UN ECE – GRSG – IGPG
6th Meeting
Ball drop results of laminated plastic panes

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1. Introduction
2. Ball drop test setup
3. Ball drop test results
4. Conclusion

Introduction

During the 4th meeting of IGPG the group questioned the different drop heights for the 227 g ball.
The group decided to set the ball drop height for „laminated plastic panes“ for all pane thickness to 6 m.

The PMMA manufacturers vetoed this decision.

The group gave Evonik the possibility to check the relevancy of this value.

Today we will present the test setup and test results

Test Setup

227 g Ball drop test:

Drop height of 6 m

Temperature of -18 °C

Time ap. 15 seconds (storage to test)

Tested material:

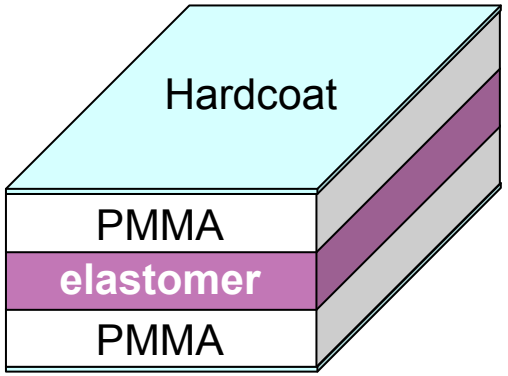
PMMA - elastomer - PMMA laminates with a thickness of

3.6 mm

4.6 mm

6.6 mm

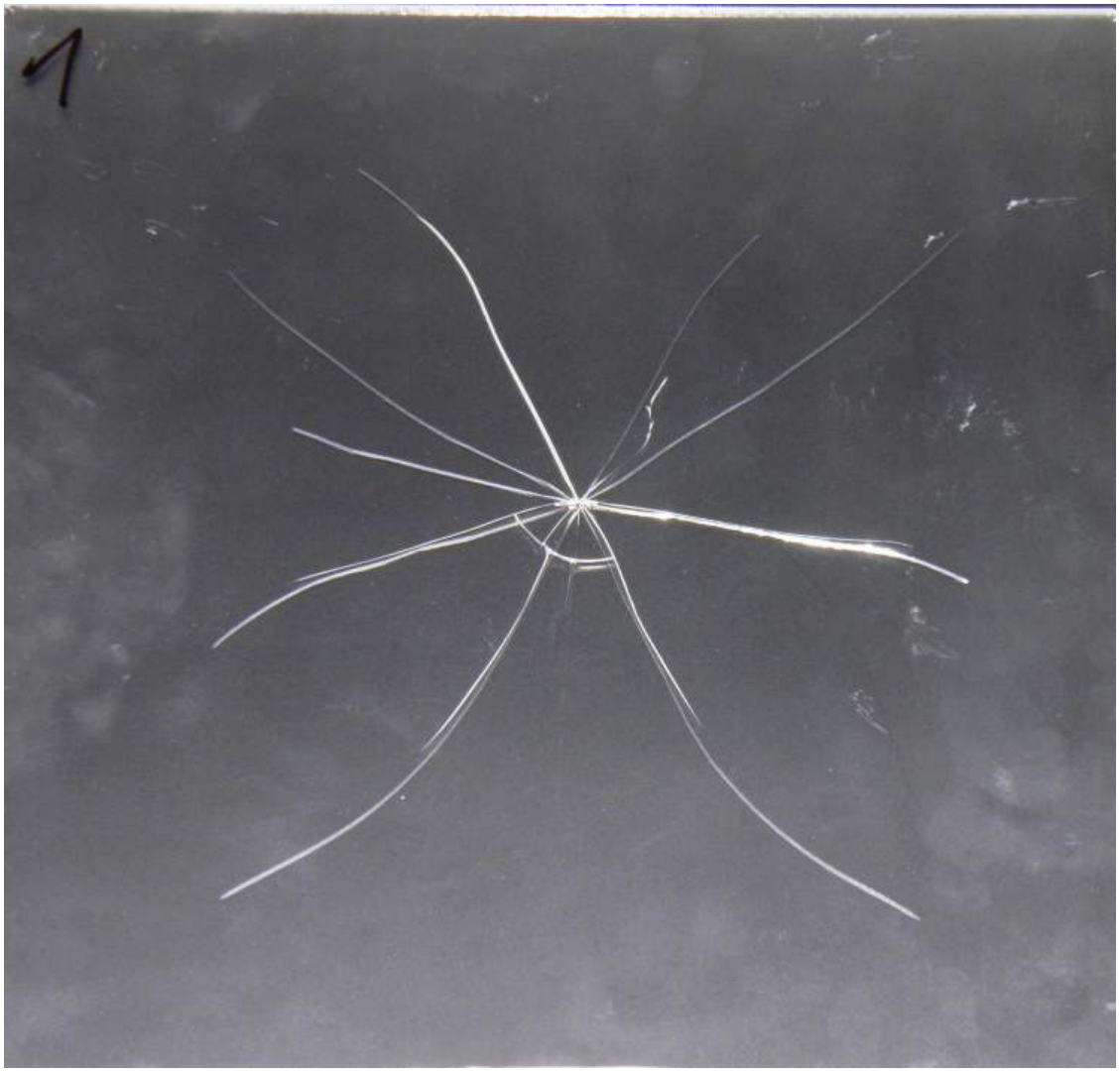
Both side hardcoated with polysiloxane lacquer



