### Task:

**Application field:** Chemistry / Plastics  
**Material:** Glass fibre reinforced polymethyl methacrylate PMMA  
**Feed size:** 5-8 mm (1 pellet)  
**Feed quantity:** 1 ml (per sample)  
**Material specification(s):** tough  
**Customer requirement(s):** < 1 mm  
**Subsequent analysis:** not defined

### Solution:

**Selected instrument(s):** MM 400 Mixer Mill  
**Configuration(s):** 2 x screwable grinding jar 10 ml, tungsten carbide (WC)  
1 grinding ball Ø 12 mm per jar, tungsten carbide (WC)  
**Parameter(s):** Frequency 30 Hz  
**Time:** 2 min. (per sample)  
**Achieved result(s):** < 100 µm  
**Remark(s):** The disintegration of the samples is only possible under pre-cooled conditions.  
For this procedure the closed jar, including material and one ball of 12 mm, was dipped in liquid nitrogen for a time of 3 min. using the cryo kit.  
**Recommendation:** For fine grinding of glass fibre reinforced plastics, the Mixer Mill MM 400 is suitable under the above mentioned conditions.