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To our members

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### General information

#### The impact resistance class - no quality criterion for profiles

Dear Sir or Madam,

EN 477 'Determination of the resistance to impact of profiles by falling mass' is an established method for process monitoring in profile extrusion. If the impact does not lead to fracture, but the profile is elastically cushioned by the profile wall, it can be concluded that the material is well plasticized. The profile standard EN 12608-1 specifies a classification system based on the drop height of the mass.

However, whether or not this sudden load causes breakage still depends crucially on the geometry of the profile. This is because elastic cushioning of an impact is only possible if the wall that is hit has a sufficient span width.

Due to the increasing complexity of the requirements for windows geometries that require small spans width between the inner webs are also necessary. In addition, technically sensible cams and screw eyes on the outer walls can prevent the definition of a suitable impact point. Despite good plastification, all of this would lead to breaks during testing. When developing a profile geometry, taking impact points into account can therefore be counterproductive.

Conclusion:

Differentiation according to impact resistance classes is not a basis for categorizing the quality of a profile.

Due to this geometry dependency of the test, the profile standard EN 12608-1 also provides for this impact resistance test to be omitted (class 0).

If you have any questions on this subject, please do not hesitate to contact us.

Yours sincerely,

Gütegemeinschaft Kunststoff-Fensterprofilsysteme e.V.



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