

Summary of Laponite grades and characteristics

Laponite grade name	gel forming	Temporary sol forming	Permanent sol forming	Features	Benefits / recommended for use in...
RD	✓			General purpose grade	Universal application and high efficiency in water based systems; rheology control in surface coatings, household products and general and industrial fields.
RDS		✓		General purpose sol grade	As for Laponite RD, universal application and high efficiency in water based systems, recommended for use in formulations that have low levels of free water.
S482			✓	Very high sol stability grade.	Aqueous dispersions of this grade will remain as stable liquids for very long periods of time. Recommended for use in highly filled surface coatings that have low levels of free water. Also for use in non-rheology applications, such as electrically conductive, antistatic and barrier films.
SL25			✓	A long term stable aqueous dispersion of Laponite	Ready-for-use, simply mix into a ready made formulation. Recommended for use in highly filled surface coatings. Also for use in non-rheology applications, such as electrically conductive, antistatic and barrier films.
B	✓			General purpose grade	For rheology control in surface coatings.
S		✓		General purpose sol grade	For rheology control in surface coatings.
JS		✓		High sol stability grade	Optimised for use in non-rheology applications such as electrically conductive, antistatic and barrier films.
XLG	✓			High purity, certified low heavy metal and low microbiological content	For rheology control in personal care and cosmetic applications, used to stabilise emulsions, lotions and creams.
XL21	✓			High purity, certified low heavy metal and low microbiological content	For rheology control in personal care and cosmetic applications, optimised for use in skincare formulations stabilised at pH 5.5 or lower.
XLS		✓		High purity, certified low heavy metal and low microbiological content	For rheology control in personal care and cosmetic applications, often used in rinse-off products containing surfactants.
D	✓			Optimised for rapid dispersion in sorbitol solution	For rheology control in toothpaste formulations.
EP	✓			Organic modification for Extra Performance in "difficult" systems	Functions well in formulas with very high or very low pH level. Recommended for systems containing higher levels of dissolved solids. Very efficient stabilisation of emulsions and suspended solids.
HW	✓			Modified to tolerate very Hard Water	All the features of Laponite RD, this grade will function very effectively when dispersed in hard or very hard water.

Speciality grades: Contact Rockwood to discuss your particular requirements

EL	✓			Has higher surface charge on the primary particle	Improved tolerance to electrolyte content in a formulation. Shows increased efficiency and gel strength compared with other grades of Laponite in systems containing higher levels of salts, alkali and/or surfactants.
OG	✓			Has a larger primary particle	Improved performance in systems that contain higher levels of bleach or acid. The level of viscosity developed by this grade remains stable over a wide range of electrolyte levels, giving advantages when used in systems where the soluble content of a formulation changes during ageing.
LV	✓			Develops very Low Viscosity in deionised water at up to 3% solids content	In high performance coatings applications, the liquid premix allows easier combination into low viscosity resin systems, but does not affect rate of paint viscosity development or moisture resistance of the coating.

The typical use level of Laponite in a formulation may range from 0.05% up to 1%, or higher in some cases. Both types of sol forming grades of Laponite are designed to produce low viscosity dispersions in water. These dispersions will produce viscosity build and structure very rapidly when they are combined with other formulation ingredients.