

Laponite[®], Optigel[®] and TIXOGEL[®]

THICKENERS AND STABILIZERS
FOR LIQUID CLEANERS



ROCKWOOD[®]
ADDITIVES



Laponite® and Optigel® – for water-based systems

Laponite® grades

Laponite® RD, Laponite® RDS and Laponite® S482 are synthetic swellable layered silicates.

Properties and effects:

- ◆ high and constant stabilizing effect
- ◆ highest purity
- ◆ excellent whiteness
- ◆ formation of transparent gels with Laponite® RD
- ◆ formation of low viscous dispersions up to 25% with Laponite® S482, thickening in the system

Optigel® C-grades

Optigel® CL and Optigel® CK are natural swellable layered silicates.¹⁾

Properties and effects:

- ◆ excellent stabilizing and antisetling effect as well as sag control
- ◆ compatibility with high amounts of water-miscible solvents
- ◆ compatibility with anionic, nonionic and amphoteric surfactants
- ◆ stability of the gel structure over a wide temperature range

Optigel® W-grades

Optigel® WX, Optigel® WM and Optigel® WA are organically modified swellable layered silicates.

Properties and effects:

- ◆ high to very high thickening effect
- ◆ modification adapted to the intended use

Product characterization	Laponite® RD	Laponite® RDS	Laponite® S482	Optigel® CL	Optigel® CK	Optigel® WX	Optigel® WM	Optigel® WA
Whiteness (Elepho R 457)	90%	90%	90%	80%	60%	60%	60%	60%
pH-stability	5 – 13	5 – 13	5 – 13	2 – 13	2 – 13	2 – 12	5 – 11	6 – 11
Electrolyte stability* (sodium salts)	0	0	0	+	+	++	+	+
Transparency	+	+	+	–	–	–	–	–
Stabilizing effect	++	system-dependent	system-dependent	+	+	++	+	+
Thickening effect	+	system-dependent	system-dependent	–	0	+	++	+
Compatibility with oxidants	+	+	+	+	0	–	–	0
Typical use level	0.5 – 2%	0.5 – 2%	0.5 – 2.5%	1 – 5%	0.5 – 3%	0.5 – 2%	0.3 – 1.5%	0.5 – 2%
Preservatives	•	•	•	•	•	••	••	•

++ = very high; + = high; 0 = medium; – = low; • = recommended depending on application; •• = necessary
 *) Higher concentrations of soluble calcium, magnesium, ammonium and potassium salts affect the efficiency of Laponite® and Optigel®.

¹⁾ In the USA Rockwood manufactures similar products under the names Gelwhite® und Mineral Colloid®.

TIXOGEL® – for solvent-based systems

Product characterization

- ◆ organophilic layered silicates as thickeners for solvent-based systems
- ◆ stabilizers for water-in-oil emulsions

- ◆ product grades adapted to different solvent polarities
- ◆ preactivated TIXOGEL® grades for easier incorporation with simple stirrers

	TIXOGEL® VP	TIXOGEL® VZ	TIXOGEL® MP 100	TIXOGEL® MP 250
Solvent polarity	unpolar	polar	unpolar	polar
Dispersibility	normal	normal	very easy	very easy
Activator demand	yes	yes	no	no
Typical use level in cleaners	0.5 – 3%	0.5 – 3%	0.5 – 2%	0.5 – 3%

Laponite®, Optigel®, TIXOGEL® – Areas of Application

Areas of Application	Laponite® RD	Laponite® RDS	Laponite® S482	Optigel® CL	Optigel® CK	Optigel® WX	Optigel® WM	Optigel® WA	TIXOGEL® VP	TIXOGEL® VZ	TIXOGEL® MP 100	TIXOGEL® MP 250
Kitchen												
All-purpose cleaners (neutral cleaners)						▲						
Scouring cream cleaners					▲	▲						
Metal polishes	○				▲	▲						
Stainless steel cleaners					▲	▲						
Oven cleaners	▲	○	○		▲	▲		○	○			
Automatic dishwashing detergents	○			○	▲			○				
Hand dishwashing detergents	○		○									
Bathroom												
Acidic toilet bowl cleaners					○	▲						
Tub and tile cleaners					○	○						
Sanitary cleaners with chlorine bleach	○			▲								
Sanitary cleaners with oxygen bleach	○											
Living room												
Glass and window cleaners	○											
Floor cleaners			○		○	▲						
Furniture polishes	○								○		▲	
Leather care												
Shoe polish (emulsions)	○						▲					
Car care												
Wheel rim cleaners						▲	○					
Rubbing compounds					▲	○	○					
Car polishes	○				▲	○	○		▲			
Handcleaners												
Handcleaning pastes, solvent-free	○			○	▲	▲	○					
Handcleaning pastes, with solvent					○	○			○	▲		○
▲ = recommended ○ = suitable												



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