

# TEGO® RC Silicones

It's all about knowing  
when to let go



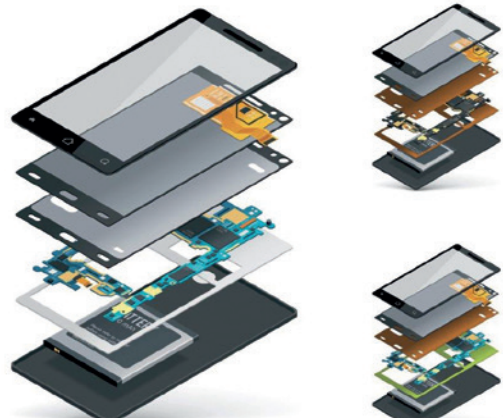
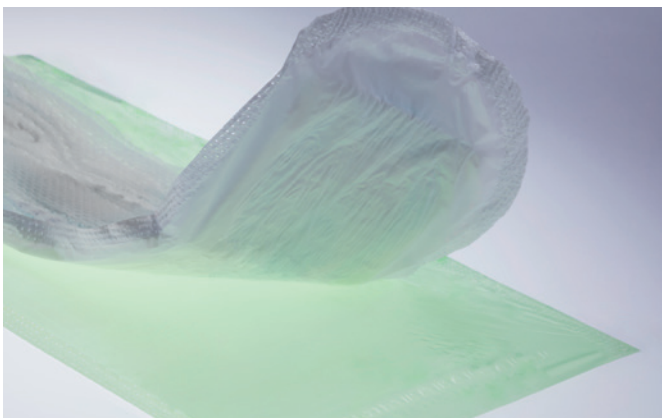
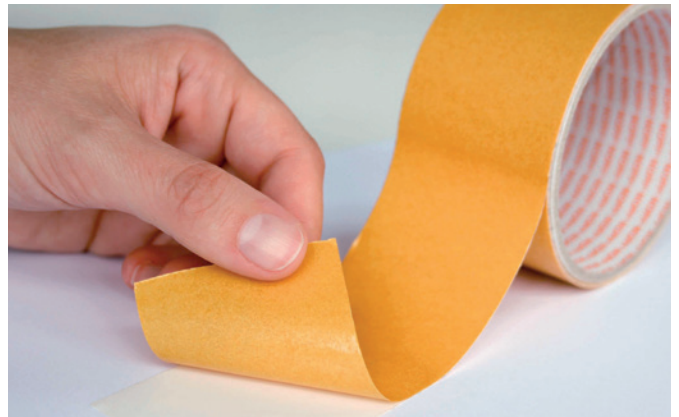
# TECHNOLOGY ADVANTAGES OF TEGO® RC SILICONES

**Pressure sensitive labels, tapes as well as hygiene and electronic products are the most important applications for release liners.**

Our TEGO® RC Silicones generate new business opportunities. The cold cure allows for the use of heat-sensitive substrates. Film thickness of PE, PP or PVC films can be minimized to reduce cost. Paper substrates do not need to be

remoisturized and show absolute lay-flat performance. Fast cure makes it possible to use TEGO® RC Silicones for inline processes together with adhesive coating. In addition very high line speeds can be realized. UV curing equipment is very compact, making it possible to retrofit existing coating and converting lines with silicizing capabilities. Compared to traditional thermal ovens, UV curing equipment also saves money, space and energy.

TEGO® RC Silicones are a perfect fit for release liners for all applications. Typical fields of application are industrial release liners, self-adhesive labels, graphic arts, tapes and hygienic products. Unusual substrates enable the manufacturing of new products and make TEGO® RC Silicones superior for many applications. Together with our customers, we will work to select the appropriate product formulation.



## FREE RADICAL CURING

The curing mechanism of silicone acrylates is very robust and unaffected by impurities in the substrates. The free radical curing reaction requires nitrogen inerting during UV exposure. Inerting is the exclusion of oxygen from the surface of the substrate and the area

under the UV source. In practical terms, it means introducing nitrogen into a specially designed curing chamber. The proportion of oxygen remaining on the surface of the substrate as well as at any place in the inerted chamber should not exceed 50 ppm. The current generation of TEGO® RC

silicone acrylates covers the whole range of release levels (premium/easy/controlled/tight release applications). This is based on a complete system of various silicone acrylate components which can be mixed with each other to adapt the release characteristic to a specific application.

### Applications and Substrates

#### APPLICATIONS WHERE TEGO® RC SILICONES ARE SUPERIOR

- Diaper tapes
- Electronics
- Envelopes
- Insulation tapes
- Business form labels
- Layflat labels
- Linerless (thermal) labels
- Protective films
- Sanitary napkins
- Security tapes

#### UNLIMITED SUBSTRATES ENABLE NEW PRODUCTS

- Aluminum & metallized foils
- Foams
- Non-woven & textiles
- Release base paper & low cost grades
- Printed surfaces
- PVC
- Recycled materials
- Renewable and colored films
- Thermal Papers
- Low gauge films

UV curable silicones are a solvent-less energy efficient method of producing release coatings with long term release level stability being free of volatile organic compounds. Typically a silicone release coating consists of an anchorage component, release component and a photoinitiator. Standard medium

pressure mercury UV lamps (arc lamps) or microwave engaged UV lamps (as used in normal UV printing and coating processes) can be used to cure the silicones. Typical application is with three or five roll or offset gravure coater heads, roll printing methods such as flexo have also been used successfully.

To ensure good anchorage on paper and especially film, in-line corona treatment is required.

For details about our products please refer to our website ([www.tego-rc.com](http://www.tego-rc.com)) and/or our "Overview of TEGO® RC Products".

### Benefits of free radical curing

- Unlimited choice of substrates
- Broad range of release values
- Compact, space saving curing units
- Food contact approval (ISEGA, FDA/FCN) for many products when formulated as specified
- Extremely fast cure without post-curing

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