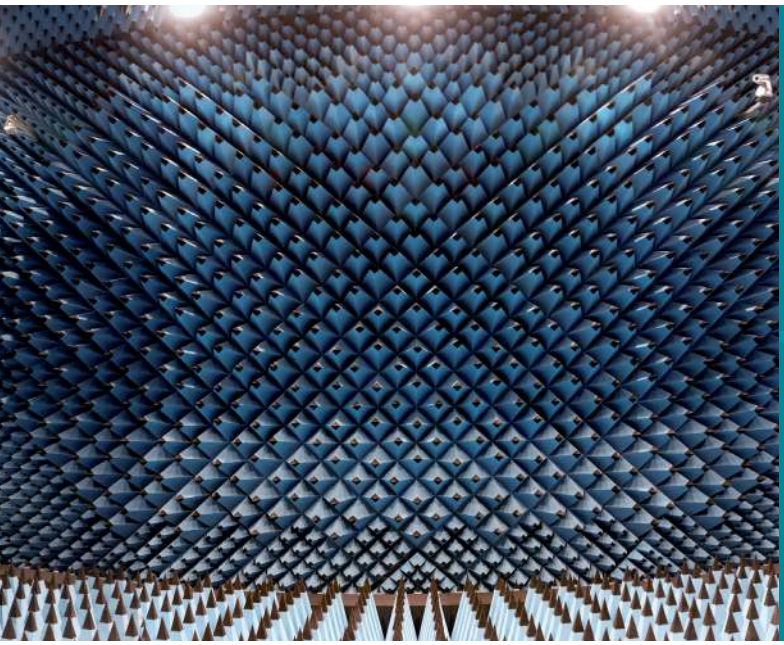
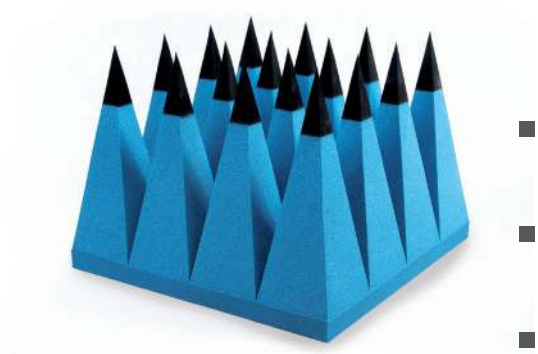
EMERSON & CUMING
Anechoic Chambers
an Albatross Projects company



WAVASORB®
VHP

Advanced Broadband Pyramidal Absorber



- WAVASORB VHP is a series of solid, pyramidal-shaped, carbon-loaded, urethane-foam absorbers.
- Premium performance in the operating frequency range from 100 MHz to 500 GHz, obtained by optimization of the geometry of any individual absorber.
- Certified to all fire-retardancy and environmental specifications by containing an advanced chemical composition.
- Excellent power-handling capability assured under continuous wave exposure.
- REACH- and RoHS-compliant, maintaining a healthy environment for operation.
- Designed and quality controlled using commercial and original simulating and test techniques.

WAVASORB®
VHP

E&C Anechoic Chambers has a fully automated manufacturing facility with CNC-controlled foam-cutting machines, computer-controlled impregnation, drying processes, and robotized painting to ensure stability of RF and fire-retardant performances.

Seventy years experience with absorber-manufacturing techniques provides consistency in chemical compositions, electrical and fire-retardant properties with uniform distribution.

E&C Anechoic Chambers can provide customized solutions to accommodate cleanroom requirements, flexible coatings and paintings to improve durability, and engineered pre-cuts and custom parts fit for equipment linings.

Perfectionism is our goal, with special attention to the dimensions and geometry of the individual absorber panels that enhance performance as well as optical appearance of the entire test facility.

Measurement Techniques

WAVASORB VHP is manufactured in well-defined batches, and their reflectivity and fire-retardant properties are continuously monitored following internal ISO 9001 procedures.

The intrinsic material parameters are regularly measured with state-of-the-art test set ups and optimized using simulation software. WAVASORB VHP is tested routinely in the frequency range from 30 MHz to 40 GHz using a set of coaxial lines, waveguides, NRL Arches and in a Compact Range in accordance with IEEE Standard 1128.

WAVASORB VHP has excellent power handling capability to safely withstand an incident CW power density of up to 800 W/m². Moreover, it can handle an incident CW power density up to 1500 W/m² for periods less than 30 minutes.

