



Makrofol® ID O.V.M® for clear windows
Novel level 1 security – easy to see and verify.

Makrofol® ID



Optical variable material (O.V.M®) for clear windows

The identification market is increasingly demanding level 1 security features in polycarbonate (PC) documents that enable fast and seamless traveler authentication whilst being extremely difficult to replicate.

Color shifting effect

With Makrofol® ID O.V.M®, the color of the clear window switches between two colors depending on a bright or dark background. Integrated in transparent polycarbonate films used for clear window applications, it is compatible with existing production processes. The O.V.M® material enables clear windows in identification documents with an innovative visual effect in security levels of 1, 2 and forensic level 3.

Key benefits:

- Color shifting – easy to see and verify (level 1 security)
- No modification of existing production processes
- Intense UV fluorescent properties
- Integrated possibility of level 1, 2 or 3 security feature

At Covestro, we developed a color shifting film suitable for clear window applications. This optical variable material (O.V.M®) is an enhancement of the level 1 clear window security feature.



White background



White and black background

Makrofol® ID grade	Thickness (µm)
Makrofol® ID 349 6-2 560648 OVM648 blue/red (non-laser)	100 µm
Makrofol® ID 349 6-2 360542 OVM542 pink/yellow (non-laser)	100 µm

Authentication levels:

Level 1: visible/tactile features
Level 2: simple equipment needed
Level 3: laboratory equipment needed



Covestro Deutschland AG
Specialty Films EMEA/LATAM
41538 Dormagen
Germany

films.covestro.com
films@covestro.com

This information and our technical advice – whether verbal, in writing or by ways of trial – are given in good faith but without warranty and are subject to change without notice. This also applies where proprietary rights of third parties are involved. The information is provided by Covestro AG without assumption of any liability. Our advice does not release you from the obligation to verify the information provided – especially that contained in our safety data and technical information sheets –, to check for updates of any information provided by us and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery.

Edition: 2020 · Order No.: COV00088638 · Printed in Germany · E