



SAPPHIRE TRANSPARENT ARMOR

Extremely Hard, Durable and Scratch Resistant

>50% Reduction in Weight & Thickness

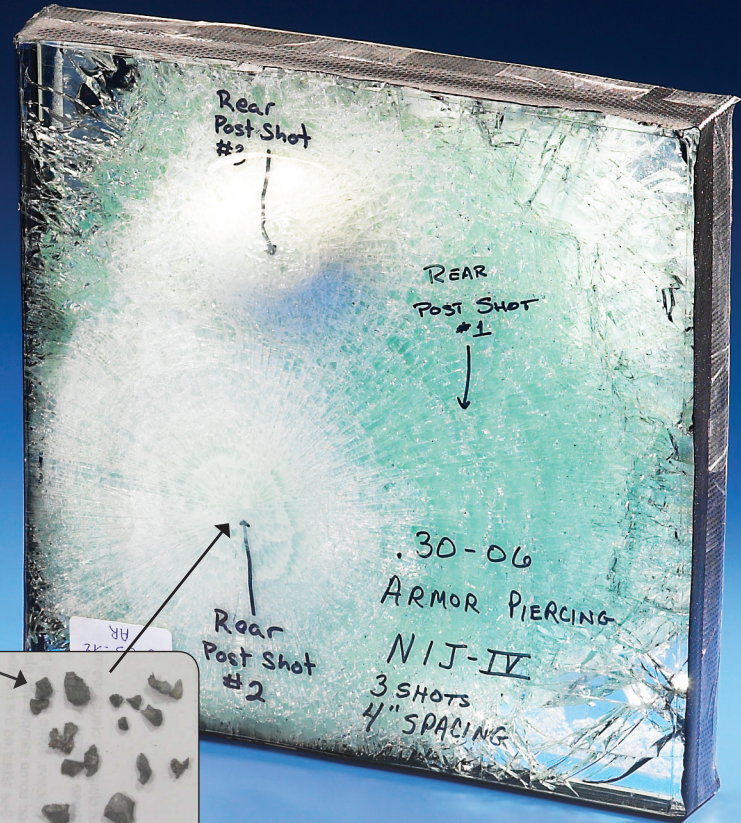
Significant Abrasion Resistance

Improved Night Vision Transmittance

Reduced Risk of Delamination

'Breaks' the Projectile

'Hardness Defeats Hardness'



Remains of hard steel core
from 7.62X54RB32 'Dragonov'

Saint-Gobain Crystals is the pioneer in offering SAFIRE™ Transparent Armor Solutions to address the ever increasing demands of ballistic performance at a reduced weight and thickness. Results from our latest designs have shown greater than a 50% reduction in weight and thickness at the same ballistic performance as traditional glass solutions.

Our transparent armor product line incorporates EFG™ Sapphire, 2nd in hardness to diamond, which provides an extremely hard and abrasion resistant strike face that 'breaks' the projectile upon impact. SAFIRE™ solutions have been designed to meet a variety of ballistic threats, while providing improved situation awareness in both the visual and infrared spectra. SAFIRE is currently being used in both ground vehicle and rotary wing platforms for the US Military.

CRYSTALS


SAINT-GOBAIN

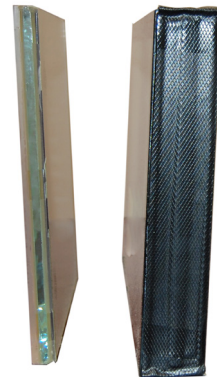
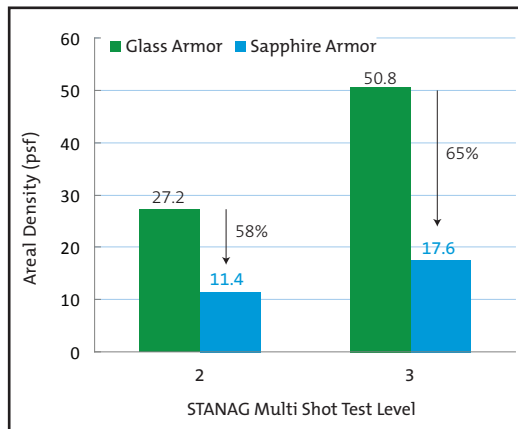


Significant Abrasion and Chemical Resistance with SAFiRE™ Armor

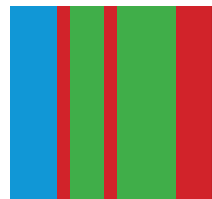


~20% Improvement in Night Vision Transmittance over Traditional Glass Armor

>50% Reduction in Thickness Using SAFiRE™ Armor to Defeat the Same Threat



Side by side comparison of **SAFiRE** and glass armor



SAFiRE

Sapphire



Glass Armor

Polymer

Glass

Schematic of **SAFiRE** and traditional glass armor



Saint-Gobain Crystals

www.crystals.saint-gobain.com

Manufacturer reserves the right to alter specifications.

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(07-16)