

Product Specification

TEGO® RC 1002 RPS Silicone

Product description

TEGO® RC 1002 is a solvent-free, UV curing silicone acrylate release coating with reduced penetration into slightly porous paper substrates. It is designed for easy release applications.

TEGO® RC 1002 is a Reduced Penetration Silicone (RPS). It is a “ready-to-use” one-component blend including TEGO® Photoinitiator A18.

Physical properties

Active matter	100 %
Volatile content	< 1 %
Viscosity, 25 °C (77 °F)	~ 600 mPas shear thinning
Specific gravity, 25 °C (77 °F)	~ 1 g/cm ³
Colour	Beige
Appearance	Opaque
Flash point (DIN 51758)	> 100 °C (> 212 °F)

UV curing of TEGO® RC 1002 requires inerting by nitrogen (< 50 ppm residual oxygen in the curing chamber).

Application fields

TEGO® RC 1002 is used in the manufacturing of release coatings with easy release properties. For example:

- Self-adhesive labels
- Self-adhesive tapes
- Hygiene products
- Many others

Advantages

TEGO® RC 1002 offers special advantages when used to coat alternative base papers, i. e. those papers not normally used as release liners. Alternative papers are often slightly more porous and thus might have insufficient silicone hold-out.

With such papers, TEGO® RC 1002 will provide better silicone coverage at low coat weights. In contrast to thermal curing silicones, it has excellent curing and silicone coverage properties on less costly alternative papers such as glossy publishing papers or label face papers. Using such alternative papers as base materials offers opportunities for savings in the production of release liners.

TEGO® RC 1002 can be used on both film substrates and standard base papers offering the advantage of a ready-to-use blend.

Dosage/Handling

As a ready-to-use blend, TEGO® RC 1002 can be used as supplied.

TEGO® RC 1002 will remain a stable mixture without separating for a few days. However, it will separate on standing for a long time. The entire content of the drum must be stirred well before removing any material. To facilitate this, extra headspace has been left in the drum.

Suitability tests

Before using any new silicone formulation, we recommend checking that the final product meets the target requirements.

This includes but is not limited to:

- Compatibility of release coating against targeted adhesives using ageing tests at both low and high temperatures.
- The influence of electron beam or Gamma irradiation on aging and release, e. g. sterilization.
- The influence of secondary UV exposure on release and aging, e. g. when curing UV printing inks on label stock with a clear face stock.

Thermal ageing or post-irradiation may cause a property change in the final product.

Note: This silicone contains particles that can reduce silicone misting as thought in US6511714. Without such particles, RC Silicones do not show silicone misting typically at speeds below 400 to 500 m/min. If TEGO® RC 1002 is coated at higher line speeds, US6511714 must be considered.

Storage stability

It is recommended that TEGO® RC 1002 is stored in the dark, at temperatures not exceeding 30 °C (86 °F). Under these conditions, the storage stability of TEGO® RC 1002 is 12 months (subject to storage in original, sealed containers).

The bath life of TEGO® RC 1002 can be as long as the storage stability if it is handled properly. Please stir and test before using the material again.

Packaging

20 kg (44 lbs) plastic drums
filled in 25 kg (55 lbs)
Pallet size: 8 x 20 kg = 160 kg

175 kg (385 lbs) plastic lined steel drums
filled in 200 kg (440 lbs)
Pallet size: 4 x 175 kg = 700 kg

Hazardous goods classification

Information concerning

- classification and labelling according to regulations for transport and for dangerous substances
- protective measures for storage and handling
- measures in case of accidents and fire
- toxicity and ecological effects

is given in our material safety data sheets.

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Evonik Nutrition & Care GmbH
Goldschmidtstraße 100
45127 Essen, Germany
Phone Europe +49 201 173 2665
Phone Asia +86 21 61191 125
Phone Americas +1 804 727 0700
interface-performance@evonik.com
www.evonik.com/Interface-performance

