General Information

Even with state-of-the-art scanners, it is necessary to apply matting spray in several application cases:

a) Transparent parts
As we are dealing with optical technologies, light needs to be reflected off the surface back into the sensor of the scanner. In case of a transparent surface, however, the light will go through the surface instead of being reflected by the same. In consequence, the scanner is not able to capture the surface structure.

b) Reflective parts
In case of reflective parts, such as a mirror, the light beams will be reflected in a focused way instead of in a diffused way. This means that the chance of a beam hitting the reflector of the scanner is greatly reduced and the scanner will only capture a fraction of the reflected light beams.

c) Deep Pocket
When the object to be scanned has deep pockets, the scanner receives a reflection from the walls of the pocket onto the bottom. This causes disturbance in the pattern of the light manifesting in the scan as “artefacts” or bad data.

d) High quality and accuracy
When quality and accuracy are important, you might want to apply spray to remove as much as possible all the causes like colour differences, differences in reflection, texture, etc.
The use of spray creates a matt, white coat reducing reflection and other inhomogeneities and thus provides perfect scanning condition.

In general, matting sprays used in 3D metrology for antireflective coating can be classified into the following two product groups:

Permenent sprays
- surface remains white after scan
- cleaning required or disposal of scanned object

Vanishing sprays
- coating evaporates automatically
- no cleaning after scanning required
- no pigment-contamination of laboratories, sensors, environments, scanners and users

1. Value proposition

AESUB white is a permanent scanning spray developed by scanning experts. It is the result of consistent further development of permanent scanning sprays.
The spray applies a homogeneous, thin matting layer onto the surface of the object. It is developed for optimal contrast values in optical scanning applications. AESUB white contains pigments, propellant and solvent and has been optimized with regards to material compatibility. AESUB white sets new standards by optimizing the surface's homogeneity and reducing layer thickness.
Unlike traditional sprays, AESUB white is free of titanium dioxide, associated with cancerogenic incidents through inhalation by the European Chemicals Agency.

AESUB white characteristics are:

- optimal contrast values
- average layer thickness of ~7 µm
- consistent and homogenous coating
- optimized material compatibility
- free of titanium dioxide (TiO2)
- excellent scannability

2. Areas of application

AESUB white facilitates and enables optical digitalization in a wide variety of industrial sectors and range of applications:

- automotive
- engineering
- aerospace
- energy sector
- architecture
- plastic design / art
- digital archiving
- reverse engineering
- optical metrology
- research and development
- process monitoring
- inline scanning
- measurement services
- surface inspection

3. Material compatibility

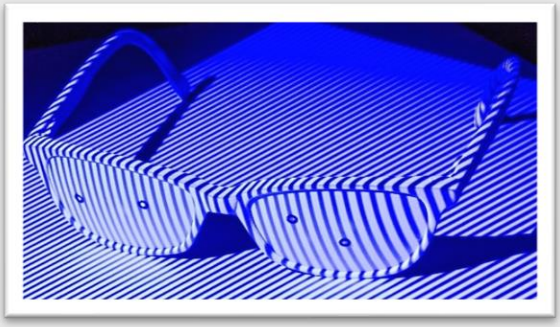
Material compatibility for specific applications cannot be guaranteed. Users should check specific material compatibility before use. AESUB white contains solvents. See the safety data sheet (https://aesub.com/download) for further information.

