

## WAVASORB® HFX/HFS

High-Power Broadband Pyramidal Absorber



- WAVASORB HFX/HFS is a series of hollow, pyramidal-shaped absorbers for high- and medium-power applications.
- 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 testing techniques.

# WAVASORB® HFX/HFS

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.

## Installation Methods and Chamber Validation

For easy exchange and free circulation of air, WAVASORB HFX/HFS is installed to metallic surfaces or open frames.

Perfect geometry and alignment compatibility with any type of shielding is achieved through Perforated Plate & Rail mounting.

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 HFX/HFS is the preferred solution to partially or totally line areas in which a high-power density occurs in Near-field or Compact Antenna Test Ranges and facilities for satellite testing.

The honeycomb structure of WAVASORB HFX/HFS is made out of high fire-retardant materials, allowing ventilated air throughout the structure to withstand higher illuminating-power capacities.

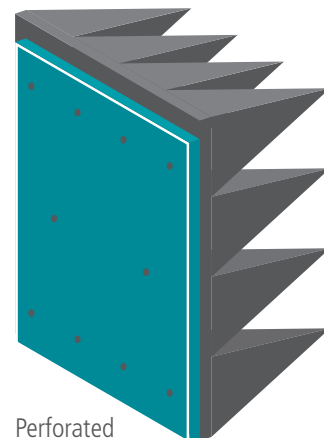
## Measurement Techniques

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

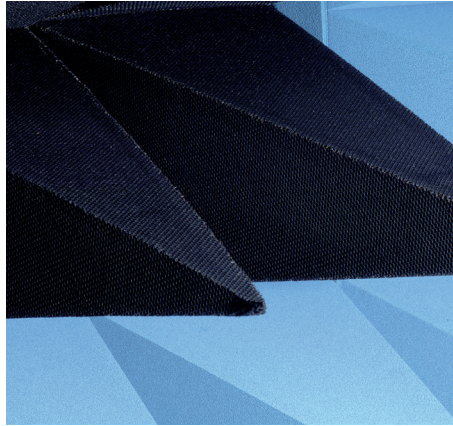
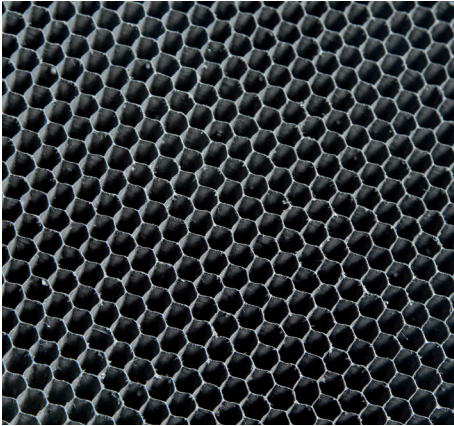
The intrinsic material parameters are regularly measured with state-of-the-art test set ups and optimized using numerical simulation software. WAVASORB HFX/HFS is tested routinely in the frequency range from 30 MHz to 40 GHz using a set of coaxial lines, waveguides, NRL Arches and in a Compact Range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

WAVASORB HFX has excellent power handling capability to safely withstand an incident CW power density of up to 15 kW/m<sup>2</sup>.

Open Cell  
Structure



Perforated  
Galva Plate



## 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 HFX/HFS-18	-5 dB	-10 dB	-15 dB	-17 dB	-25 dB	-30 dB	-40 dB	-45 dB	-50 dB	-50 dB	-50 dB	-50 dB
WAVASORB HFX/HFS-26	-8 dB	-15 dB	-18 dB	-25 dB	-30 dB	-38 dB	-42 dB	-45 dB	-50 dB	-50 dB	-50 dB	-50 dB
WAVASORB HFX/HFS-36	-10 dB	-15 dB	-20 dB	-30 dB	-35 dB	-40 dB	-42 dB	-45 dB	-50 dB	-50 dB	-50 dB	-50 dB

