

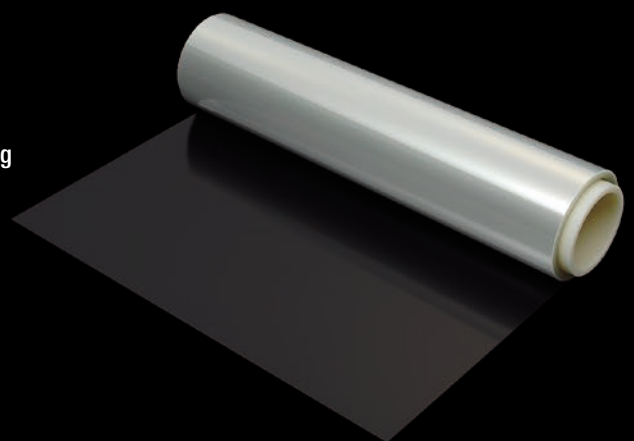
A detailed image of medieval armor, including a helmet and a breastplate, set against a dark background. The armor is metallic and shows signs of wear and battle. The text "Iron-Clad Protection" is overlaid on the right side of the armor.

Iron-Clad Protection

TDK Hard Coat Film has achieved industry-leading scratch resistance, an excellent fingerprint wiping property, and a high slipping property. The product has been realized by applying a hard coat agent developed through the recording surface protection for optical disks and the coating technology cultivated through the development of magnetic tapes. It is best suited for the surface protection or shatter proofing of the cover-glass of smartphones, tablet terminals and notebook PCs.

A logo consisting of a grid of small squares, some of which are colored blue and white, arranged in a pattern that suggests a film or a digital display.

TDK Hard Coat Film



Features

- ☐ **Standard Type HR series**
Industry-leading scratch resistance
- ☐ **Anti-Fingerprint Type HS series**
Fingerprints practically unnoticeable
- ☐ **Low Friction Type HL series**
High slipping property comparable to that of surface treatment glass products

Typical applications

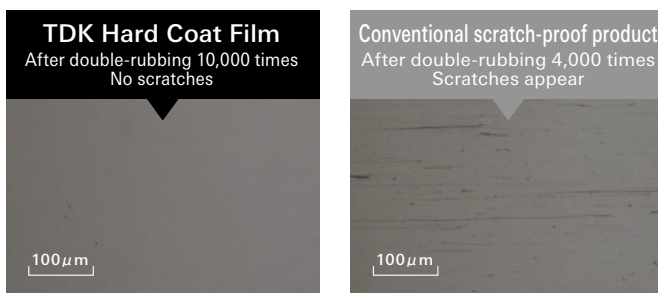
- ☐ Surface protection or shatter proofing of the cover-glass of smartphones, tablet terminals, notebook PCs and mobile devices.

Standard Type HR series

This Hard Coat Film has achieved excellent resistance against scratch and fingerprints as well as fingerprint wiping property. It is best suited for the surface protection of devices such as smartphones, tablet terminals.

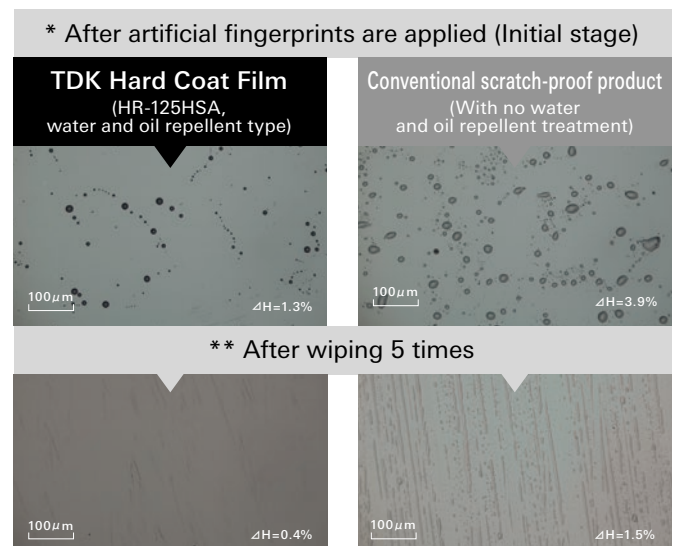
- ☐ **Protects from scratches with industry-leading scratch resistance**

Scratch resistance test using steel wool (#0000, 1kgf/cm²)



- ☐ **Highly resistant to fingerprints and easy to keep clean**

Anti-fingerprint property test using artificial fingerprints



* Haze value change before and after application of artificial fingerprints (by TDK measurement method)

** Haze value change before application of artificial fingerprints and after wiping of the film surfaces with BEMCOT® wiper 5 times (TDK measurement method)

Anti-Fingerprint Type HS series

This Hard Coat Film has achieved excellent anti-fingerprint property. Even if fingerprints are applied, they are not noticeable. It is suitable for those who are worried about fingerprints on smartphone or tablet terminals.

