

# MAXITHEN<sup>®</sup> SCR

Masterbatches to improve the scratch-resistance of  
polypropylene parts

# MAXITHEN® SCR series

Due to its good mechanical properties, polypropylene (PP) is one of the most frequently used plastics nowadays. These properties are: low density and good processability coupled with a good price-performance ratio, recyclability and a very wide range of applications.

The big disadvantage of PP, which stands in contrast to today's striving for a high aesthetic value and surface quality of the manufactured products, is its low resistance to scratching. This is all the more important in view of the fact that the surface design of the products (styling & structure) has an increasing influence on the consumer's purchase decision.

## OUR SOLUTION

The new MAXITHEN® SCR range  
from the Gabriel-Chemie Group.

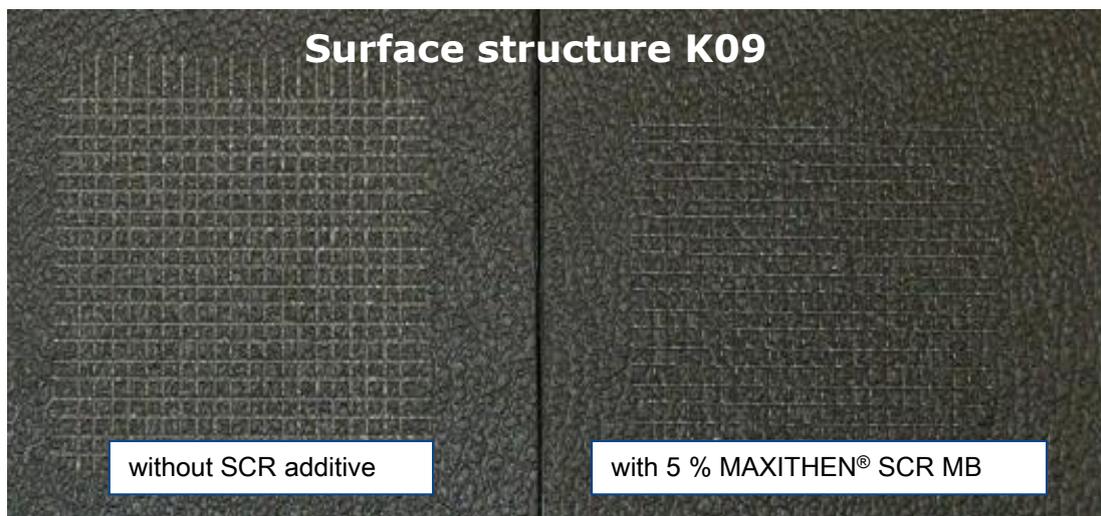
MAXITHEN® SCR Masterbatches significantly improve the optical appearance of scratches as well as the resistance of PP products to scratching, as a result of which the high-quality, new look of your plastic products can be permanently retained.

**SCR** ... short for '**SC**cratch-**R**esistant'

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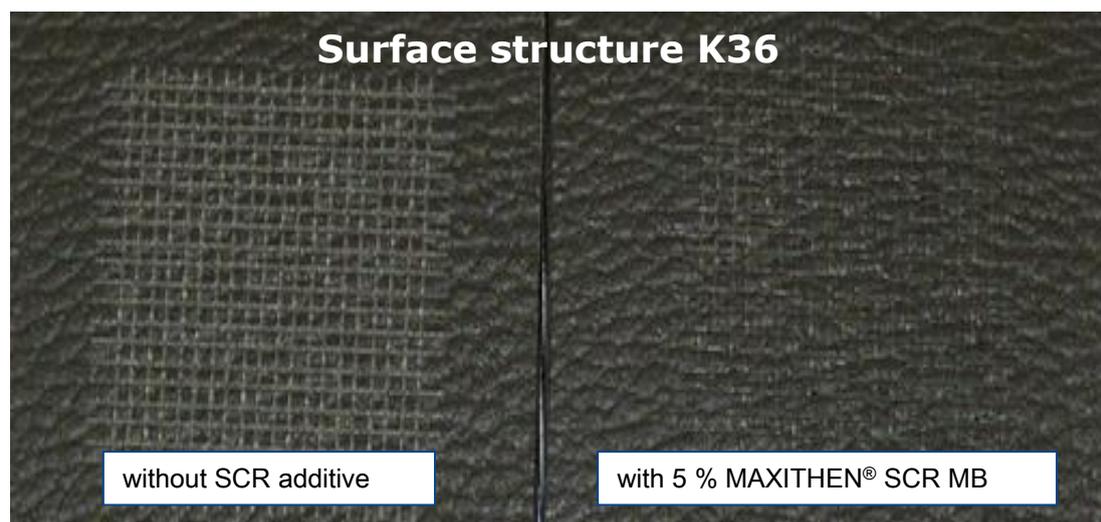
## ILLUSTRATION OF THE VISUAL EFFECT OF THE MAXITHEN® SCR RANGE

The increase in the resistance to scratching is based on a modification of the material by the SCR masterbatch, the effect of which is to reduce the depth and visibility of the applied scratches. Due to the high thermal stability and freedom from migration of the MAXITHEN® SCR masterbatches, a permanently lasting effect is ensured.



