

KYDEX® 5555HI and KYDEX® 6565HI Specially Engineered High-Impact Solution

INTRODUCTION

SEKISUI KYDEX's portfolio of high-impact products supports our commitment to improving passenger safety through innovative products.

KYDEX® 5555HI and KYDEX® 6565HI are specifically engineered to improve passenger safety when used in components requiring the Head Injury Criterion (HIC) test. Recognizing our obligation to passenger safety and the importance of aesthetics in aircraft interior design, these two materials offer greater design flexibility with enhanced impact properties.

All KYDEX® materials developed for use in aircraft interiors are compliant to FAR 25.853, paragraph (a) and (d) requirements. The high-impact products, KYDEX® 5555HI and KYDEX® 6565HI are designed to absorb more impact energy prior to failure. These products have a ductile failure mode, compared to a brittle failure mode common on competitive PVC/PMMA materials. This improved "ductile failure" characteristic increases the likelihood that thermoformed parts made with KYDEX® 5555HI and KYDEX® 6565HI will pass HIC testing when used in demanding geometries in the passenger HIC zone.

SEKISUI KYDEX tested KYDEX® 5555HI and KYDEX® 6565HI with competitive PVC/PMMA materials to the ASTM D5420 Gardner Drop Dart Impact requirements using a common dart geometry. In all cases, the KYDEX® high-impact materials proved to have a higher mean failure than competitive materials.

The resulting ductile and "higher mean" failure provides an improved solution for demanding plastic part geometries on components utilized in passenger HIC zones. The colour, texture, gloss, and finish of KYDEX® high-impact materials are comparable to standard KYDEX® products with the same finish.

In keeping with our commitment to leading the industry with improved performance and enhanced specifications, pricing on these materials is the same, per pound, as their non-HI counterparts.

IMPROVED FAILURE CHARACTERISTICS

TESTING



At top: Falling weight drop dart test with GE geometry: the smallest outer diameter and largest rounded metal head.

At bottom: Geometries for HIC zones are stronger than ever.

KYDEX® 5555HI and KYDEX® 6565HI compared to non-HIC sheet results from Gardner Drop Dart Impact Testing.

SEKISUI
KYDEX

Customer Collaboration

6685 Low St, Bloomsburg, PA 17815 USA
Phone: 800.325.3133, +1.570.389.5810
Email: info@kydex.com

appLab™

Phone: 800.682.8758
Email: applab@kydex.com

kydex.com

KYDEX® 6565HI



Dropped at 18.08 J
160 in-lb_f

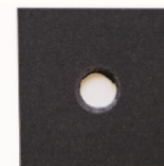


Dropped at 25.31 J
224 in-lb_f

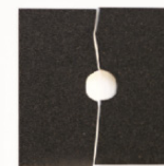


Dropped at 28.92 J
256 in-lb_f

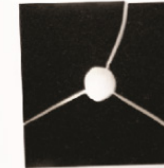
Non-HIC sheet



Dropped at 18.08 J
160 in-lb_f



Dropped at 25.31 J
224 in-lb_f



Dropped at 28.92 J
256 in-lb_f