

Product Specification

TEGO® RC 1412

Product description

TEGO® RC 1412 is an UV curable solvent-free epoxy silicone release coating for paper and film. TEGO® RC 1412 is used to provide **tight release** values.

Physical properties

Active matter	100 %
Volatile content	< 1 %
Viscosity, 25 °C (77 °F)	~ 250 mPa*s
Specific gravity, 25 °C (77 °F)	~ 1 g/cm ³
Colour	Yellowish
Appearance	Clear
Flash point (DIN 51758)	> 100 °C (> 212 °F)

The cationic curing mechanism of TEGO® RC 1412 does not require nitrogen inerting and can be cured under atmospheric conditions.

Cationic curing systems are catalyzed with TEGO® PC 1467. The catalyst may be poisoned by alkalines, sulphur, phosphorous, amine and other components. The cure speed and release properties are therefore dependent on the curing conditions, the choice of substrate and the adhesive system.

Very low or very high humidity may also have an influence on the possible cure speed and the release properties.

Application fields

The cationic curing TEGO® RC 1400 series was developed to complement the radical UV/EB curable TEGO® RC Silicone acrylates (RC 700/900 series). In some applications, the requirements for the release coating and the non-availability of inerted UV curing units may require the use of cationic curing silicones.

Advantages

- Easy to handle and use
- Inerting not required
- Low temperature impact to substrates
- Low extractables
- Stable release from most PSA's
- Tight release values
- Sensitized for faster cure speed

Dosage/Handling

With the addition of 1 to 3% of the cationic photo catalyst TEGO® PC 1467, TEGO® RC 1412 is ready for UV curing.

TEGO® RC 1412 contains the sensitizer ITX, enabling improved cure speed and reliability.

Lower release values are possible by adding TEGO® RC 1403 or TEGO® RC 1401. The addition level depends on the individual application. All blends need to be stirred prior to application.

The pot life of TEGO® RC 1400 series silicones with TEGO® PC 1467 added is minimum 72 hours if stored properly (avoid exposure to sunlight and heat). Maximum bath life can be longer but is very dependant on local storage conditions.

All blends have good adhesion on all substrates. The adhesion to the substrate can be improved by corona pre-treatment.

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

Storage stability

TEGO® RC 1412 should be stored in the dark at temperatures below 30 °C (86 °F). Keep oxidizing, acidic or alkaline substances away from TEGO® RC Silicones.

The guaranteed shelf life is 24 months, when stored under these conditions and in original sealed containers.

Packaging

25 kg (55 lbs.) plastic containers
pallet size: 12 x 25 kg = 300 kg

200 kg (440 lbs.) plastic lined steel drums
pallet size: 4 x 200 kg = 800 kg

1 000 kg (2 200 lbs.) container

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.

08/2019

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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