Parameters applying to all samples:

- Erichsen cross-cut test (load 10 N)
- Polymer: PP/TPO compound
- 20 % talcum
- 1.5 % black masterbatch



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The MAXITHEN® SCR range can do even more!

The new MAXITHEN® SCR masterbatches cover a wide area of applications due to their mechanism. The improvements that can be attained with the MAXITHEN® SCR masterbatch products range from:

- improved processability due to the
- reduction of the melt viscosity
- with increased output (throughput)

via:

- energy saving due to
- lower required extruder power
- and lower pressure consumption in the nozzle

through to:

- improved surface properties, such as
  - improved resistance to surface damage
  - surface gloss and
  - a lower coefficient of friction
- which also lead to easier demoulding.

Depending on the desired application, the masterbatch products from the new MAXITHEN® SCR range can therefore be used not only to improve resistance to scratching with a dosage of approximately 5 - 6 %; thanks to their characteristics, they can also be used as processing aids at lower dosages of approximately 1 - 2 %.

# MAXITHEN® SCR series

**SCR**atch-**R**esistant masterbatches for improving the resistance of polypropylene products to scratching

MAXITHEN® SCR masterbatches improve the resistance of PP and TPO/TPE surfaces (filled and unfilled) to scratching not only in automotive applications, but also for many other areas of use, such as:

- Household goods & appliances
- Entertainment electronics & electric appliances
- Garden equipment & garden furniture
- Furniture, decorative articles & toys
- Storage & packing
- Technical plastic parts of all kinds
- High-quality cosmetic articles, suitcases etc.

TPO ... **T**hermoplastic **O**lefins

TPE ... **T**hermoplastic **E**lastomers

# MAXITHEN<sup>®</sup> SCR series

## PROPERTIES AND REGULATORY STATUS

The MAXITHEN<sup>®</sup> SCR range encompasses the following products:

	MAXITHEN <sup>®</sup> PP7A7020 SCR	MAXITHEN <sup>®</sup> PP7A7030 SCR	MAXITHEN <sup>®</sup> PP7A7080 SCR
Recommended dosage (SCR)	5-6 %	5-6 %	5-6 %
Approved for contact with foodstuffs and cosmetics	yes *	no	yes *
Toys, EN71/Part 3 *	yes *	yes *	yes *
Cadmium, lead, diarylide and other heavy metals*	no *	no *	no *
Further additives possible	yes	yes	yes
Inherent colour of masterbatch	milky	milky	milky
Pigmentation	all colours possible	all colours possible	all colours possible
Gloss effects	possible	possible	possible

\* Please request a declaration of conformity from us.

# MAXITHEN® SCR series

## PROCESSING RECOMMENDATIONS

The new MAXITHEN® SCR masterbatches can be used in a wide range of processes. The effect of the MAXITHEN® SCR masterbatches also depends on the:

- type of plastic used
- type and proportion of fillers
- processing conditions
- surface structures

Note: The resistance to scratching is measured using different methods with partly different loads, which can result in differing evaluations of the effect.

Our concentrates for improving resistance to scratching (MAXITHEN® SCR) are suitable for processing in injection moulding machines and blown moulding machines as well as for extrusion. The recommended dosage for improving resistance to scratching is around 5-6 % masterbatch addition.

MAXITHEN® SCR masterbatches exhibit very good thermal stability and are suitable for direct printing. With the recommended quantities, the light-fastness of the polymer is negatively affected just as little as the mechanical characteristics, the weather resistance and the impact strength.

MAXITHEN® SCR can be combined with further additive and colour masterbatches (for example UV, anti-static, antimicrobial masterbatches etc.). Combination masterbatches can also be made to customer specification if required. Please, make specific enquiries to our Technical Service Department.

If you require information about suitability as an article for food requirements or for direct contact with foodstuffs, or about cosmetic or pharmaceutical conformity, please contact your local sales office.

**BUSINESS UNITS OF GABRIEL-CHEMIE GROUP:**



Building & Agriculture



Home & Lifestyle



Packaging for Industrial & Consumer Goods



Cosmetics Packaging



Food & Beverage Packaging



Medical



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