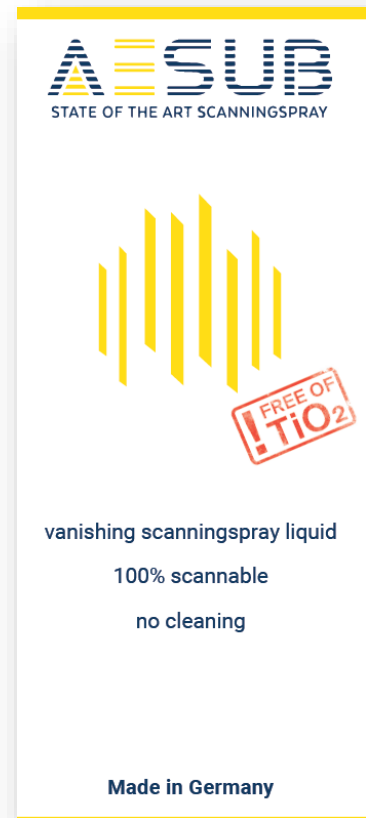


AESUB yellow – liquid

- + **Sublimating Scanning Spray**
- + **Contains no pigments or TiO₂ - the spray mist does not damage sensitive measurement technology**
- + **Time and cost savings - no post-cleaning required; the spray sublimates automatically**
- + **Thin, homogeneous, and non-slip coating**
- + **Excellent scannability**
- + **Developed by scanning experts**



General Information

Even when using state-of-the-art scanners, it is often necessary to use matting agents in many applications to achieve good contrast values and thus accurate measurement results:

a) Transparent parts

Optical measurement technology relies on light emitted by the scanner being reflected back into the scanner sensor from the surface of the part being scanned. However, in the case of a transparent surface, the light passes through the surface instead of being reflected from it. As a result, the scanner cannot capture the surface structure.

b) Reflective parts

On reflective or mirror-like surfaces, the light beam is reflected in a focused manner instead of in a diffuse manner. As a result, the scanner cannot capture the surface.

c) Depressions

If the object to be scanned has pronounced depressions, the scanner receives a reflection from the walls of the depression. This leads to a disturbance of the light pattern, which appears as "artifacts" or faulty data in the scan.

d) High quality and accuracy

For the most accurate and high-quality measurements, a scanning spray should be used to eliminate possible sources of interference, such as differences in reflection properties, texture, and/or color of the object being

scanned. The use of scanning spray creates a matte, white, and homogeneous coating that reduces reflections and other inhomogeneities, creating excellent scanning conditions.

The matting sprays used in 3D scanning technology to reduce surface reflections can be divided into two product groups:

Semi-permanent pigment spray

- White, non-slip coating remains on the component after scanning
- Necessary cleaning of the scanned object or its disposal if cleaning is not possible

Sublimating scanning spray

-
- White, non-slip coating self-vaporizes after scanning, eliminating the need for component cleaning
- Laboratories, sensors, environments, and users are not contaminated by pigments

1. AESUB yellow

AESUB yellow is a self-vanishing scanning spray developed by scanning experts. It eliminates basic application problems in 3D measurement technology, particularly in sensitive areas such as laboratories and production facilities, and protects equipment from contamination by pigment deposits. Cumbersome transportation of externally matte-finished measurement objects to the sensor as well as the arduous cleaning of the measurement environment and objects after scanning are eliminated. With AESUB yellow, you achieve a significant increase in efficiency and productivity throughout the digitization process.

AESUB yellow product features:

- Sublimating / evaporating
- Time and cost savings – no post-cleaning necessary
- Layer thickness < 2 µm possible
- Does not contain any pigments – the spray mist does not damage sensitive measurement technology
- Optimized material compatibility
- Excellent scannability
- Precise and localized application possible via airbrush systems.

With proper application, AESUB yellow forms a matte, very thin, and homogeneous coating on the surface of the scanning object, providing ideal conditions for optical detection. The formula has been optimized for maximum material compatibility.