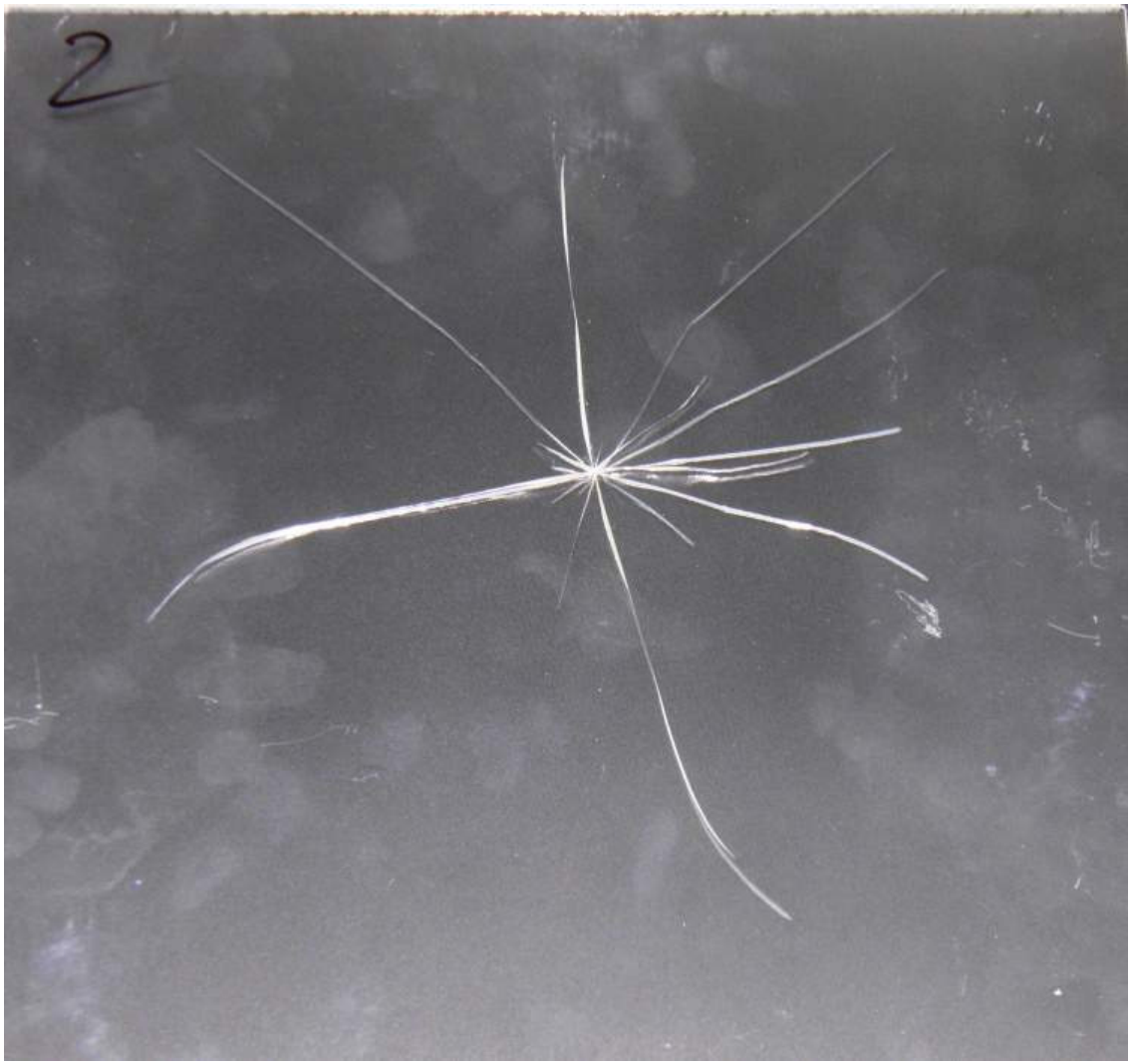
Test results

- All test are passed (10 of 10)
- The ball does not penetrate the test piece
- The test piece gets some fissures
- The test piece does not break into separate pieces
- No shards get of the test pieces