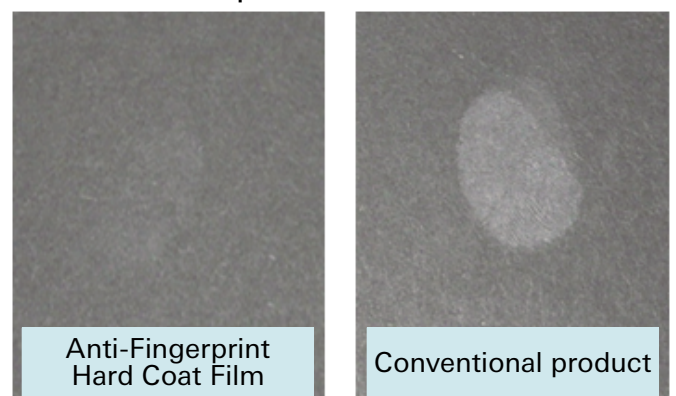
- ☐ **Water repellent and lipophilic type with water repellent function**

Contact angle Pure water 92°
 Oleic acid 10°

- ☐ **Excellent pencil hardness and scratch resistance even though the lipophilic property**

Pencil hardness 2 ~ 3H
 (HS-100HSB,
 100μm base material product)

Scratch resistance 5000cycles



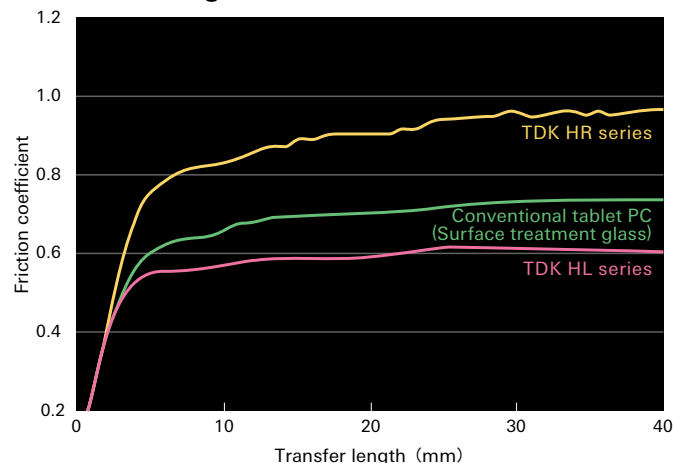
Low Friction Type HL series

This Low Friction Hard Coat Film has achieved a smooth touch feeling close to that of surface-treated glass. The smoothness could not be realized until now in the Hard Coat Film. It is most suitable touch screen, such as smartphones and tablet terminals.

Specification comparison

		TDK Standard Type HR series	Conventional tablet PC (Surface treatment glass)	TDK Low Friction Type HL series
Contact angle	Pure water	110°	113°	103°
	Oleic acid 10μl	73°	73°	50°
Friction coefficient		0.82	0.63	0.55

Friction coefficient measurement using tensile strength tester (TDK method)



Specification table

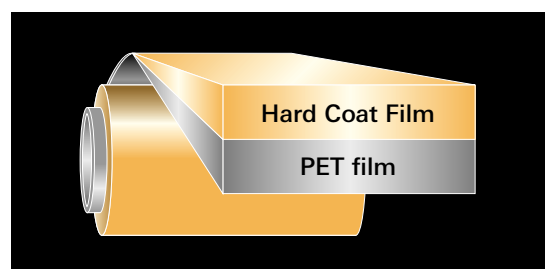
		Standard type			Anti-fingerprint type		Low friction type	
		HR series			HS series		HL series	
Items	Test method	HR-075HSA	HR-100HSA	HR-125HSA	HS-075HSB	HS-100HSB	HL-075HSC	HL-100HSC
Base material thickness	-	75μm	100μm	125μm	75μm	100μm	75μm	100μm
Total light transmittance Tt*1	JIS K 7105	92.0%			92.0%		92.0%	
Haze*1	JIS K 7105	0.5%			0.5%		0.5%	
Contact angle	Pure water	Contact angle meter			110°		92°	
	Oleic acid 10μl	Contact angle meter			73°		10°	
scratch resistance (Steel wool resistance)	Steel wool : #0000	More than 10000cycles			5000cycles		5000cycles	
	Weight : 1kgf/cm ²							
Pencil hardness	JIS K 5600-5-4	2H	2 ~ 3H	3H	2H	2 ~ 3H	2H	2 ~ 3H

*1: Each property has been evaluated after the glass lamination.

* The characteristic values shown above are typical values, not guaranteed values.

* For further information on product specifications, please contact our sales department.

Product configuration example



Application of a protection film on Hard Coat is also possible.

The product can be delivered either in the form of a sheet or a roll upon the request of the customer. The product can also be customized in various forms; please feel free to consult our sales persons.

Inquiries

Please contact us below for more details.

<http://www.global.tdk.com/contact/>