



FOAMING EPOXY SYSTEMS



It's all in the Chemistry

www.sicomin.com

Foaming Epoxies

Sicomin is the original formulator of a range of expanding foaming systems that have been developed specifically for the manufacture of strong, high quality structural cores and also used for the bonding of laminate skins made of epoxy, polyester or vinylester resins.

Foaming epoxies are used for core parts where rigid foam or honeycomb core are not well suited. Parts with complex geometry can be produced with Sicomin's foam without the time and expense of CNC machining rigid cores which accumulates large amounts of waste.

With over 30 years experience of formulating and processing foams for industrial, marine and aerospace applications, Sicomin now boasts one of the largest portfolios of multiple density systems on the market.

Sicomin's expanding epoxy foams and hardeners can be tailored to match the customer's production environment and part specification. This ensures a low pressure controlled expansion of the foam, allowing customers to use moulds with less support structure, and to tailor the system to the size of the mould, ensuring very high quality finished parts.

Using Sicomin's systems, it is also possible to use 2K mixing machines for accurate repetitive processing and large series production programmes.

Features and Benefits

- Largest range of multiple density foaming systems
- For strong, high quality, versatile cores
- Superior bonding of laminate skins (epoxy, polyester, vinylester)
- Low pressure, controlled expansion
- Closed Cell with no shrinkage after hardening or water uptake
- Adaptable to multiple production requirements and environments
- Fire retardant and fast curing versions available
- Machine dispensable options available for large series production runs

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TOP PRODUCTS

PB 170, 250, 400 & 600 / DM OX

Closed cell foam production epoxy systems from 170 to 600 kg / m³.

The PB systems are two part epoxy formulations which produce closed cell low density foams

The densities obtained are respectively about 170, 250, 400 and 600 kg / m³ (open mould expansion at 23°C)

The resulting foam is white but can be coloured with epoxy compatible pigments

The hardener modifies the curing time and reachable thickness

The mix evolves in two steps; gentle expansion and slow hardening of the foam

Adheres to a wide selection of materials

Can be poured onto and co-cured with prepregs or other epoxy laminates

Uniform density

Excellent resistance to water

CFC Free



PB 250 / SD 560X

Simple 1 to 1 volume ratio

Produces resilient foams with better flexural elongation without requiring any post curing cycles.

Resilient ambient curing epoxy foam

Two part epoxy formulation which produces closed cell low density foam

The density obtained is approximately 275 kg / m³ (open mould expansion)

The resulting foam is white but can be coloured with compatible epoxy pigments

The hardener modifies the curing time and attainable thickness

The mix evolves in two step; gentle expansion and slow hardening of the foam

Can bond to a variety of materials including wet surfaces

Uniform density

Excellent resistance to water

CFC Free

PB 270 i, PB 370 i & PB 570 i

Self-extinguishing 2 component epoxy foaming system

Two part epoxy formulation which produces fireproof closed cell low density foams

The densities obtained are respectively about 270, 370 and 570 Kg/m³ (open mould expansion)

The resulting foam is white but can be coloured with epoxy compatible pigments

The hardener modifies the curing time and reachable thickness

The mix evolves in two steps: rapid expansion and slow hardening of the foam

Adheres to a variety of materials

Can be poured onto and co-cured with prepregs or other epoxy laminates

Uniform density

Excellent resistance to water

CFC Free



EPOXY / FOAMING 170 TO 600 KG / M3 - Comparative Chart - Epoxy Systems - Foaming

	Weight ratio 100 g + .. g	Volume ratio 100 ml + .. m	Free expanded density at 20°C (Kg/m3)	Expansion volume ratio at 20°C	TG 1 Max °C		
PB 170, PB 250, PB 400 & PB 600 / DM 0							
PB 170 / DM 02	36	-	170	x 6,2	90		
PB 170 / DM 03	31	-	170	x 6,2	92		
PB 250 / DM 02	36	-	250	x 4	94		
PB 250 / DM 03	31	-	250	x 4	88		
PB 250 / SD 5602	90	100	275	x 3.7	58		
PB 270 i, PB 370 i & PB 570 i							
PB 270 i / DM 02	28	-	270	x 3.7	85		
PB 270 i / DM 03	22	-	270	x 3.7	81		
PB 370 i / DM 02	26	-	370	x 2,7	88		
PB 370 i / DM 03	23	-	370	x 2,7	88		

Sicomini boasts one of the largest product portfolio's of technically superior epoxy systems on the market today, as well as high performance advanced composite materials.

Epoxy Resins

Clear
Green
Foaming
Fire Retardant
Laminating
Fast Curing
Prepreg
Wood
Injection
Casting
Fairing
Solvent Free
Wet Surfaces

Reinforcements

Carbon Multiaxials
Glass Multiaxials
Aramid Multiaxials
Woven Fabrics
UD Fabrics

Structural Cores

PVC Foam
PEI Foam
PU Foam
Balsa Foam
PET Foam

Release Agents

Semi-Permanent
(with solvent or
water based)

Fillers

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