

Pyramidal lightweight radio absorbers

ECCOSORB VHP provides the highest broad band performance at both normal incidence and at wide incidence angles of all known absorbers. While primarily designed for low forward scatter, it offers favorable back scatter properties as well. It is thus well suited for use in all regions of anechoic chambers. Since it is available in a variety of thicknesses, the chamber designer has the opportunity to choose versions appropriate for specific requirements. The versions indicated in the table (over) are offered. The standard absorber color is light blue. Standard sheet size is 61cm x 61cm (24in x 24in)

With regard to physical characteristics, ECCOSORB VHP is in the form of an array of sharp pointed pyramids made of carbon impregnated urethane foam.

As a result it is light weight, flexible and tolerant of physical abuse.



ECCOSORB® VHP

The recommended mounting is chloroprene adhesion. ECCOSORB VHP is also available at slight additional cost with Velcro zippers for ease of attachment and removal. ECCOSORB VHP products conform to non-flammability requirements of ASTM D-1692-74. Improved processing procedures make it possible to offer ECCOSORB VHP to meet all requirements of Test 1 and 2 of NRL Report No.8093, and in addition, to meet most of the toxic-gas limits set by this report.

This information is not to be taken as warranty or representation for which we assume legal responsibility, nor as permission or recommendation to practice any patented invention without licenses. It is offered solely for consideration, investigation, and verification.

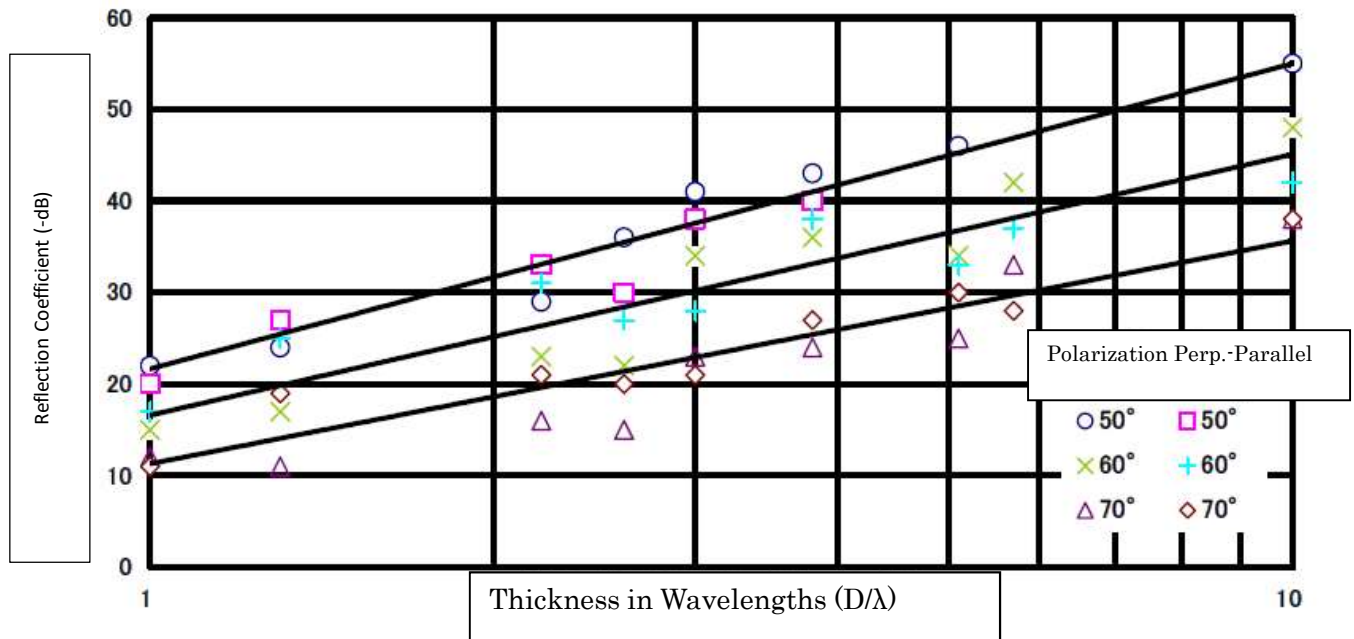
Absorption performance of ECCOSORB VHP in angle near normal incidence

| VHP TYPE | Height of Pyramid cm(inch) | Nominal Weight per Piece 0.37 sq. m. kg) | VHF 200 MHz | UHF 300 MHz | UHF 500 MHz | L UHF 1GHz | S SHF 3GHz | C SHF 5GHz | X SHF 10GHz | Ku SHF 15GHz | K SHF 24GHz |
|----------|----------------------------|--|-------------|-------------|-------------|------------|------------|------------|-------------|--------------|-------------|
| VHP-45 | 114(45) | 8.1 | 30 | 35 | 40 | 45 | 50 | 50 | 50 | 50 | 50 |
| VHP-26 | 66(26) | 4.6 | | 30 | 35 | 40 | 50 | 50 | 50 | 50 | 50 |
| VHP-18 | 45(18) | 3.3 | | | 30 | 40 | 45 | 50 | 50 | 50 | 50 |
| VHP-12 | 30(12) | 2.2 | | | | 35 | 40 | 50 | 50 | 50 | 50 |
| VHP-8 | 20(8) | 1.8 | | | | 30 | 40 | 50 | 50 | 50 | 50 |
| VHP-4 | 11(4) | 1.3 | | | | | 30 | 40 | 45 | 50 | 50 |

Reflection Coefficient vs angle of incidence of ECCOSORB VHP

| D/λ | 1.0 | | 1.3 | | 2.2 | | 2.6 | | 3.0 | | 3.8 | | 5.1 | | 5.8 | | 10 | |
|-----------------|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|----|----|
| Incidence angle | ⊥ | // | ⊥ | // | ⊥ | // | ⊥ | // | ⊥ | // | ⊥ | // | ⊥ | // | ⊥ | // | ⊥ | // |
| 50° | 22 | 20 | 24 | 27 | 29 | 33 | 36 | 30 | 41 | 38 | 43 | 40 | 46 | - | - | - | 55 | - |
| 60° | 15 | 17 | 17 | 25 | 23 | 31 | 22 | 27 | 34 | 28 | 36 | 38 | 34 | 33 | 42 | 37 | 48 | 42 |
| 70° | 12 | 11 | 11 | 19 | 16 | 21 | 15 | 20 | 23 | 21 | 24 | 27 | 24 | 30 | 33 | 28 | 38 | 38 |

Reflection Coefficient vs Thickness Wide Angle Performance



Note: Every piece is measured to establish compliance with the nominal minimum performance given in the table above. Also note this test was performed in the case of metal back.