

TECHNICAL DATASHEET

Since 1955 Orthophtalic, Isophtalic and DCPD resins for all major fields of application

POLIPLAST

Company with Quality System Certification
ISO 9001:2008 TUV Cert. Nr. 50100 3977

Environmental Management System Certification
UNI EN ISO 14001:2004 Nr. 198A IQNET:IT-44550



TRANSPORTS
NAUTICAL FIELD
CULTURED MARBLE
AUXILIARY PRODUCTS
PUTTIES AND MASTICS
ABRASIVES
ARTISTIC CASTINGS
REINFORCED PLASTICS
SANITARIES
SWIMMING POOLS
SMC AND BMC
SILOS AND CONTAINERS

POLIPLAST GVR 1205

Technical Datasheet nr.: 00014512
Revision nr. : 2
Date : 14/01/2005

CHARACTERISTICS

Unsaturated polyester resin which is modified and diluted into Monomer Styrene. IT'S A SPECIAL RESIN SUITABLE TO THE REINFORCEMENT OF SANITARIES MADE OF CAST PMMA and COEXTRUDED ABS. This resin is characterized by a reduced styrene emission during its working.

The low viscosity of the system enables the application to medium-low temperatures and pressures, and consequently, in combination with the high filler ratios, will further reduce emissions.

- REINFORCEMENT OF SANITARIES MADE OF coextruded ABS and cast PMMA
- THIXOTROPIC- PRE-ACCELERATED E
- HIGHLY FILLABLE WITH CALCIUM CARBONATE (UP TO 140% IN WEIGHT)

WORKING

It is used in the sanitary reinforcement when the automatic application is involved (cut-and spray gun). To have an homogeneous colour in the reinforcement layer we suggest to add 1-2% of White Colouring paste (Pasta Bianca 79). The resin may be used both like it is or FILLED with Calcium carbonate (up to 140% in weight). The use of a filler allows to save on the colouring paste, on resin and glass fiber and furtherly decrease the styrene emission.

CHARACTERISTICS OF LIQUID RESIN			
Sales Specif. Rev. n. 2 of 14/01/2005			Metodo
Viscosity at 25°C.	mPa*s	70 - 100	(253)
Thixotropic Index	(Vi/Vm)	1,2 - 2	(256)
Styrene Content	%	41 - 45	(401)
Acidity Number	mgKOH/g	13 - 26	(001)

STORAGE STABILITY: **3 months in the dark at 23°C.**

APPLICATION

SANITARIES REINFORCEMENT - under standard working conditions (resin pre-heated at 25-28°C, post-curing at 40-50 °C for 40-45 minutes) the adhesion occurs in 1,5-2 hours.

CURING CONDITIONS

The curing usually occurs at a temperature varying between 25 and 35°C by the adding of 1,5 - 2,5 % of Methyleneethylketonperoxide (Catalyst n° 1, n° 1 M - with about 9 % of active oxygen). The gel time and the workability (cutting of borders, drilling) of the reinforced manufacture are related to the application, room and post-curing temperatures.

CURING CHARACTERISTICS			
Curing Conditions:		C1T36	
2 % Catalizzatore n° 1 (MEKP-Butanox M 50 - Akzo) at 25°C.			
Gel Time	minutes	9 - 13	
Exothermal Peak	°C.	135 - 155	
Curing Time	minutes	19 - 33	
(from catalysis to exothermal peak)			
ASTM D 2471 (Method 1003)			

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STATYCAL STYRENE EMISSION**during the curing**

Curing conditions:
2 % C atalizzatore n° 1 (ME KP-Butanox M 50 - Akzo) at 25°C.

Statycal emission of styrene

45-55 gr/m² (Met. 106 - UNI 9557-474)

CHARACTERISTICS OF CURED RESIN**Curing conditions**

The base resin at 25°C. was added 2 % Catalizzatore n° 1 (MEKP) a 25°C. and post-cured for 3h at 100°C.

Characteristics	Unità	PURE RESIN Typical Value	Reference Methods
SPECIFIC WEIGHT OF CURED RESIN at 23°C.	g/cm ³	1,20-1,22	ISO 3521
VOLUME SHRINKAGE AFTER THE CURING	%	8,5	
BARCOL HARDNESS		38	ISO EN 59
WATER ABSORPTION (24 h. at 23°C.)	%	0,33	ISO 62 Meth.1
WATER ABSORPTION (28 days at 23°C.)	%	1,64	
TENSILE STRENGTH	MPa	32	
TENSILE MODULUS	MPa	2.900	ISO 527
TENSILE ELONGATION - Elongation at break	%	1,8	
FLEXURAL STRENGTH	MPa	65	ISO 178
FLEXURAL MODULUS	MPa	2.300	
HEAT DISTORTION TEMP. (H.D.T.) at 1820 KPa	°C.	48	ISO 75 Meth. A

INSTRUCTIONS FOR HANDLING AND STORAGE

Unsaturated polyester resins Poliplast are for professional use, only.

Use protective clothing, safety glasses and gloves suitable for organic solvents.

Ensure good ventilation, especially at floor level (Fumes and vapors are heavier than air).

For short exposures use approved masks (type A), in the most intense and prolonged exposures wear a breathing device. Use explosion-proof equipment and spark-proof tools and instruments, do not smoke.

Store product in tightly closed original containers, away from sunlight, in a cool and ventilated place. The outside storage, particularly in translucent plastic containers (such as PP-PE-polyethylene or polypropylene), may cause the formation of gels and significantly reduce (up to a few weeks) the stability of the product.

The correct storage temperature is below 25 °C. Heat will increase pressure and risk of explosion. Proceed carefully to the reopening of drums.

For fixed storage facilities, i.e. for tanks, containers and piping, use the stainless steel.

Take precautions against static electricity. The vapors that are released in the event of accidental spillage are heavier than air and may occur a danger of fire or explosion. They can accumulate in low areas or can spread at ground level. Ensure the presence of monitoring equipment for losses and verify the absence of ignition sources.

The unsaturated polyester resins Poliplast must be stored separately from oxidizing agents and catalysts (organic peroxides).

Operators must carefully read this data sheet and the Safety Data Sheet of the product.

Information found in this technical data sheet were developed through our experience and our Customers have to thoroughly test the products before starting any industrial application. Our Company has been continuously working to improve all his products. Hence we trust in Your comprehension if adjustments to the characteristics of the products are to be reported. The here given specifications are only indicative; as far as the material characteristics is concerned, you need to refer to the specific certificate of analysis and sales specifications. The present data sheet deletes and replaces the previously given versions. For further information get in touch, please, with the C.Q. & R.D. Laboratory