

REZORB™ S REFLECTIVITY ABSORBER

ReZorb™ is a proprietary Laird technology combining material sciences and geometry surface design to optimize reflectivity performance over a targeted frequency band. While ReZorb™ thermoplastic grades (Polypropylene and Polyamide) are addressing 3 dimensions structural parts application, the silicone version, ReZorb™ S, is useful to cover surfaces thanks to its elastomer behavior.

This innovative technology brings the reflectivity absorber to the next level of performance and reliability overperforming the traditional reflectivity foam absorber.

The standard ReZorb™ S achieve -25dB reflectivity over 60-90 GHz frequency band at a thickness of 4.7 mm. The concept is flexible, the material and surface texture can be tuned to address lower frequency bands.

Showing much more robustness compared to polyurethane foams, ReZorb™ S can be used in uncontrolled and harsh environment like climatic chamber, factory and workshop areas. Its shaped surface enable to keep performance over a wide range of angle of incidence. Intending for surface coverage, ReZorb™ S tiles are designed with interlocking features to facilitate a reliable mounting.

PROPERTIES

ReZorb™ S	
Property	Typical Value
Physical	
Elastomer	Silicon
Density, gm/cc	1.55
Tensile strength, psi	255
Tear resistance, kg/cm	3.7
Color	Dark grey
Flammability	
UL	94V0
Outgassing	
TML(%)	1.18
CVCM(%)	0.22
Thermal	
Temperature range (°C)	-70 +177
Thermal Conductivity (W/m.K)	0.6
Electrical	
Volume Resistivity (ohm*cm)	10 ⁷

KEY FEATURES

- High reflection loss
- Large operating temperature range
- Low sensitivity to moisture and dust
- Tear and wear resistance
- Washable
- Compact thickness
- UL V0 94
- Performance independent from angle of incidence

USA: +1.866.928.8181

Europe: +49.8031.24600

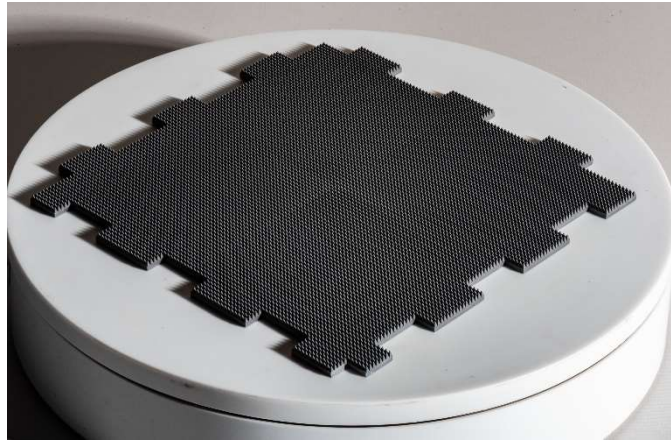
Asia: +86.755.2714.1166

www.laird.com



PRODUCT CONSIDERATIONS

- ReZorb™ S tiles are passing quality check to ensure the specified minimum -25 Db reflectivity is achieved.
- Cut to size and shape is possible through traditional blade cutting technology
- Optimum reflectivity performance is obtained over a metal substrate/backplane



ASSEMBLY PROCESS

• Substrate preparation

Make sure substrate is clean and dry, free of any contaminant like oil. Use adequate washing agent and process to prepare your surface.

• Mounting process

Several options are possible to bond ReZorb™ S tiles to your substrates.

Ensure to select the relevant bonding option upon your substrate and expected operating conditions (temperature, mechanical constraint, horizontal vs vertical....)

- Dry mounting trough PSA laminated at the back of the part :

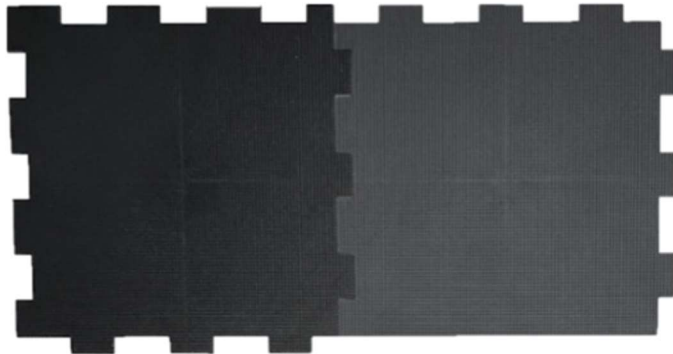
- ✓ Remove the liner



- ✓ Position the tile to its final location and apply pressure perpendicularly across the surface with a flat palm /tool

