

# Additives for Waterborne Acrylic Pressure Sensitive Adhesives



# SOLUTIONS FOR THE PRESSURE SENSITIVE ADHESIVES (PSA) MARKET

## TEGO® RC IS NOW A SYSTEM SOLUTION PROVIDER FOR PARTNERS IN THE PSA MARKET.

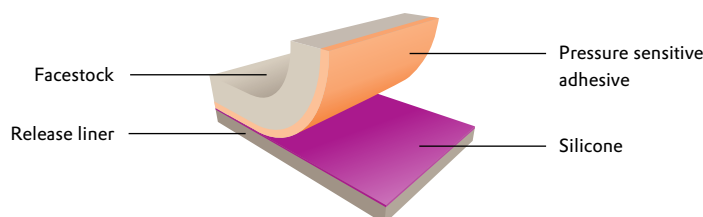
The acquisition of the Performance Material Division Business of Air Products by Evonik enables TEGO® RC to now offer solutions for two important components of PSA products – the release layer and the adhesive – from one source. PSA products such as labels and tapes consist of the facestock, the adhesive, and a release liner with a silicone release coating. In the final product the adhesive and the silicone

release coating are adjacent to each other. Our customers in the PSA market benefit not only from our broader product range however also from our adhesive formulation and application know-how and our global services.

The requirements for formulated adhesives have become more demanding with higher application speeds posing even greater challenge to the formulator. Today coating applications including curtain coater concepts run at standard speeds up to 1000 m/min and even

higher. The product portfolio of wetting agents and antifoams targets high speed coating applications of waterborne acrylics in PSA applications. Excellent substrate wetting and foam control while maintaining adhesive properties like peel, tack, shear, clarity and water resistance can be achieved. The high speed application process requires homogeneous and pinhole free adhesive coating and formation of a stable curtain during the curtain coating process.

**PICTURE 1:** Structure of a standard pressure sensitive adhesive laminate



## TEST FACILITIES

Evonik addresses these different demands for wetting and defoaming in the various waterborne PSA applications with our brands Surfynol®, Dynol®, REWOPOL®, TEGOPREN®, TEGO® Surten and TEGO® Antifoam. These products provide the right solution for each application. For pressure sensitive adhesive applications, we have equipment available to measure values for adhesion, cohesion and tack according to FINAT test standards. Our laboratories are well equipped with a

variety of test methods, including but not limited to standard defoamer tests, viscosity measurements, evaluation of wetting properties and microscopic evaluations.

Being a highly reputed player in the PSA industry for TEGO® RC Silicone UV release coatings our technical team is well experienced when it comes to adhesion performance in the final products e.g. labels and tapes. An integral part of the technical service are pilot plants and

laboratory facilities at Evonik's multiple global locations. Here we can assist your developments and projects. Our pilot coating line in Essen, Germany is – in addition to UV siliconizing – also capable of in-line adhesive coating (water-based dispersion, hot melt or UV hot melt adhesives). The pilot line offers a working width of 500 mm at a line speed of 20-100 m/min. This makes the line a viable tool for product development and pre-production trials.

## EVONIK ANTIFOAMS

Evonik Antifoam products are unique products based on organosiloxane and organic chemistry. Organosiloxanes combine high surface activity and efficiency with superior compatibility. TEGO® Antifoams provide excellent foam control providing efficient production process without adverse surface effect.

Excellent food contact status is a high priority. You will find detailed information about the food contact compliance on the respective Technical Data Sheets.

## EVONIK WETTING AGENTS

Evonik offers wetting agents based on broad and versatile technologies. Surfynols® and Dynols® are dynamic wetting agents active even at low concentrations especially suited for curtain coating processes. REWOPOL®, TEGOPREN® and TEGO® Surten W complete our product portfolio of wetting agents.

### Benefits of Evonik Antifoams:

- High efficiency
- Superior compatibility
- Easy handling
- Long-term stability of formulated dispersion
- Food contact compliance
- Free of alkylphenoethoxylates (APEO)

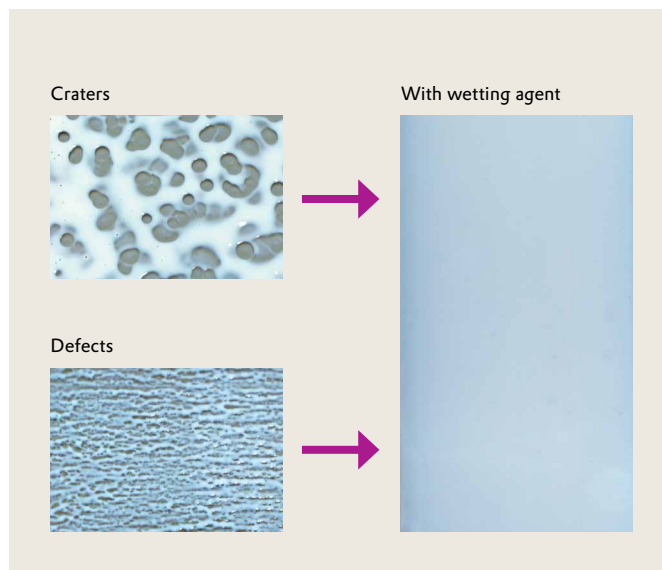
### Benefits of Evonik wetting agents

- Improved substrate wetting
- Foam control during processing and application
- Broad food contact compliance
- Good handling characteristics
- Improved water resistance

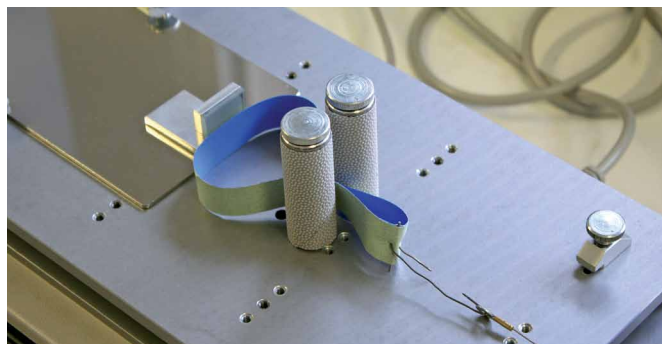
PICTURE 2: Essen Technical Center



PICTURE 3: Solving wetting issues with Evonik additives



PICTURE 4: Peel adhesion (FINAT test method 1 & 2)



PICTURE 5: Loop tack measurement (FINAT test method 9)

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