



CUMING MICROWAVE

C-RAM ALU

RoHS
Compliant

TECHNICAL BULLETIN 310-9

LOSSY DIELECTRIC NEOPRENE TAR

C-RAM ALU is a series of thin, rubber sheet materials with precision adjusted dielectric loss. The sheets are flexible, easily draped, and are readily cut to size using scissors or a sharp knife. C-RAM ALU has many applications as an absorber of RF energy. It is used as an interior liner of radiating elements to minimize surface currents. It is useful in antenna pattern modification, shielding, and radar signature reduction.

As a neoprene tarp material, C-RAM ALU is weatherproof and performs well either outdoors or indoors. It is impervious to water and its electrical properties are not affected by exposure to UV light or humidity variations. C-RAM ALU is precision loaded and exhibits exceptionally good point-to-point and sheet-to-sheet uniformity of electrical properties.

C-RAM ALU is characterized by its insertion loss (IL), which is the decibel reduction in field strength (both absorbed energy and reflected energy) when the material is placed in an electromagnetic field perpendicular to the direction of field propagation. The insertion loss of ALU remains nearly constant as a function of frequency in the 2 GHz to 18 GHz range.

TYPICAL PROPERTIES

Color: Black
Thickness: 0.9mm (0.035 inch)
Weight: 1.2 kg/m² (0.25 lb./ft²)
Maximum use temp: 65°C (150°F)

AVAILABILITY

C-RAM ALU is available in eight standard grades, specified by insertion loss:

ALU-1	ALU-2	ALU-3
ALU-5	ALU-7	ALU-10
ALU-15	ALU-25	

The number after the dash indicates the average insertion loss in dB. Standard sheet sizes are 12 in x 12 in (305 x 305mm) or 12 in x 24 in. (305 x 610mm). Other dimensions and insertion losses can be produced on special order.

Cuming Microwave can also die-cut parts out of C-RAM ALU to drawing specifications.

METHOD OF APPLICATION

Sheets of C-RAM ALU are readily cut with a sharp knife. The material can be bonded to a substrate with a contact adhesive such as C-BOND 287. Since C-RAM ALU is non-porous, it is important to follow these guidelines when using a solvent-based contact adhesive:

Document Control No. N-08-000-0060-D
06/04/07 page 1 of 2

1. Clean the substrate to remove dirt and grease.
2. Apply a thin coat of neoprene contact adhesive to the mounting surface and to one side of the absorber.
3. Wait until the solvent has evaporated and the adhesive appears dry but is still tacky to the touch.
4. Mate the absorber to the mounting surface and press it firmly in place. On large surfaces, a wood or plastic roller is useful in removing air bubbles.

The information in this Technical Bulletin, although believed to be accurate, is not to be taken as a warranty for which Cuming Microwave assumes legal responsibility, nor as permission or recommendation to practice any patented invention without license; it is offered for verification by the customer, who must make the final judgment of suitability for any application.