

Features

- Optical and rugged quality
- glossy (**OptiProtect-h3**) or non-glare coating (**OptiProtect-AR3**)
- hard coated
- only negligible reduction of transmission
- high chemical resistance
- reliable temperature-resistant adhesion
- simple, bubble-free, self-sticking mounting on account of stiffness, i.e. very low pressure lamination
- repeated repositioning possible
- residue free removal and reapplication, even after extended periods of time (no conventional glue)
- no displacement on account of high cohesive resistance
- no electrostatic charge caused by mounting or removal of OptiProtect



Applications

Glare reduction and contrast enhancement by non-glare surface. Mechanical and chemical protection of displays, touch panels, keypads, and other sensitive surfaces (in control panels, or in medical, measurement, lab, navigation, and telecommunication equipment, monitors and displays of all kinds) preventing

- scratches and abrasion from use of equipment in harsh environments
- staining or contamination caused by dust, dirt or chemical substances
- corrosion, destruction, or deterioration caused by sea water
- damage during equipment assembly

offering

- ease of cleaning and sustained sterility

and

- shatter protection

Delivery form

- Pre-cut parts: width up to 610 mm, length user-defined
 - in any shape to customer's drawing and requirements
 - with holes, cutouts, or notches
 - without or with tab to assist in peeling off back liner
- article description: Opti-Protect-...-0 without tab
 Opti-Protect-...-1 with tab

OptiProtect®: surface protection that lives up to its promises.

OptiProtect® : simple to apply on any flat surface (smooth or mat or textured) to be removed without any residue and renewed, allowing repeated repositioning.

OptiProtect® is ttv's registered trademark for protection films of highest optical quality for protection of displays (LCD, TFT and others), monitors, and their filters – as well as touch panels and key pads – from scratches, scuffs, smudge, and chemicals if used in rough environments. OptiProtect films can generally be used to protect high quality surfaces during use, assembly, storing, and shipping.

These hard coated, scratch resistant protection films also prevent sea water from damaging displays and other critical surfaces of maritime instruments.

Critical surfaces protected by OptiProtect are easy to clean and simple to be kept sterile in medical equipment, i.e. in operating rooms and intensive care units. OptiProtect is simple to install and to remove residue-free for replacement or repositioning.

OptiProtect can very effectively be applied on glass to reduce danger of breakage or splintering which increases safety and resistance against vandalism.

OptiProtect is available with **glossy** surface (**OptiProtect-h3**) or **non-glare** coating (**OptiProtect-AR3**).

TECHNICAL DATA	TEST METHOD	UNIT	VALUE*
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PHYSICAL

Thickness (without Liner) (OptiProtect-h3 / OptiProtect-AR3)		mm	approx. 0.175 / 0.235
Pencil Hardness	ASTM D-3363		approx. 2-3H

OPTICAL

Transmission (OptiProtect-h3 / OptiProtect-AR3)		%	approx. 93 / 90
Refractive Index	ASTM D-542		1.52
Haze (OptiProtect-h3 / OptiProtect-AR3)		%	< 0.7 / 2.5

ENVIRONMENTAL AGING

Chemistry	240 h at 80°C and 240 h at -30°C and 10 cycles -30°C to 70°C, 40 min dwell time	stable
Adhesion		no change
Color		no change
Bondline		no debonding or edge lifting
Optics		no change
Removability		no residue or adhesion buildup
Salt Water	OptiProtect on acrylic placed in salt water for 42 days	no change, no debonding or edge lifting

SHATTER TEST

Steel ball (508 g) dropped from height 1m onto - unprotected float glass (3 mm) - float glass (3 mm) with OptiProtect laminated to both surfaces	DIN 52338	breakage, flying splinters post-breakage resistance, no flying glass
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recommended minimum application temperature: 5°C
storage and shelf life: one year when stored at 22°C, 50% R.H.

* Values provided cannot be guaranteed in your application due to circumstances beyond our control.



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