

# TEGOPAC® RD – Reactive Diluents



# WHAT ARE REACTIVE DILUENTS BASED ON TEGOPAC® TECHNOLOGY?



## What are you looking for?

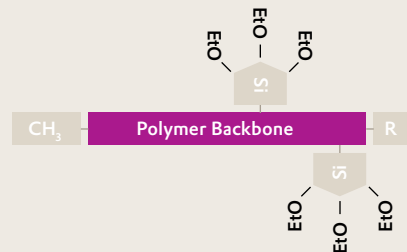
- A raw material for
- Parquet adhesives
  - Roofing applications
- Pressure sensitive adhesives
- Epoxy blended adhesives

## Technical parameters

	TEGOPAC® RD 1	TEGOPAC® RD 2
<b>APPEARANCE</b>	Colorless, liquid	
<b>VISCOSITY</b>	1 Pa.s	1.5 Pa.s
<b>DENSITY</b>	1g/cm <sup>3</sup>	
<b>PLASTISIZER</b>	no	
<b>SOLVENT</b>	no	

The two 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.

## Let's talk chemistry





## 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.

## Technical data

	Reference, formulation with 18% of plasticiser	10% plasticiser substituted (=1.8% of total formulation)	Total replacement of plasticiser by TEGOPAC® RD 1
<b>TEGOPAC® RD 1</b>			
Shore A hardness	34	36	39
Through cure (mm/24h)	1.9	2.8	3.9
Modulus 50% (N/mm <sup>2</sup> )	0.4	0.5	0.5
Tensile strength (N/mm <sup>2</sup> )	1.5	1.7	1.8
Elongation at break (%)	244	212	196
<b>TEGOPAC® RD 2</b>			
Shore A hardness	34	37	56
Through cure (mm/24 h)	1.9	2.8	3.9
Modulus 50% (N/mm <sup>2</sup> )	0.4	0.4	1.5
Tensile strength (N/mm <sup>2</sup> )	1.5	1.7	2.2
Elongation at break (%)	244	210	80

TEGOPAC® RD can be blended with different types of silane-modified polymers and epoxy polymers. When formulating with various plasticizers, fillers, and other additives, it is possible to address applications like parquet adhesives, roof sealing applications, pressure sensitive adhesives, and many more.

TEGOPAC® RD will strengthen Evonik Nutrition & Care's position as a solution provider for various needs in the adhesive & sealants market and enhance the silane-modified polymer portfolio.

### Reason why

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

## 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 150	Ethanol	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

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

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