Application Note ReZorb™ S

- ✓ Interconnect tiles together from the interlocking features for safe positioning and minimum gap between tiles

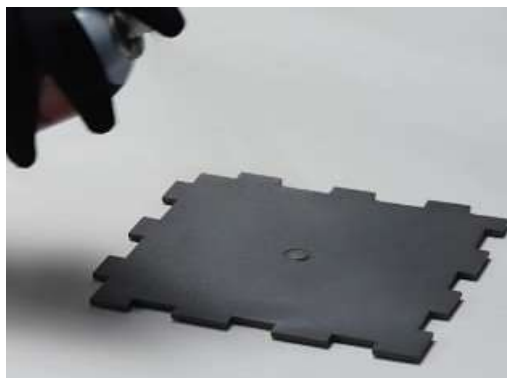


- ✓ Wait 24 hours before going into operating conditions (if outside of standard RT conditions)

- *Wet mounting with sealant/adhesive*

- ✓ Select adhesive upon your substrate and operating environment. Sealant like military silicone grades or SMP Silane Modified Polymer technology have proven good results Reach out Laird for recommended grade and always run trials to check compatibility.
- ✓ Make sure backside of the part has not been contaminated by any chemicals, dust or oil. If any doubt, clean with isopropyl alcohol
- ✓ Apply parallel thin beads of sealant (so that 0.2 mm max bondline is achieved after pressure and curing)
- ✓ Apply pressure perpendicularly over the tile surface to make the sealant flows and air escapes
- ✓ Remove any excess on the edges before connecting and bonding the next tile as per same procedure as dry mounting
- ✓ Wet mounting should allow repositioning slight if necessary. Once in place , respect recommended curing schedule from the sealant supplier

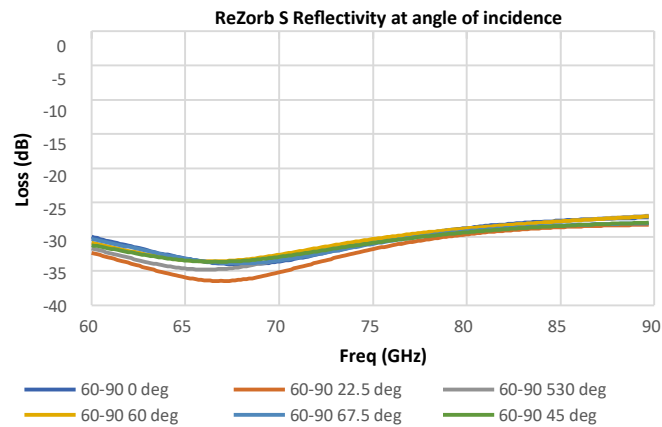
PS: For temporary or horizontal use in room temperature conditions, a spray adhesive can be used



Check high level visual assembly process at
https://www.laird.com/sites/default/files/2023-11/LAIRD%20Rezorb%20Panels%20_REV2_1080p.mp4

RELIABILITY DATA

ReZorb™ S material has been tested toward our standard aging profile with positive results. Variation after 2000 hours conditions shows very little within the test method expected variance.



TYPICAL APPLICATION

- Chip/ Radome/ Radar Test box and equipment (including combined EMI/temperature chamber)
- Bench test
- Industrial Robot
- ADAS End of line testing equipment and environment
- High frequency scanner
- Telecom test unit
- Antennas and radars
- Sensors

OPTION

- **Pressure Sensitive Adhesive (PSA)** at the back of the part . The standard PSA withstand 120°C . High temperature PSA up to 150°C is available as an option.
- **Top layer** : dielectric layer for further protection (dust , shock....)

STORAGE CONDITIONS

Keep in original packaging in standard conditions (10-25°C , relative humidity <50%)
Shelf life in recommended storage conditions is 2 years without PSA and 1 year with PSA.

REZORB™ S 12052023