



**Omni-ID Ruggedized Tags**

**Attachment Guidance**

Omni-ID products are supplied as standard with a durable label finish. When supplied in a label finish Omni-ID products can be attached to items using the high performance self adhesive provided on the back of the tag. The products are also available in a low-profile ruggedized rigid case for applications with harsh environmental requirements. Our ruggedized tags can be attached securely via mechanical attachment, as shown on the opposite side of this design brief.

**Omni-ID is RFID, redefined.**

We eliminated the interference to metals and liquids that cause conventional RFID tags to underperform in harsh environments. Our breakthrough technology enables you to track high value assets and manage supply chains with over 99.99% accuracy. Yet, not only have we developed the industry's most reliable RFID tags, we've also built alliances with the most trusted providers of RFID hardware, software, and solutions. Together, we can ensure that you have a complete solution that meets your unique requirements. All of which explains why a growing number of companies are choosing to identify with Omni-ID. Interested in joining them? [Contact Omni-ID today.](#)

**Apply with confidence.**

In order to get the most out of your Omni-ID tags, please read this document carefully. Best practice should be observed for attachment to assets, especially when a long service life is required.

| Self-adhesive Attachment – Adhesion Strength Data <sup>1</sup> |  |         |
|--|--|---------|
| Substrate  | Adhesion after 72 hours at room temp. using modified D-3330 test procedure |         |
|  | N/100mm  | Oz/Inch |
| Stainless Steel  | 153  | 140     |
| ABS  | 140  | 128     |
| Polypropylene  | 149  | 136     |

| Self-adhesive Attachment – Adhesion Technical Data <sup>1</sup> |  |
|---|--|
| Environmental parameter   | Self-adhesive performance (after application to asset)   |
| Humidity  | Minimal  |
| U.V. Exposure   | Minimal  |
| Water   | No effect  |
| Temperature   | No effect up to 148°C for short periods (minutes, hours) and 93°C for long periods (days, weeks) |

<sup>1</sup> Typical values, not for specification purposes, data is representative of attachment adhesive material only.

## Self-adhesive Attachment

By utilizing high-strength acrylic self adhesive, tags can be easily and quickly applied to assets. This solution provides a very high bond strength to most surfaces including plastics, metals, and even lightly oiled surfaces.



### How to apply.

To ensure optimal adhesive strength, please follow the recommended attachment process:

- Surface preparation** – For maximum bond strength, the surface should be thoroughly cleaned and dried; solvents such as heptanes and isopropyl alcohol are typical. Carefully read and follow manufacturers' precautions and directions for use with cleaning solvents.
- Application temperature** – Tags should ideally be applied to assets between 21-38°C (70-100°F). Not recommended below 10°C (50°F), as the adhesive becomes too firm to adhere to the item. Once attached, the bond strength is good across -40°C to 93°C temperature range for prolonged periods.
- Pressure** – By applying firm progressive pressure to the top of the tag during application, the bond strength will be significantly improved.
- Time** – Typically, bond strength improves as a function of time. After 15 minutes, the bond strength will be approximately 75 percent, with full bond strength achieved after 72 hours (based on tag application at room temperature).

## Mechanical Attachment

Mechanical attachment using screws or rivets ensures best hold in the most changing environments. Omni-ID ruggedized tags are supplied with inset holes to allow easy mechanical attachment.



### How to apply.

For maximum mechanical strength, please follow the recommended attachment process:

- Drill holes in asset** – Holes should be drilled to size suitable for screws or rivets selected.

Distance Between Inset Holes on Omni-ID Tags

|               | U.S. | EUR. |
|---------------|------|------|
| Omni-ID Max™  | XXin | XXmm |
| Omni-ID Flex™ | XXin | XXmm |
| Omni-ID Prox™ | XXin | XXmm |

- Punch out the holes in the product** – The covering is designed with a weak point which is punctured by applying pressure using the tip of a cross-head screw driver.
- Adhesively apply tag to asset** – This will allow easy mechanical attachment and will also add adhesive bond-strength to the structure. (See self-adhesive attachment guidelines at left.)
- Attach product** – Screw product to asset or rivet using a suitably specific rivet gun.