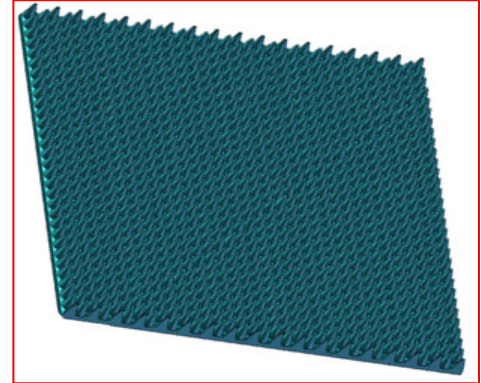




Conical Rubber Based Radar Absorbent Material (RAM):CRA-18-P

CHARACTERISTICS FEATURES:

- ❖ Basic Composition: Loaded Rubber.
- ❖ Working Temperature: -50 °C to + 80 °C.
- ❖ Thickness: 18 to 20mm.
- ❖ Base Size: 300mm X 300mm.
- ❖ Weight: Approx.1.3 kg of 300mm X 300mm size sheet.
- ❖ Conical front side to face radiation to be absorbed.
- ❖ Color: Black for CRA-18, **CRA-18-P is painted** (as desired) version of CRA-18.
- ❖ Type of Paint: Polyurethane type suitable for outdoor (ship born) applications.
- ❖ Feature: Broadband, Conical, Weather proof, suitable for sea applications.
- ❖ Application: On ship borne mast and other out door applications, etc.
- ❖ Walk-able: CRA-18, CRA-18-P & CRA-18-P-M is rigid enough to be used on walk on areas.
- ❖ Frequency region: **5.0 GHz to 18.0 GHz and beyond.**



REFLECTIVITY PERFORMANCE:

- a) **At Normal Incidence & Upto 45° from Normal: Min. reflection loss** (angle of incidence equals angle of reflection) w.r.t metal plate of same size shall be **-15dB at 5.0 GHz**, rising to min. **-17 dB at 8.0 GHz** and min. **-20 dB at 10.0 GHz** and higher frequencies in both polarizations.
- b) **At 60° From Normal:** The reflection loss is down by less than 5 dB w.r.t normal and upto 45° performance at all frequencies and in both polarizations.
- c) **Under Wet Condition:** Performance under wet condition remains practically unchanged w.r.t dry condition performance at all angles /polarizations /frequencies.



AREA OF APPLICATION: CRA-18-P is mainly used around RADAR and antenna.

- ❖ For radar signature management by covering the ship mast.
- ❖ To avoid the ground reflections at open area test sites (OATS).
- ❖ To eliminate interferences and unnecessary reflection.
- ❖ To avoid the cross talk between transmitter and receiver antenna.

TEST PROCEDURE TO TEST CRA-18-P RADAR ABSORBENT MATERIAL:

Tested as Per IEEE Std.1128/1998: IEEE Recommended practice for RF Absorber Evaluation using NRL Arch Method. Measurement of Reflection Loss at normal, near normal incidence (approx. 10° from the normal) and at wider angle (30° , 45° and 60°) from normal with reference to metal sheet of 300mm X 300mm size, at two polarizations – VV & HH. Test setup is as below:

