

WAVASORB® VHP

Advanced Broadband Pyramidal Absorber

WITH RESPECT FOR THE ENVIRONMENT: REACH & RoHS COMPLIANT



- ✓ 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 each individual absorber.
- ✓ Certified to all fire-retardancy and environmental specifications through 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 test techniques.

WAVASORB® VHP

Installation Methods and Chamber Validation

WAVASORB® VHP is typically bonded to metallic surfaces using E&C Adhesive 13111.

For easy exchange, modular installation techniques are available using velcro-fasteners or plate & rail mounting to achieve perfect geometry and alignment, compatible with any type of shielding.

Robust, walkable floor absorber versions (WAVASORB® VHP-FL) 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 facilities;
- ✓ Compact Antenna test ranges;
- ✓ Rader Cross Section (RCS) facilities;
- ✓ Electronic Warfare (EW) test ranges;
- ✓ Wireless Over-The-Air (OTA) measurement systems;
- ✓ (Small) test boxes;
- ✓ Millimeter-wave applications up to 500 GHz.

* for various floor configurations whilst complying with all EMC standards.

* for use in all regions of anechoic chambers.

*Multiple variables go with our WAVASORB® VHP-absorbers,
e.g. plastic coating, painting/coating colours, self-adhesive tape factory-installed, ...
For more information on variables,
contact your local sales representative.*

WAVASORB® VHP

Characteristics

Handling Temperature ⁽¹⁾	+5°C to +35°C
Humidity Range	30% to 70%
Frequency Range	100 MHz up to 500 GHz
Maximum Incident Power Density ⁽²⁾	1,5 kW/m ² , 0,98 W/in ² , 750 V/m
Fire Retardancy Tests	According to: - UL-94-HBF - ISO 11925-2 Class E - ISO 4589-2 - DIN 4102-1 Class B2 - NRL 8093 Tests 1, 2 and 3
Environmental Testing	Compliant with: - IEC 60068-2-1 Test Ab - AATCC 30-IV (2004)
REACH compliant	According to EC 1907/2006
RoHS compliant	According to 2015/863/EU
Quality control	IEEE Standard 1128 ISO 9001
Product life	+25 years under controlled environment

⁽¹⁾ Depending on the application, the absorber can withstand temperatures of +90°C, for more information, contact your sales representative

⁽²⁾ Depending on duration & frequency, for more information, contact your sales representative

Physical properties

	Standard Color ⁽¹⁾	Standard footprint ⁽²⁾
WAVASORB® VHP	Light blue	61 cm x 61 cm

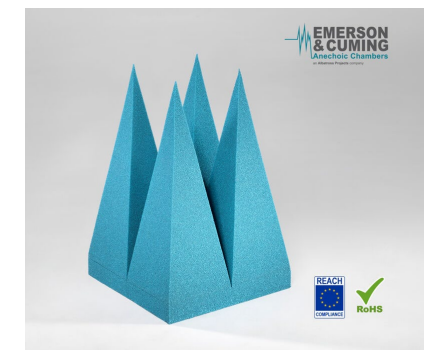
⁽¹⁾ Contrast colours available on request / black tips as of 18-inch absorbers

⁽²⁾ The above-mentioned dimensions have a tolerance of +/- 6 mm

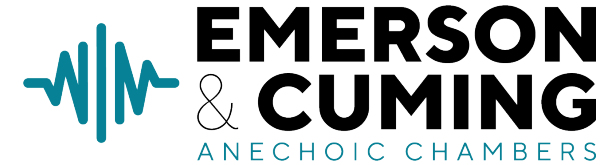
	Total height ⁽¹⁾ (cm)	Nominal weight ⁽²⁾ (kg)	Number of pyramids per piece
WAVASORB® VHP-2	5,6	1,3	1.024
WAVASORB® VHP-4	10,2	1,7	256
WAVASORB® VHP-8	20,3	2,5	81
WAVASORB® VHP-12	30,5	3,1	36
WAVASORB® VHP-18	45,7	4,1	16
WAVASORB® VHP-26	66,1	6,3	9
WAVASORB® VHP 36	91,4	9	4
WAVASORB® VHP-45	114,0	10,5	4

⁽¹⁾ The above-mentioned dimensions have a tolerance of +/- 6 mm

⁽²⁾ Weight values are subject to changes



WAVASORB® VHP



Typical Reflectivity Performance at Normal Incidence & Measurement Techniques

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

WAVASORB® VHP is tested routinely in-house in the frequency range from 10 MHz to 9 GHz using a set of coaxial lines, waveguides and NRL Arch in accordance with the practice recommended in IEEE Standard 1128. In the GHz range, measurements are performed in the frequency range of 9 GHz up to 110 GHz inside a compact range facility of an external test house. Furthermore, WAVASORB® VHP offers favourable reflectivity properties at off normal angles of incidence with almost no reflectivity degradation up to 45 degrees.

	TYPICAL REFLECTIVITY (dB)											
	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 ⁽²⁾
WAVASORB® VHP-2								-20 dB	-25 dB	-40 dB	-45 dB	-55 dB
WAVASORB® VHP-4							-18 dB	-32 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

⁽¹⁾ For more information, contact your local sales representative

⁽²⁾ Measurements results as of 110 GHz available at request



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Safety Considerations: It is recommended to consult the E&C ANECHOIC CHAMBERS product literature, including material safety data sheets, prior to use E&C ANECHOIC CHAMBERS products. These may be obtained from your local sales office.

Warranty: Values shown are based on testing of laboratory test specimens and represent data that falls within the normal range of properties of the material. These values are not intended for use in establishing maximum, minimum or ranges of values for specification purposes. Any determination of the suitability of the material or any use contemplated by the user and the manner of such use is the sole responsibility of the user who must assure that the material as subsequently processed meets the needs of this particular product or use.

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