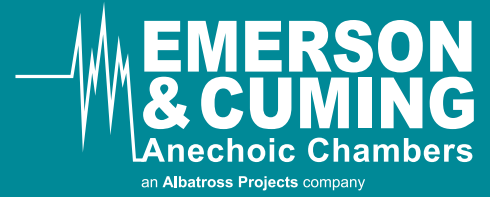
## Characteristics

Standard Color	Black
Operation Temperature	+5°C to +35°C
Humidity Range	30% to 70%
Frequency Range	100 MHz - 110 GHz
Maximum Incident Power Density	HFS : 3 kW/m <sup>2</sup> , 1,93 W/in <sup>2</sup> , 1063 V/m HFX : 15 kW/m <sup>2</sup> , 9,68 W/in <sup>2</sup> , 2378 V/m
Fire-retardancy	DIN 4102-1 Class B2
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	10+ Years

## Physical Properties

	Total Height (cm)	Number of Pyramids per Piece	Nominal Weight (kg)
WAVASORB HFX/HFS-18	45.7	16	6.5
WAVASORB HFX/HFS-26	66.0	9	7.5
WAVASORB HFX/HFS-36	91.4	4	8.5

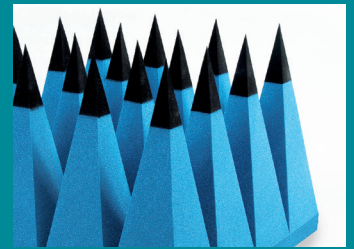
Standard Footprint: 61 x 61 cm



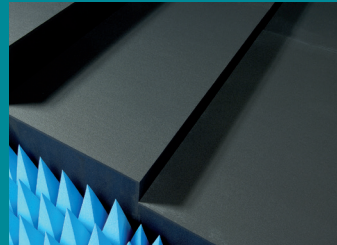
## Related WAVASORB® Series



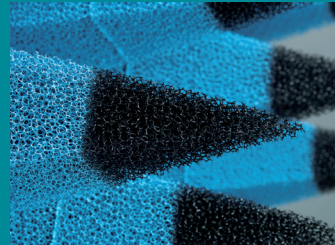
WAVASORB® VHP CO:  
Coated Absorber



WAVASORB® VHP:  
Broadband Pyramidal Absorber



WAVASORB® VHP FL:  
Walkable Floorabsorber



WAVASORB® VHP VE:  
Ventilation Absorber



WAVASORB® VHP OD:  
Outdoor Absorber

■ **E&C Anechoic Chambers NV**  
Nijverheidsstraat 7A  
B-2260 Westerlo  
Belgium

Tel.: +32 14 59 58 00  
Fax: +32 14 59 58 01

info@ecanechoicchambers.com  
www.ecanechoicchambers.com

■ **E&C Anechoic Chambers Asia Ltd**  
Flat/Rm 303, 3/F St. George's Bldg  
2 Ice House Street, Central  
Hong Kong

Tel.: +852 3972 2173  
Fax: +852 3972 2211

jtsang@ecanechoicchambers.com  
www.ecanechoicchambers.com

■ **Albatross Projects GmbH**  
Daimlerstrasse 17  
89564 Nattheim  
Germany

Tel.: +49 7321 730 500  
Fax: +49 7321 730 590

info@albatross-projects.com  
www.albatross-projects.com

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■ **Albatross Projects RF Technology  
India Pvt. Ltd**  
312, Siddhraj Zori, Near Sargasan Cross, KH-0,  
Off S.G. Highway  
Gandhinagar, 382421  
India

Tel.: +91 79 3221 3399

info@albatross-projects.in  
www.albatross-projects.de

■ **Albatross Projects RF Technology  
(Shanghai) Co., Ltd.**  
Block 35, No. 100 Baise Road  
Inside Grand Skylight Gardens Hotel  
200231 Shanghai  
P.R. China

Tel.: +86 21 6434 1110  
Fax: +86 21 6434 7800

info@albatross-projects.com.cn  
www.albatross-projects.com.cn

■ **AP Americas Inc.**  
1500 Lakeside Parkway, Suite 100-B  
Flower Mound, TX 75028  
USA

Tel.: +1 972 295 9100  
Fax: +1 972 810 3223

info@apamericas.com  
www.apamericas.com

[www.ecanechoicchambers.com](http://www.ecanechoicchambers.com)

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