2. Areas of application

AESUB scanning sprays facilitate or enable (for example, in the case of transparent/shiny components) optical digitization in various industries, as well as in craftsmanship:

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

3. Material compatibility

AESUB scanning sprays are optimized for their material compatibility, but material compatibility cannot be guaranteed for specific applications. Therefore, the user must check the specific material compatibility before use. AESUB yellow contains solvents. For wax-like surfaces or simple 1K coatings, please test thoroughly beforehand. For more details, refer to the Safety Data Sheet (SDS) (<https://aesub.com/download>).

4. Layer thickness

AESUB yellow has been optimized for a minimal layer thickness. With proper application using a compressed air airbrush gun such as the AESUB yellow airbrush, the layer thickness is less than 2µm.

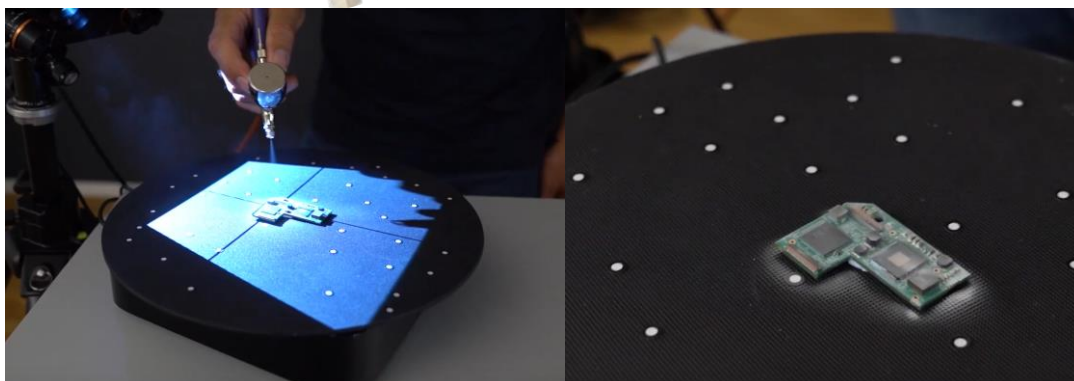
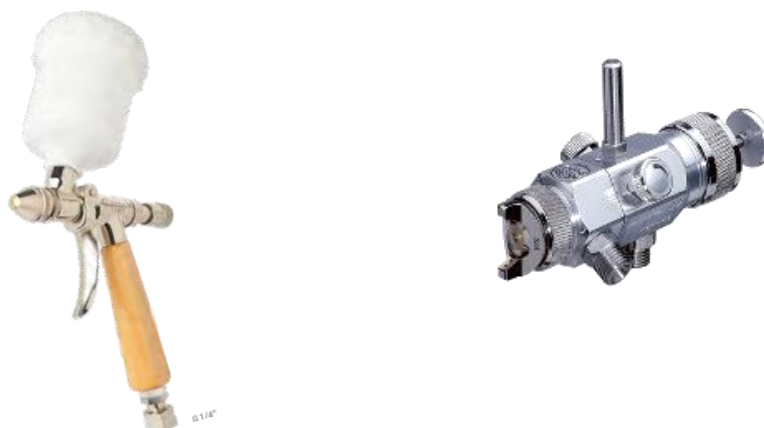
5. Surface coating

With 200ml of AESUB yellow, you can cover up to 2m² of surface area depending on the application.

6. Application

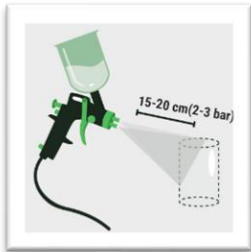
There are different ways to apply AESUB yellow:

- With the AESUB yellow airbrush, SKU: AESP001, gravity-feed airbrush gun (+/- 1bar, nozzle diameter between 0.3 and 0.5mm) - this allows for a very fine and homogeneous surface that is particularly suitable for close-range scans with high accuracy.
- With the AESUB automatic nozzle. It allows for automated and repeatable use and is particularly suitable for automated projects with series measurements. Details available upon request.