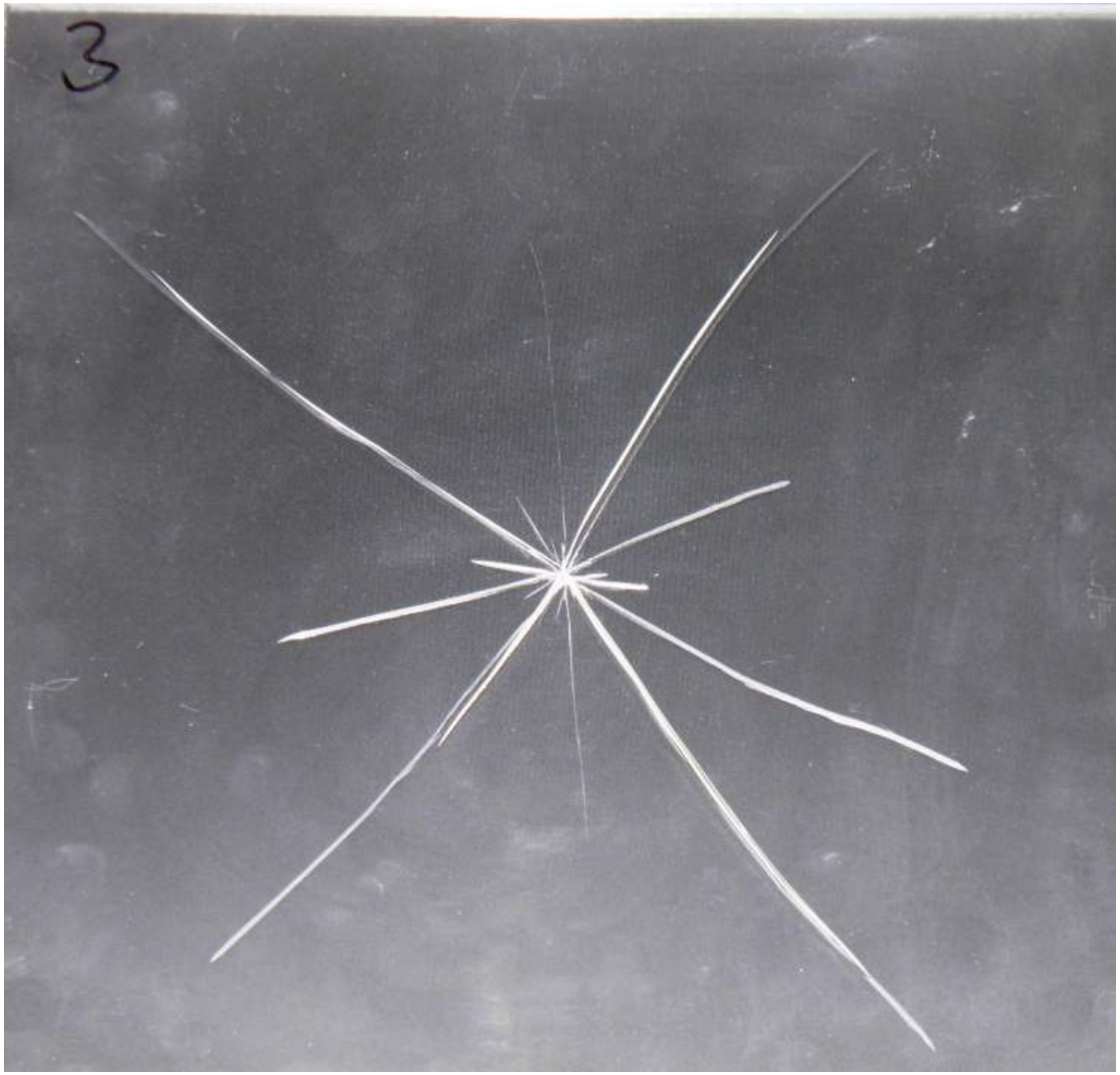
3.6 mm laminate



4.6 mm laminate



6.6 mm laminate



Conclusion

Laminated PMMA can pass the 227 g ball drop test with a drop height of 6 m

Evonik agreed with a ball drop height of 6 m for laminated plastic panes (new annex 18)