Guaranteed Reflectivity

	100 MHz	160 MHz	200 MHz	300 MHz	450 MHz	800 MHz	1 GHz	3 GHz	6 GHz	12-18 GHz	18-40 GHz	40-110 GHz
WAVASORB VHP-2								-20 dB	-25 dB	-40 dB	-45 dB	-55 dB
WAVASORB VHP-4							-20 dB	-30 dB	-45 dB	-50 dB	-55 dB	-55 dB
WAVASORB VHP-8						-20 dB	-30 dB	-40 dB	-50 dB	-50 dB	-55 dB	-55 dB
WAVASORB VHP-12					-20 dB	-30 dB	-35 dB	-45 dB	-50 dB	-50 dB	-55 dB	-55 dB
WAVASORB VHP-18				-20 dB	-30 dB	-35 dB	-40 dB	-50 dB	-50 dB	-50 dB	-55 dB	-55 dB
WAVASORB VHP-26			-20 dB	-25 dB	-32 dB	-40 dB	-45 dB	-50 dB	-50 dB	-50 dB	-55 dB	-55 dB
WAVASORB VHP-36		-20 dB	-25 dB	-30 dB	-40 dB	-45 dB	-50 dB	-50 dB	-50 dB	-50 dB	-55 dB	-55 dB
WAVASORB VHP-45	-20 dB	-22 dB	-25 dB	-35 dB	-40 dB	-45 dB	-50 dB	-50 dB	-50 dB	-50 dB	-55 dB	-55 dB

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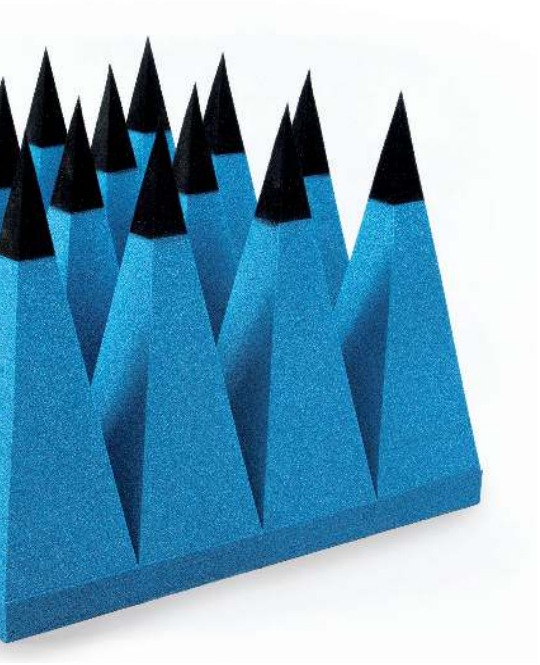

Installation Methods and Chamber Validation

WAVASORB VHP is typically bonded to metallic surfaces using WAVASORB Adhesive. For easy exchange, modular installation techniques are available using Velcro fasteners or Plate & Rail mounting to achieve perfect geometry and alignment compatibility with any type of shielding.

Contrast colors are available in various types of paint and coating.

Robust, walkable versions are available in different grades to provide ample access to the equipment.

E&C Anechoic Chambers has developed VSWR Field-Probe measurement techniques for anechoic chamber validation, verifying the chamber performance at the system level.

Applications

WAVASORB VHP is the preferred solution for the anechoic chamber lining of Far-field, Near-field and Compact Antenna Test Ranges, Rader Cross Section (RCS) facilities, Electronic Warfare (EW) test ranges and wireless Over-The-Air (OTA) measurement systems. Furthermore, it offers favorable back-scattering properties at off-normal angles of incidence. It is thus well suited for use in all regions of anechoic chambers. Excellent performance has been proven for milimeter-wave applications up to 500 GHz.

WAVASORB VHP is also the the preferred solution for various floor configurations to comply with all EMC standards.

Characteristics

Standard Color	Blue (contrast colors available on request)
Operation Temperature	+5°C to +35°C
Humidity Range	30% to 70%
Frequency Range	30 MHz - 500 GHz
Maximum Incident Power Density	800 W/m², 0,52 W/in², 550 V/m
Fire-retardancy	NRL 8093 Tests 1, 2 and 3 DIN 4102-1 Class B2 ISO 11925-2 Class E UL-94/HBF ISO 4589-2
RoHS Compliant	According to 2011/65/EU
Reach Compliant	According to EC 1907/2006
Environmental	IEC 60068-2-1 Test Ab AATCC 30-IV (2004)
Quality Control	IEEE Standard 1128 ISO 9001
Product Life	20+ Years

Physical Properties

	Total height (cm)	Number of pyramids per piece	Nominal weight (kg)
WAVASORB VHP-2	5.6	1024	1.4
WAVASORB VHP-4	10.2	256	1.6
WAVASORB VHP-8	20.3	81	2.0
WAVASORB VHP-12	30.5	36	2.7
WAVASORB VHP-18	45.7	16	3.6
WAVASORB VHP-26	66.1	9	5.7
WAVASORB VHP-36	91.4	4	8.0
WAVASORB VHP-45	114.0	4	9.5

Standard Footprint: 61 x 61 cm

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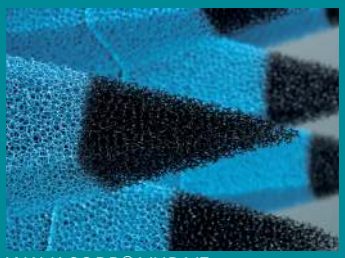
Related WAVASORB® Series

WAVASORB® VHP CO:
Coated Absorber

WAVASORB® HFX/HFS:
High Power Absorber

WAVASORB® VHP FL:
Walkable Floorabsorber



WAVASORB® VHP VE:
Ventilation Absorber

WAVASORB® VHP OD:
Outdoor Absorber

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