

Description

CASABOND E is a water-based RFL adhesion promoter, particularly recommended for pre-treatment of polyester tyre cords, conveyor belt and V-belt reinforcements.

Typical Properties

Appearance	low viscosity liquid
Colour	purple-brown
Density at 20°C (kg/m ³)	1050
Total Solids at 70°C (%)	19.5 - 21.0

Application

CASABOND E is recommended for addition to a resorcinol/formaldehyde/copolymer latex dip (RFL) formulation, to produce a single-stage aqueous dip treatment. After appropriate drying and curing, the polyester cord treated with the **CASABOND E / RFL** system shows excellent adhesion to a wide range of elastomers after vulcanisation.

Casabond E offers a user-friendly, water-based additive for RFL, for use in single-dip and double-dip applications. When formulated with RFL the grade offers adhesion enhancement; opportunity for modulus modification; and excellent resistance to settling in a dip-tank.

Guideline Formulations

Using "In-Situ" RF Resin						Using pre-formed RF Resin					
(A) RESIN MASTER						(A) RESIN MASTER					
Component	Name	Parts Dry	Parts Wet	Wt %	Comments	Component	Name	Parts Dry	Parts Wet	Wt %	Comments
1	Deionised water	-	716.80	89.82		1	Deionised water	-	713.80	89.45	
2	32% NaOH _(aq)	0.29	0.90	0.11		2	32% NaOH _(aq)	0.29	0.90	0.11	
3	Resorcinol	33.00	33.00	4.14	<i>Indspec</i>	3	Pre-formed RF resin, 75%	38.18	50.90	6.38	e.g. <i>Penacolite® R-2170</i> , <i>Indspec</i>
4	37% Formaldehyde sol'n _(aq)	17.50	47.30	5.93		4	37% Formaldehyde sol'n _(aq)	11.99	32.4	4.06	
TOTAL:		50.79	798.00	100.00	@ 6.4% solids, (F / R) ratio = 1.95	TOTAL:		50.46	798.00	100.00	@ 6.4wt% solids (F / R) ratio = 1.95
(B) LATEX MASTER						(B) LATEX MASTER					
Component	Name	Parts Dry	Parts Wet	Wt %	Comments	Component	Name	Parts Dry	Parts Wet	Wt %	Comments
1	41% VPSBR Latex	300.12	732.00	77.40	<i>Gentac® 118, Omnova Solutions</i>	1	41% VPSBR Latex	300.12	732.00	77.40	e.g. <i>Gentac® 118, Omnova Solutions</i>
2	Deionised water	-	180.00	19.00		2	Deionised water	-	180.00	19.00	
3	28% Ammonium hydroxide	9.49	33.90	3.60		3	28% Ammonium hydroxide	9.49	33.90	3.60	
TOTAL:		309.61	945.9	100.00	@ 32.8% solids	TOTAL:		309.61	945.9	100.00	@ 32.8% solids
(C) RFL FORMULATION 'A'						(C) RFL FORMULATION 'C', USING PRE-FORMED RF-RESIN					
Component	Name	Parts Dry	Parts Wet	Wt %	Comments	Component	Name	Parts Dry	Parts Wet	Wt %	Comments
1	(A) Resin Master, 6.4% solids	309.61	945.90	54.2		1	(A) Latex Master, 32.8%	309.61	945.90	54.2	
2	(B) Latex Master, 32.8% solids	50.79	798.00	45.8		2	(B) Resin Master, 6.4%	50.46	798.00	45.8	
TOTAL:		360.40	1743.9	100.00	@ 20.7% solids, (L / RF) ratio = 6.1	TOTAL:		360.07	1743.9	100.00	@ 20.7% solids. (L / RF) ratio = 6.1

(Guideline continued overleaf)

(Guideline continued overleaf)

Enhanced RFL Formulation using CASABOND E (and in-situ RF resin in RFL)

Enhanced RFL Formulation using CASABOND E (and pre-formed RF resin in RFL)

Component	Name	Parts Dry	Parts Wet	Wt %	Comments
1	Basic RFL Formulation 'A', 20.7 % solids	360.40	1743.90	63.90	(Using in-situ RF resin)
2	Casabond E, 20% solids	122.00	610.20	22.08	
3	Deionised water	-	409.70	14.83	
TOTAL:		482.40	2763.30	100.00	@ 17.5% solids, Casabond E = 22%

Component	Name	Parts Dry	Parts Wet	Wt %	Comments
1	Basic RFL Formulation 'C', 20.7 % solids	360.40	1743.90	63.90	(Used pre-formed RF resin)
2	Casabond E, 20% solids	122.00	610.20	22.08	
3	Deionised water	-	409.70	14.83	
TOTAL:		482.40	2763.30	100.00	@ 17.5% solids, Casabond E = 22%

RFL Curing

A recommended drying / curing cycle for RFL containing Casabond E follows:

- 45-90 seconds @ 100 - 150° C
- 60-120 seconds @ 230 - 240° C

The suggested conditions are guidelines: the experienced user will be aware that a lighter denier textile will require shorter drying and curing schedules compared to a heavier denier textile.

For further information on the Casabond E Series of RFL adhesion promoters, please refer to the Casabond product brochure, contact Thomas Swan via your local representative or visit www.thomas-swan.co.uk.

Packaging

CASABOND E is packed in 200 kg nett weight drums.

Shelf Life

CASABOND E should be stored in cool and dry conditions in a well ventilated area. Direct exposure to sunlight should be avoided. It is recommended that the material be used within 12 months of certification. Once opened the material should be used within 2 - 3 days.

Handling

Please refer to current Material Safety Data Sheet (MSDS).

NOTES

- CASABOND E must be stored in dry conditions at ambient temperature.
- Ensure that containers remain sealed up to the time of use.
- Prior to use or sampling, it is recommended that the containers be rolled as slight settlement may occur. If opened for sampling purposes then the container must be re-sealed under a blanket of nitrogen.
- Once a drum is opened, it is recommended the material be used within 2 - 3 days.