

REFLECON® tarnish 3D Scanning Matting Agents



GENERALLY:

REFLECON® tarnish matting agents have been developed to dull reflecting, mirroring, transparent or dark surfaces for the 3D optical measurement technique (known as laser scanning).

3D laser scan allows a quick and exact non-contact measurement of complex geometrics. For an optimal measurement of reflecting, mirroring, transparent or dark surfaces a matting agent is applied before.

For this application two different REFLECON product types are available:

- REFLECON® tarnish type 1 – volatile matting agents (sublimating)
- REFLECON® tarnish type 2 – non-volatile matting agents

FIELD OF APPLICATION

The optical 3D laser measurement is used especially in the following sectors:

- Automotive
- Aerospace
- Engineering
- General industrial use
- Medical engineering
- Art and culture

In these sectors the measurement is performed in the following areas:

- Optical testing and measuring technology
- Research & development
- Quality control
- Surface inspection
- Process monitoring

MATERIAL SUITABILITY:

REFLECON® tarnish matting agents are suitable for the following materials:

- Metal and non-metal
- Thermoplastic resins (PC, PP, PU or ABS)
- Glass
- Ceramic
- Polyester, cotton, PLA fabrics
- **Single-component lacquer coatings, plastics, rubber: Suitability see product table**

If you have any questions, do not hesitate to contact us!

APPLICATION:

To achieve a good and smooth surface the distance to scanning surface should be 15-20 cm.

REFLECON® tarnish-12-HC should be sprayed at a distance of 10 cm. The layer thickness must be specified by user.





REFLECON® tarnish - type 1

VOLATILE MATTING AGENTS

REFLECON® tarnish-10-MC -middle contrast-	REFLECON® tarnish-11-HC -high contrast-	REFLECON® tarnish-12-HC -high contrast-	REFLECON® tarnish-30-HC -high contrast-
100% free of Cyclododecane			
Special suitability for small measuring objects	Special suitability for large measuring objects	Special suitability for large measuring objects	Special suitability for large measuring objects
None suitability for lacquer coatings and plastics* □ □ □	Suitability for lacquer coatings and plastics* ■ □ □	Very good suitability for lacquer coatings and plastics ■ ■ ■	Suitability for lacquer coatings and plastics* ■ □ □
Solvent based	Solvent based	Solvent reduced	Solvent based
Odour reduced	Odourless	Odour reduced	Odour reduced
Excellent wetting characteristic on the surfaces mentioned above			
Labelling see safety data sheet	Optimized declaration of hazardous ingredients acc. to GHS – only flammable	Optimized declaration of hazardous ingredients acc. to GHS – only flammable	Labelling see safety data sheet
Creates a homogeneous , smooth, fine, dispersed, white powder layer for a precise measurement			
homogeneity of powder layer ■ ■ ■	homogeneity of powder layer ■ ■ □	homogeneity of powder layer ■ ■ □	homogeneity of powder layer ■ ■ ■
Powder layer is sublimating and evaporates residue-free Please read the notes on page 4!			
Sublimation time ■ □ □	Sublimation time ■ ■ ■	Sublimation time ■ ■ ■	Sublimation time ■ ■ □
No post-cleaning of the parts or surface needed.			
Contrast ■ ■ □	Contrast ■ ■ ■	Contrast ■ ■ ■	Contrast ■ ■ ■
No dust residue while spraying → Saving the fan of the laser equipment			
Very good adhesion and removability of marker points on layer of matting agent at average layer thickness.			
DELIVERY FORM:			
Aerosol can, 500 ml (12 cans / box)	Aerosol can, 500 ml (12 cans / box)	Aerosol can, 500 ml (12 cans / box)	1 L 10 L
MINIMUM SHELF LIFE:			
4 years, stored at storage temperature			
STORAGE TEMPERATURE:			
5-45°C**	5-45°C**	5-45°C**	5-30°C**

* Products are not suitable for single-component lacquer coatings. Suitability for plastics and rubber needs testing prior to use.

** Please note that the state of aggregate changes at temperatures below 5°C. When the temperature rises up above 5°C the state of aggregate will normalize again.



REFLECON® tarnish type 1

IMPORTANT NOTES REGARDING SUBLIMATION TIME

These are the influencing factors of sublimation time of REFLECON® tarnish type 1 products:

- **Temperatures:**
Higher temperatures of matting agent, measuring object and ambient temperatures, here especially $>30^{\circ}\text{C}$, reduce the sublimation time, lower temperatures increase the time.
- **Structure of surface:**
Rough surfaces increase the sublimation time, smooth surfaces reduce the time.
- **Thickness of matting agent layer**
Apply a thick layer of matting agent to increase the sublimation time enormously.

FURTHER INFORMATION

Contamination of measuring objects can cause residues of matting agent on the surface!





REFLECON® tarnish - type 2 NON-VOLATILE MATTING AGENTS

REFLECON® tarnish-80	REFLECON® tarnish-90
100% free of titanium-dioxide	
Odourless	Characteristic odour
Water based, solvent free	Solvent based, quick drying
No declaration of hazard ingredients according to GHS – ECO-Line	Labelling see safety data sheet
Creates a smooth, fine, dispersed, white powder layer for a precise measurement, medium grain size 5 µm	Creates a smooth, fine, dispersed, white powder layer for a precise measurement, medium grain size 6 µm
Excellent wetting characteristic on the surfaces mentioned above	
The layer thickness can be specified by user	
Easy to wipe off with a cloth or brush	
Easy to wash off with water	
Only available in container	Aerosol can is overhead sprayable – 360°
DELIVERY FORM:	
1 L 10 L	Aerosol can, 500 ml (12 cans / box) 1 L 10 L
MINIMUM SHELF LIFE:	
4 years, stored at storage temperature	
STORAGE TEMPERATURE:	
5-50°C	Aerosol can 5-45°C Container 5-50°C





REFLECON® tarnish-11-HC / tarnish-12-HC – aerosol cans

Product differentiation

Product attribute	REFLECON® tarnish-11-HC	REFLECON® tarnish-12-HC
Sublimation time	■ ■ □	■ ■ ■
Material suitability	<ul style="list-style-type: none"> ▪ uncoated objects ▪ metals and non-metals ▪ thermoplastics such as PC, PP, PU or ABS ▪ glass ▪ ceramics ▪ Polyester, cotton, PLA fibers 	<ul style="list-style-type: none"> ▪ coated and uncoated objects ▪ metals ▪ non-metals
Odour	odour reduced	characteristic
Spraying pattern	centred	extensive
Solvent	ethanol	<5% n-pentane

