

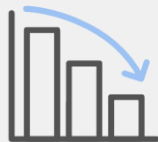


RUBA Thermoplast AG

**your top cap supplier
&
professional toolmaker**



Scratches on cosmetic caps and our experience



The scratches on cosmetic caps reduce the value of the product. They could occur during production through falling all over each other, but also during transport and in the further processing. In the case of a glossy surface they are easily visible, especially on dark and black caps. On white or transparent items they are only hardly seen.

The scratches and fall damages depend on various factors, one of them is weight of the cap.

After numerous tests and observations, we have carried out few experiments and evaluated them with following interesting results:

(The closures were tested with a unit weight of 5 grams)

Description	Scratch percentage %	approx. price increase per 1000 pcs
Robot removal with addition of additive	5-10%	6 Euro
Robot removal without addition of additive	10-15%	5 Euro
Without robot removal with addition of additive	15-20%	1 Euro
Without robot removal, without adding additives	25-38%	0

The price increase refers to a lot size of min.100'000 pieces.

More information about handling robot can be found [here](#).



To prevent scratches, there are some basic rules to be considered:

Description	Remark / result
Demolding temperature	<p>With cooling time influenceable:</p> <ul style="list-style-type: none"> • The colder the caps are demolded, the less scratches are present • The later the caps are dropped into the box, the less scratches are available
The drop height during demoulding	Reduce the drop height and drop speed with chicane
The drop height and temperature in the carton	<p>The equipment of conveyor belts with ventilators</p> <p>Using of the distributors at the end of the conveyor</p> <p>Optimization of the conveyor belt to increase cooling time</p>
Using of lubricant/additive Lifoslip (external lubricant)	<p>Advantage: better results</p> <p>Disadvantage: after a certain storage time, the molecule diffuses upwards and creates a film on the top surface. There could be some difficulties with further processing (finishing)</p>
Using of lubricant/additive Heconuk	<p>Advantage: better results</p> <p>Disadvantage: Effect of the lubricants after 48 hours at the end of the production. There could be some difficulties with further processing (finishing)</p>
Sensitising of employees during packing	Carefully handling with cartons, correct packaging containers, continuous training, using of gloves, etc.

Colour sampling

The colour sampling of dark caps with glossy outside shape are always considered very carefully. During the sampling can be made some tests with different settings and additives like a external lubricants without incurring high costs.

Through the early recognition of the problem „scratches“, later complaints by our clients can be avoid.

However, this sampling does not give a guarantee, that the production later represents 100% of the prior colour samples.

The caps with scratches, marks or shades should not be segregated. When the caps are released, the possibility of scratches has to be advised. (RUBA Form QMR 07.13 Colour sampling report).

Additionally we offer on customers demand an updated 100% control including lay-up. The scratches can not be absolutely removed, but the affected caps are sorted out.

Customer satisfaction and quality demands are individual and variable. Only if we have a precise knowledge of the special wishes of our clients, can we respond and react to the their demands.

Just let us know your requirements and we will provide you with the best solution!