

TEGOPAC® RD – Reactive Diluents



WHAT ARE REACTIVE DILUENTS BASED ON TEGOPAC® TECHNOLOGY?



What are you looking for?

A raw material for

- Parquet adhesives
- Liquid membrane & roofing applications
- Pressure sensitive adhesives
- Epoxy blended adhesives

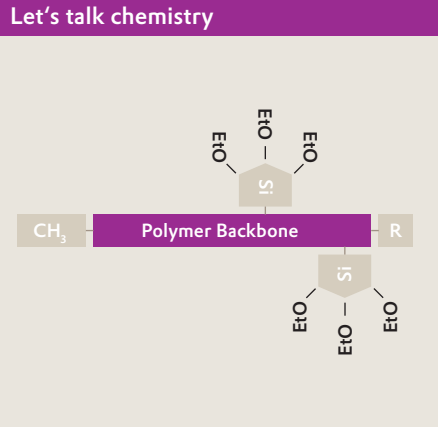
Technical parameters*

	TEGOPAC® RD 1	TEGOPAC® RD 2	TEGOPAC® RDS 1
APPEARANCE	Colorless, clear liquid	Colorless, clear liquid	Colorless, clear liquid
VISCOSITY (23 °C)	1,000 mPas	1,500 mPas	300 mPas
DENSITY (25 °C)	1g/cm ³	1g/cm ³	1g/cm ³
PLASTICIZER	none	none	none
SOLVENT	none	none	none
CLASSIFICATION	<ul style="list-style-type: none"> • Lateral cross-linking groups • Low cross-linking density 	<ul style="list-style-type: none"> • Lateral cross-linking groups • High cross-linking density 	<ul style="list-style-type: none"> • Lateral cross-linking groups • Medium cross-linking density • More hydrophobic character in comparison to RD 1 & RD 2
	Ethanol releasing SMP	Ethanol releasing SMP	Ethanol releasing SMP

* No specification data

TEGOPAC® RD products are silane-modified polymers with lateral crosslinking functions which release ethanol during the curing process. Curing takes place in the presence of moisture.

TEGOPAC® RD products can be used to reduce viscosities of adhesive & sealant formulations. The products can also be used for adhesive & sealant formulations to avoid migration effects. A replacement against migrating plasticizers is possible.



Features

- Viscosity reduction
- Reduction of migration effects
- Improvement of cure through properties
- Increase of hardness and tensile strength
- No harmful reaction products
- Chemical anchoring into polymer network

It is recommended to combine TEGOPAC® RD with a co-binder.

TEGOPAC® RD 1 is used to reduce viscosity of formulations and to improve cure through properties with only marginal effects on mechanical properties of the adhesive & sealant product.

TEGOPAC® RD 2 is addressing polymer structures with a high crosslinking density. A development of formulations with improved curing properties, increased hardness & tensile strength and a convenient formulation viscosity is possible.

TEGOPAC® RDS 1 has lower water-pick-up properties in comparison the other reactive diluents, because of a more hydrophobic character. The product is used in in adhesive & sealant formulations to improve water-pick up properties & to reduce viscosity of formulations.

TEGOPAC® RD can be blended with different types of silane-modified polymers and epoxy polymers.

Formulating with various plasticizers, fillers, and other additives is possible to address applications like parquet adhesives, liquid-membrane & roof sealing applications or pressure sensitive adhesives.

Reason why

Feature	Benefit	Advantage/ reason why	Application
Viscosity reduction	Reduction of formulation viscosity	<ul style="list-style-type: none"> • Possible cost advantage by increasing filler quantity in a formulation • Improved handling properties • Better flowability of formulations 	<ul style="list-style-type: none"> • Parquet adhesives • Liquid membranes & roof sealing
Implementation into the polymer network during the curing process	Development of migration-free formulations is possible	<ul style="list-style-type: none"> • Staining-free formulations are possible by replacement of standard plasticisers 	<ul style="list-style-type: none"> • Assembly adhesives • Parquet adhesives
Improved cure-through properties	Better & quicker in-depth curing	<ul style="list-style-type: none"> • Allows earlier loading/straining; more safety 	<ul style="list-style-type: none"> • Sealing & bonding of large area surfaces
Increase of the formulation-cross-linking density with TEGOPAC® RD 2 Tensile strength (N/mm ²)	Increase of Shore A hardness and tensile strength	<ul style="list-style-type: none"> • Improvement of mechanical properties 	<ul style="list-style-type: none"> • Parquet adhesives • Liquid membranes & roof sealing • Assembly adhesives

SMP Product Portfolio

	RELEASE OF	MODULUS OF FORMULATION	POLYMER BACKBONE	PLASTICIZER	VISCOSITY AT 25° C [MPAS]	POSITION OF CROSS-LINKING GROUPS
Polymer ST 48	Methanol	low- medium	PPG	DHPH	60,000	terminal
Polymer ST 77	Methanol	low- medium	PPG	Elatur® CH	40,000	terminal
Polymer ST 61	Methanol	high	PPG	none	35,000	terminal
Polymer ST 61 LV*	Methanol	high	PPG	none	12,000	terminal
Polymer ST 80	Methanol	high	PPG	none	20,000	terminal
Polymer ST 81	Methanol	high	PPG	none	40,000	terminal
TEGOPAC® Seal 100	Ethanol	low- medium	PPG	none	55,000	lateral
TEGOPAC® Bond 160	Ethanol	medium	PPG	none	10,000	lateral
TEGOPAC® Bond 170	Ethanol	medium	PPG	none	30,000	lateral
TEGOPAC® Bond 251	Ethanol	medium	modified	none	30,000	lateral
TEGOPAC® RD 1	Ethanol	reactive diluent	modified	none	1,000	lateral
TEGOPAC® RD 2	Ethanol	reactive diluent	modified	none	1,500	lateral
TEGOPAC® RDS 1	Ethanol	reactive diluent	PPG	none	300	lateral

* Please contact your local representative for product availability in your country

Europe | Middle East | Africa

Evonik Operations GmbH
 Goldschmidtstraße 100
 45127 Essen
 Germany
 Phone +49 201 173-2665
 Fax +49 201 173-1990
www.evonik.com

Asia | Pacific

Evonik Specialty Chemicals Co., Ltd.
 55, Chundong Road
 Xinzhuang Industry Park
 Shanghai, 201108
 PR China
 Phone +86 21 6119-1125
 Fax +86 21 6119-1406

The Americas

Evonik Corporation
 P.O. Box 34628
 Richmond, VA 23234
 USA
 Phone +1 804 727-0700
 Fax +1 804 727-0855

This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.



www.evonik.com/solutions-for-adhesives