### Task:

**Application field:** Chemistry / Plastics

**Material:** Rubber  
EPDM = ethylene propylene diene rubber: vulcanized elastomer with fibres

**Feed size:** 0-5 mm (granulate)

**Feed quantity:** 100 g (approx.)

**Material specification(s):** elastic, temperature sensitive

**Customer requirement(s):** < 0.2 mm, 100 - 200 g/batch

**Subsequent analysis:** not defined

### Solution:

**Selected instrument(s):** Ultra Centrifugal Mill ZM 200

**Configuration(s):**  
Push-fit rotor ZM 200, 12 teeth, stainless steel;  
Ring sieve ZM 200 trapezoid holes 0.50 mm, stainless steel;  
Optional:  
Cyclone ZM 200 with passage receptacle and holder, with 3 litres collector

**Parameter(s):** Revolution speed 18000 rpm

**Time:** 2 min. (approx.)

**Achieved result(s):** 60 % < 200 µm

**Remark(s):** Before grinding the granulate has to be pre-embrittled in liquid nitrogen (LN₂).  
For sample amounts > 100 g the usage of the cyclone and accessories is reasonable.  
If ring sieves with hole sizes < 0.5 mm are used, sieve blockades appear.
**Recommendation:** For grinding of EPDM elastomers we recommend our Ultra-Centrifugal Mill ZM 200 according to the above mentioned conditions.

**Pictures of the sample**

**Fig. 1:** Initial EPDM granulate

**Fig. 2:** EPDM elastomer after grinding in ZM 200 with ring sieve 0.5 mm trapezoid hole