Box 1227  
CH-8207 Schaffhausen  
Switzerland  
+41 (0)52 644 1212  
inquiry.world@aliancys.com

### **Aliancys China**

Jinling Aliancys Resins Co., Ltd.  
Zone F, 3/F, Block A  
Fenghuo Building  
No. 88 Yun Long Shan Road  
Jian Ye District  
Nanjing, Jiangsu Province 210019  
China  
+86 (0)25 8549 3888  
inquiry.china@aliancys.com

The user is held to check the quality, safety and other properties of the product referred to herein. The information and recommendations in this document are to the best of our knowledge and reliable. However, no rights whatsoever can be derived from this document or the information contained therein by any party, other than those expressly accepted by a selling entity of the Aliancys group of companies ("Aliancys selling entity") in a binding sale and purchase agreement for product referred to herein. For the avoidance of doubt the Aliancys group of companies makes no warranty of any kind, express or implied, including those of merchantability and fitness for purpose. Unless explicitly agreed to otherwise in writing by the Aliancys selling entity, all offers, quotations, sales and deliveries of Aliancys products are subject to the general conditions of sale of such Aliancys selling entity. Atlac®, Beyone™, Daron®, Neomould®, Neoxil®, Palatal®, Palapreg®, Synolite™, Aliancys™, the Aliancys™ logo, and the LET'S TALK / logo are registered trademarks of Aliancys AG.

© Aliancys 2016

Aliancys is a joint venture of CVC Capital Partners and Royal DSM

LET'S TALK /

For more information

[inquiry.world@aliancys.com](mailto:inquiry.world@aliancys.com) / [aliancys.com](http://aliancys.com)

**aliancys**  
QUALITY RESINS

