

TEGO® RC 722 – a perfect anchorage

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Evonik introduces a novel silicone to complement its range of free radical curing RC Silicones.

Today TEGO® RC Silicones offer a wide range of products for various applications and release requirements. The free radical curing mechanism is a robust curing method that is standard in the pressure sensitive adhesive products industry for more than 20 years. Applications include standard labels and tapes but also highly specialized release liners on paper and plastic films. Some liner applications like specialty tapes use substrates as PE foams or PVC. A perfect silicone anchorage to the liner material is vital for a good quality liner. Furthermore, especially the label

industry has increasing requirements for lower release values in label constructions as there are trends that adhesive coat weights and face material gauge are further reduced. TEGO® RC 722 can help to achieve better silicone anchorage and enables lower release values in combination with TEGO® RC 922. TEGO® RC 722 is a solvent-free silicone acrylate and can be used at lower addition levels.

With only 15 % TEGO® RC 722 addition level, a premium release level can be realized with many adhesives and for ►►

Benefits

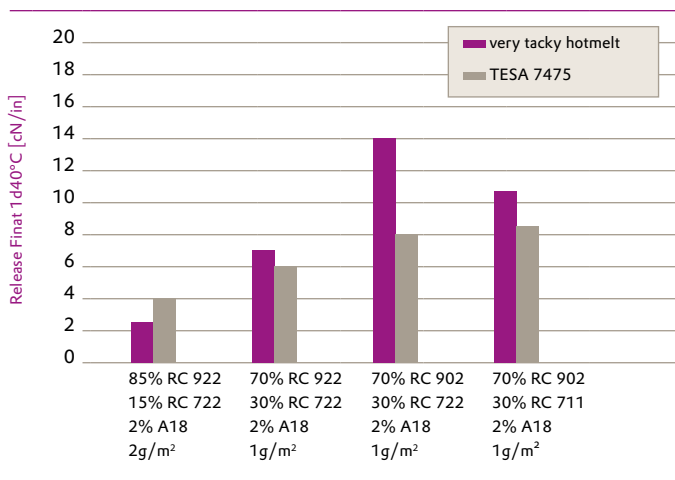
- Excellent anchorage to all substrates
- Premium release in combination with TEGO® RC 922
- Increased abrasion resistance and improved rub-off
- Improved coating quality due to lower blend viscosity

►►► many applications. This is especially the case in combination with TEGO® RC 922 that delivers a lower release compared to TEGO® RC 902 (see table 2). Also the blend viscosity is slightly lower at such low addition level.

Table 1: Typical formulation for premium release

Content	RC component
15 parts	TEGO® RC 722
85 parts	TEGO® RC 922
2 parts	TEGO® Photoinitiator A18

Table 2: Comparison of release properties



Silicone rub-off and in some cases also the scratch resistance, is very good right off machine. In some cases, however, the rub-off improves considerably within a couple of days. The rub-off is not getting worse over time, including on PET substrates and in humid conditions.

On difficult substrates, the maximum addition level recommended is 40% TEGO® RC 722. The use of organic anchorage promoters, like TMPTA or phosphoric acid acrylates, is obsolete.

Table 3: Rub-off results on selected substrates

Substrate	Rub-off
PET, Torray 36 µm	no
PET, Mitsubishi	no
BoPP, Süperfilm	no
HDPE	no
LDPE white	no
LDPE blue	no
Boise Advantage Plus 60g/m ²	no
Delfort Tersil Constant Gold S 60g/m ²	no, after a few days

Formulation: RC 922 / RC 722 / A18 85:15:2

Organic multifunctional acrylates can have an impact to the release performance which is observed to a far lesser extent when using TEGO® RC 722. Problems with increasing release level and release stability can be avoided using TEGO® RC 722. Unwanted side-effects resulting from the use of phosphoric acid acrylates, such as rubber roller deterioration, pot life issues and corrosion can be avoided.

Blends of TEGO® RC 722 need to be agitated well until they appear homogenous. Blends may separate on standing, thus stirring is necessary prior to application. All blends require the addition of 1 – 2% of TEGO® Photoinitiator A18. Before using any new silicone formulation, we recommend checking that the final product meets the target requirements.

Please also refer to our product data sheet.

More information about TEGO® RC Silicones can be found on our web site at www.evonik.com/tego-rc or ask your regular contact in your country. Request your free of charge samples for testing!

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