Product Data Sheet

Atlac 382 Powder

Product description

Atlac 382 Powder is a pulverised solid propoxylated bisphenol A fumarate polyester. The powder can easily be dissolved in a reactive monomer, such as styrene, resulting in an unsaturated polyester resin. A solution of 50 % (w/w) Atlac 382 Powder in styrene is commercially available as Atlac 382 (see paragraph dissolving Atlac 382 Powder in styrene)

Performance

Atlac 382 resins are suitable for high temperature water, acid and salt solutions and medium temperature alkali solutions.

Major applications

Atlac 382 resins can be used in all fabrication methods, but are especially adapted to meet the requirements of filament winding, centrifugal casting, hand lay-up and spray-up applications. These resins may also be used to formulate glassflake coatings and mortars.

Approvals

Cured non-reinforced Atlac 382 resins conform to type 1310 according to DIN 16946/2 and are classified group 5 according to DIN 18820/1 and group 6 according to EN12131/2.

Product specifications upon delivery)

Property	Value	Unit	TM
Viscosity, 23°C	560 - 660	mPa.s	2013
Color, Gardner	0 - 6	-	2017
Appearance	clear	-	2265
Acid value, as such	11 - 14	mg KOH/g	2401
Gel time from 25 to 35°C	5 - 12	Minutes	2625
Cure time from 25°C to peak	22 - 30	Minutes	2625
Peak temperature	140 - 170	°C	2625

Remarks

TM2013: 50% in styrene, Physica (Z2/100 s-1/23°C))
TM2017: 50% in styrene
TM2625: resin 50% in styrene: 1.0g Accelerator NL63-10P + 0.5g Accelerator NL51P + 1.5g Butanox M-50 (all AKZO-Nobel) added to 100 g resin

Properties of the resin upon delivery (typical values)

Property	Value	Unit	TM
Stability, no init., dark, 25°C	12	Month	-

Dissolving Atlac 382 Powder

Atlac 382 resin in styrene can be made by dissolving 50 % (w/w) Atlac 382 POWDER in 50 % (w/w) styrene. The most suitable mixing procedure will depend on the type of mixer that is available. When using a Cowless type mixer, first put all styrene into the container. Start agitation and add Atlac 382 powder as fast as the agitation will remove the solid resin from the liquid surface. When a propeller-type mixer is used, add one half of the styrene into the mixing container and start agitation. Charge Atlac 382 Powder slowly with continuous vortex agitation. When all of the Atlac 382 Powder has been added and a homogenous mixture is obtained the remaining quantity of styrene can be added under continuous agitation.

It is advised to add a small quantity of inhibitor to the styrene before adding the Atlac 382 Powder. The inhibitor advised is p-tert-butylcatechol that is available in a 10% solution. (Inhibitor NLC-10 – AKZO-Nobel)
Dissolving Atlac 382 POWDER into styrene will be accelerated when increasing the temperature slightly up to 50°C.

In order to adjust reactivity of the resin mixture both dimethylaniline and cobalt have to be used. In the Atlac Anti Corrosion Industry brochure starting formulations can be found for different reactivity characteristics.

See brochure Atlac Anti Corrosion Industry for further details.

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Storage guidelines
The resin should be stored indoors in the original unopened and undamaged packaging, in a dry place at temperatures between 5°C and 30 °C. The shelf life of styrene containing unsaturated polyester will be significantly reduced when exposed to light. Store in dark and in 100% light tight containers only.

Material Safety
A Material Safety Data Sheet of this product is available on request.

Test methods
Test methods referred to in the tables are available on request.

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