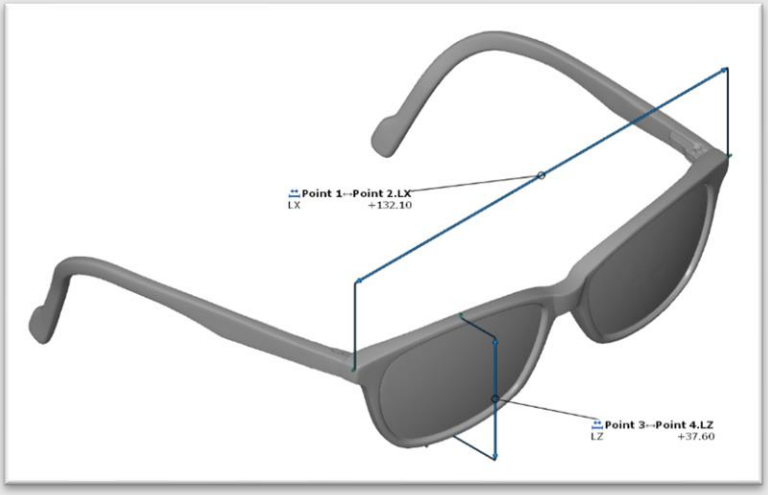
4. Layer thickness

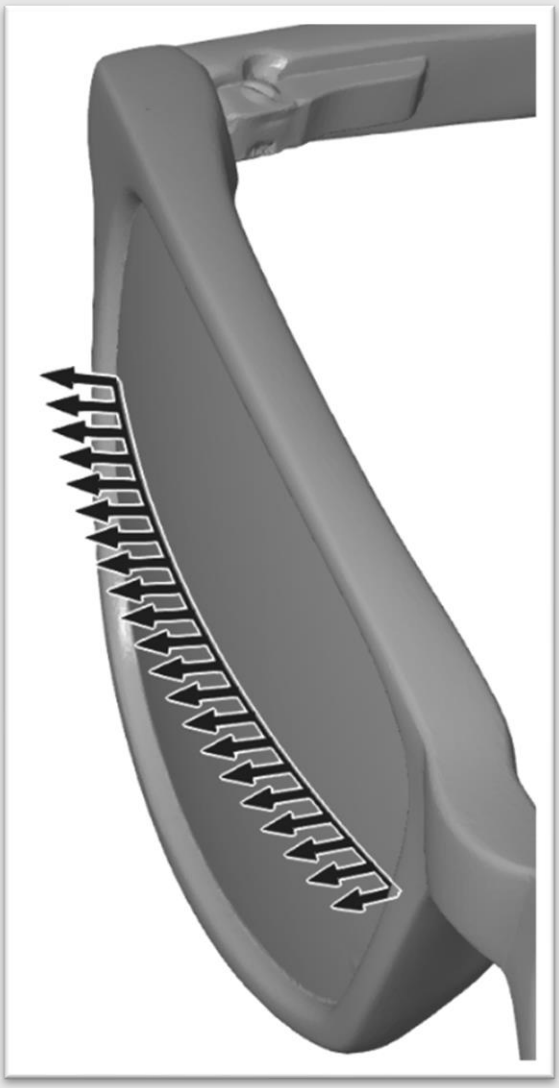
The average layer thickness of AESUB white is approx. 7 µm depending on the user-specific application.

5. Surface coating

AESUB white forms a consistent and very homogeneous coating on the surface of the object to be scanned. The figure below shows a picture of the scan process and the final data of glasses matted with AESUB white.







6. Application

SHAKE

Shake well until loud noise.

SPRAY

Apply AESUB white from 15-20 cm away. Spray over the entire surface that you will be scanning. Gently push down the spray button and move the can across the area using even, back and forth strokes. Move at a consistent pace without pausing at one point to achieve an even coat. Once the coat is applied, you can scan the object in usual manner.

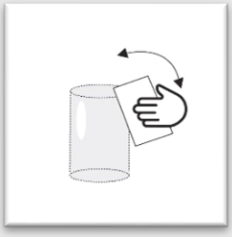
AESUB white is applied "wet". The solvent vanishes within a few seconds while the pigments remain as coating on the surface. Increase spraying distance or pace in case of drop formation or when coat remains "wet" for too long. Note that multiple spraying increases layer thickness. The ideal ambient temperature is 21°C/69.8°F.

Make sure not to spray next to your sensors and sensible equipment, as AESUB white is a permanent scanningspray containing pigments that will contaminate the nearby environment. Utilize the sublimating scanningspray AESUB blue to avoid pigment-contamination.

SCAN

Scan can be started as soon as you have a stable & white coating.
Scan object in usual manner.

CLEAN



AESUB white is a permanent scanningspray. Coated parts need to be cleaned or disposed after scanning. AESUB white was developed to allow easy cleaning. Utilize a soft brush in combination with water and a towel to clean coated parts.

7. Further Information

a) Storage

- optimal storage temperature ranges between 18°C and 21°C (64.4°F and 69.8°F)
- shelf life of five years
- store at dry conditions with no direct sunlight

b) Risk information centre

- If you feel unwell after use, please call the 24-hours emergency number +49 (0) 761/192 40 for assistance.

You will find further information our website (https://aesub.com) and in particular in the safety data sheet (https://aesub.com/download).

Disclaimer:
The above information was prepared carefully. We, however, cannot be held liable for any incorrect or incomplete information.