

## Technical Information

## TEGOMER® 6810 and TEGOMER® 6850

TEGOMER® 6810 and TEGOMER® 6850 are organomodified siloxanes (OMS) on a polymer carrier. The polymer carrier is polyethylene (PE) in the case of TEGOMER® 6810 and polypropylene (PP) in the case of TEGOMER® 6850.

**Physical properties**

Water content	< 0.1 %
Delivery form	pellets
Bulk density	500 – 600 kg/m <sup>3</sup>

**Application**

TEGOMER® 6810 and TEGOMER® 6850 are applied in various film processes, e.g. cast films, blown films and others. The products are suitable for transparent and matt films as well as for films containing TiO<sub>2</sub> (white opaque films) or CaCO<sub>3</sub>.

TEGOMER® 6810 and TEGOMER® 6850 cause a significant reduction of the coefficient of friction (COF). At the same time the slip performance is improved. There is no transfer of the additive to the opposite layer of the film causing a loss in adhesion force or a reduced sealing strength.

TEGOMER® 6810 and TEGOMER® 6850 are suitable to replace fluorine-based polymer processing aids (PPA) to prevent the film against shark skin appearance. TEGOMER® 6810 and TEGOMER® 6850 do not contain any halogens.

TEGOMER® 6810 and TEGOMER® 6850 prevent against die built up and, thus, reduce the need for cleaning stops and maintenance.

**Benefits**

The use of TEGOMER® 6810 and TEGOMER® 6850 gives the following benefits:

**In general**

- No thermal degradation
- No influence on printability
- TEGOMER® 6810 and TEGOMER® 6850 do not cause a coating of the rollers in cast film applications nor the metal dies in blown films applications resulting in less cleaning and maintenance work compared to PPAs
- High gloss and no haze in transparent applications, which is important for graphic art films for instance

**If used as a COF reduction agent / slip enhancer:**

- Longer lasting slip performance even after thermal aging
- Even at very low addition levels a homogenous distribution of the OMS additive can be achieved in the finished product.

**If used as PPA:**

- Unlike other PPAs, TEGOMER® 6810 and TEGOMER® 6850 show an immediate effect without start-up processes being required.
- Quick material change from one quality of film to another
- Quick color change as material does not stick to the metal walls
- No corrosive degradation products
- No issues with any release of fluorine compounds into the environment / ground water

## Dosage

TEGOMER® 6810 and TEGOMER® 6850 can be incorporated by using gravimetric dosing equipment. Alternatively, TEGOMER® 6810 and TEGOMER® 6850 can be preblended with the virgin polymer.

To improve the COF and/or the slip performance a dosage of TEGOMER® 6810 or TEGOMER® 6850 of 1 % up to 10 % (in the top layer) is recommended, a first trial should be based on a 3 % level.

If used as a PPA, TEGOMER® 6810 and TEGOMER® 6850 are applied with a dosage between 0.5 % and 2.0 %, respectively.

## Food Contact Status

### FDA

TEGOMER® 6810 and TEGOMER® 6850 can be used as additives in flexible food-contact polyolefin (PE, PP) in compliance with 21 CFR 177.1520, in food-contact ethylene vinyl acetate (EVA) film, in food-contact polystyrene (PS) film and in single and repeated-use food-contact polyethylene terephthalate (PET).

TEGOMER® 6810 and TEGOMER® 6850 may be used up to 1000 mg/m<sup>2</sup> food contact area in PP, PE, EVA and PS films, and in single and repeated use PET up to 1000 mg/m<sup>2</sup> and 6000 mg/m<sup>2</sup> food contact area, respectively.

A concentration of 1000 mg/m<sup>2</sup> food contact area corresponding for example with

- 1.0 % TEGOMER® 6810/6850 in a 100 µm film
- 10.0 % TEGOMER® 6810/6850 in a 10 µm film

assuming a film density of 1 g/cm<sup>3</sup>, respectively.

### EC 10/2011

According to EC 10/2011 TEGOMER® 6810/6850 may be used as a polymer production aid (PPA) in polymer films up to a maximum level of 1000 mg/m<sup>2</sup> food contact area.

TEGOMER® 6810/6850 can be used as a PPA, whereas it is not listed in EC 10/2011 to be used as an additive.

## Registration

TEGOMER® 6810 and TEGOMER® 6850 are listed in the following chemical inventories:

EINECS, TSCA, DSL, ENCS, IECSC, KECL, TCSI

Based on the submitted information of our raw material suppliers we can confirm, that TEGOMER® 6810 and TEGOMER® 6850 are compliant with EC Regulation 1907/2006 (REACH).

## Storage Stability

Minimum 12 months after date of production under normal good storing conditions.

## Packaging

25 kg net in a cardboard box with PE inliner  
600 kg net (24 x 25 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.

This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.

**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](mailto:interface-performance@evonik.com)  
[www.evonik.com/Interface-performance](http://www.evonik.com/Interface-performance)