Application

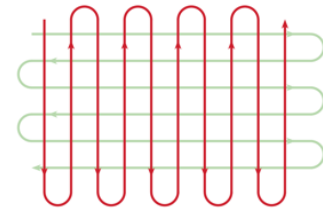
SPRAY



Apply AESUB yellow from a distance of 5-10 cm. Here we recommend using the aforementioned products with a nozzle diameter between 0.3 and 0.5mm. Spray evenly, with the nozzle directed at the object, slowly back and forth to obtain a uniform coating.

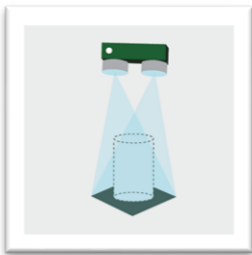
AESUB yellow is applied "wet on wet" in a crosshatch pattern.

The solvent evaporates within a few seconds, while the active ingredient remains as a coating on the surface. The whiteness level of the coating increases with the progressing evaporation of the solvent.



The complete evaporation occurs after approximately 1-2 minutes. If drops form on the component or the applied matting remains "wet" for a longer time, increase the spraying distance or speed. The ideal ambient temperature is 21°C/69.8°F.

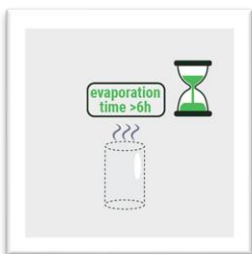
SCAN



After AESUB yellow has fully dried, the object can be scanned as usual.

If necessary, reference markers can be applied to the sprayed surface.

DONE



The applied layer of AESUB yellow evaporates automatically after scanning. The otherwise laborious cleaning after use is eliminated.

7. Vanishing / Sublimation

The sublimation of AESUB yellow takes about 6-10 hours, but this depends significantly on the following factors:

a) Temperature

- High ambient temperatures shorten the sublimation time
- Low ambient temperatures lengthen the sublimation time

b) Airflow

- Airflow (wind, ventilation) shortens the sublimation time

c) Surface

- Uneven surface structures lengthen the sublimation time, while flat structures shorten the sublimation time
- Exposed areas (outer corners) shorten the sublimation time

d) Material

- The materials on which AESUB yellow is applied influence the sublimation time. Plastics shorten the time, while metals lengthen it.

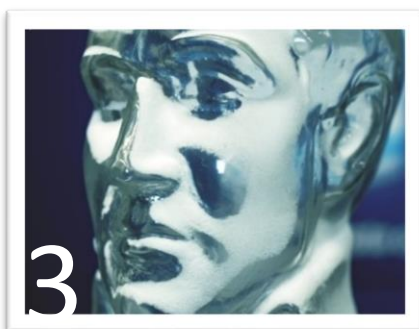
e) Layer thickness

- A higher layer thickness lengthens the sublimation time

Experience shows that AESUB yellow-matted components remain fully scannable for about 4-5 hours. Individual contours can be re-sprayed as needed. Applying multiple layers can significantly extend the sublimation time.

Accelerating the sublimation time: If you want to accelerate the sublimation process, increase the temperature (hair dryer) and/or air circulation (fan).

Sublimation process:



8. Scanning of big objects

AESUB yellow is suitable for precise measurements on small to medium-sized components with a high demand for detail and accuracy. Depending on the thickness of the layer, AESUB yellow can remain on the component for a long time, allowing you to digitize it as usual. The only recommended change in your usual workflow is to apply the measurement points (targets) to the surface after spraying AESUB yellow. This eliminates the need to clean the points before scanning.



9. Further information

a) Storage

- Optimal storage temperature between 18°C and 21°C (64.4°F and 69.8°F)
- Minimum shelf life: 5 years
- Store in a dry place and avoid direct sunlight exposure.

b) Hazard information

- If you feel unwell after using AESUB yellow, please contact the 24-hour emergency number - see safety data sheet section 1.4 (<https://aesub.com/download>).
- Never spray on hot or glowing components and ensure adequate ventilation. Do not use for products intended for contact with food - exclude food contact. Please read the safety instructions in the corresponding safety data sheet carefully (<https://aesub.com/download>).

For further information, please visit our website at <https://aesub.com> and refer to the safety data sheet (<https://aesub.com/download>).

Disclaimer

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