adhesivetech
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Phone: +64 9 838 6961 **Website:** adhesivetech.co.nz

VERSION: 1.0
DATE ISSUED: 15/01/2024

406 Colloidal Silica

Introduction:

WEST SYSTEM 406 is a hydrophilic colloidal silica which is used as a general purpose viscosity modifier in epoxy and polyester resins.

The efficiency of WEST STEM 406 is very dependent on the degree of dispersion. For best results the use of high speed dispersing equipment is recommended.

Typical Usage:

- Improve strength
- Abrasion resistance
- General bonding
- Filleting
- Fairing compounds
- Prevent runoff on vertical and overhead joints

Mix Instructions:

Thixotropic Glue: add an equal volume (dry bulk) of WEST STEM 406 to the volume of mixed epoxy resin and hardener. Stir in thoroughly by hand using a broad spatula. The actual quantity added can be varied to suit the application.

Sag Reduction (laminating resins on vertical surfaces): add approximately half volume (dry bulk) of WEST STEM 406 to the volume of mixed epoxy resin and hardener.

Note: In this case it is recommended that pre-dispersions be used. This eliminates possible inclusions of undispersed lumps in the laminate.

WEST STEM 406 is not effective as a thixotrope in Vinyl ester systems. Please contact manufacturer for suitable vinyl ester thixotropic additives.

It is advised that end-users should carry out tests to determine for themselves the suitability of WEST STEM 406.

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Physical Properties:

	Value	Method
Appearance	White Powder	
Polarity	Hydrophilic	(behaviour in water)
BET surface area	200 ± 25 m^2/g	
Avg. Particle size	12nm	
Bulk Density	50g/L	
Real Density	2.6	
Moisture content	<1.5%	(ex. Factory 2hr @ 105°C)
Ignition loss	<1%	(2hr @ 1000°C)
pH value	3.6 – 4.3	(4% aq. Dispersion)

Storage:

WEST STEM 406 will keep for 2 years if kept in original unopened packaging at room temperature (15°C – 32°C) and out of direct sunlight. Opened packaging should be tightly sealed in air tight containers to limit moisture absorption.

Health & Safety:

Adhesive Technologies NZ ltd provides its customers with a product specific Material Safety Data Sheet (MSDS) to cover potential health effects, safe handling, storage, use and disposal information.

Direct skin contact should be avoided, WEST STEM 406 should not be ingested; in an unlikely event WEST STEM 406 is ingested see your nearest physician immediately.

- Use with good ventilation and adequate safety equipment including gloves.
- If skin contact occurs, wash with lanolin based hand-cleaner and water.
- If eye contact occurs, immediately wash for 15 minutes with running water.
- If swallowed:

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Resins - DO NOT induce vomiting, and contact a doctor or the Poisons Information Centre.

Hardeners – DO NOT induce vomiting, give plenty of milk or water and contact a doctor or Poisons Information Centre.