

CLEARLY SAFER: REDUCING OPERATOR INJURY FROM FLYING DEBRIS CREATED BY ATTACHMENTS

LEXAN™ POLYCARBONATE SHEET IS 250x MORE IMPACT RESISTANT THAN GLASS



HEAVY EQUIPMENT APPLICATIONS

- Flat windshields
- Formed windshields
- Side, back and door glazing
- Visors
- Skylights
- Guards

LEFT: Two identical excavators, one outfitted with a heavy-duty hydraulic hammer, which increases the risk of injury when the operator is sitting behind a glass windshield.

Heavy equipment cab enclosures provide protection and comfort for the operator while optimizing the visibility of their workplace environment. Although glass has traditionally been used for cab enclosures, it has some serious drawbacks:

- Tempered glass may shatter and laminated glass may exhibit white-out or fail when hit violently by heavy objects or flying debris – potentially causing harm, disrupting work and requiring costly replacement.
- Glass is heavy, making it challenging to transport, handle and install.
- It is difficult or extremely expensive to create curved windows with glass.
- Untreated glass does not protect against some harmful ultraviolet (UV) radiation.

Increasing use of heavy equipment attachments, such as hammers and mulching heads underscore the need to optimize impact protection of enclosures with safety glazing.

That's why manufacturers of heavy equipment for forestry, mining, landscaping and construction are replacing glass in cab windshields, enclosures and guarding with a more advanced material: LEXAN polycarbonate (PC) sheet.

BENEFITS OF SPECIALTY COATINGS

Coatings applied to the surface of PC sheet offer enhanced properties, such as:

- Abrasion resistance
- UV protection
- Chemical resistance
- Anti-fogging
- Graffiti removal
- Water run-off for visibility

ONSITE GLAZING REPLACEMENT MADE EASY

LEXAN sheet's light weight (50% less than glass) makes replacement glazing easy to transport and install in the field. Plus, the option to use existing framing can save time and money.

FIELD NOTES

To enhance safety and reduce maintenance downtime, a construction company replaced the three-part glass enclosure for its Volvo Wheel Loader with a one-piece design made with formed and post-coated Optical Quality LEXAN sheet. The impact-resistant, seamless enclosure improved the operator's safety and field of vision and the vehicle's aesthetics. An abrasion-resistant coating on both sides of the high optic LEXAN sheet provides chemical resistance and supports cleaning.

Learn more about the design, protection and visibility advantages of LEXAN PC glazing for heavy equipment enclosures.



Volvo Windshield Case Study



ABOVE: Single piece, high optical quality LEXAN PC windshield made by SHIELDS for a Volvo wheel loader, allowing the machine operator an improved field of vision compared to glass. Image courtesy of SHIELDS.

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Impact Performance Video



Cleaning Performance Video

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