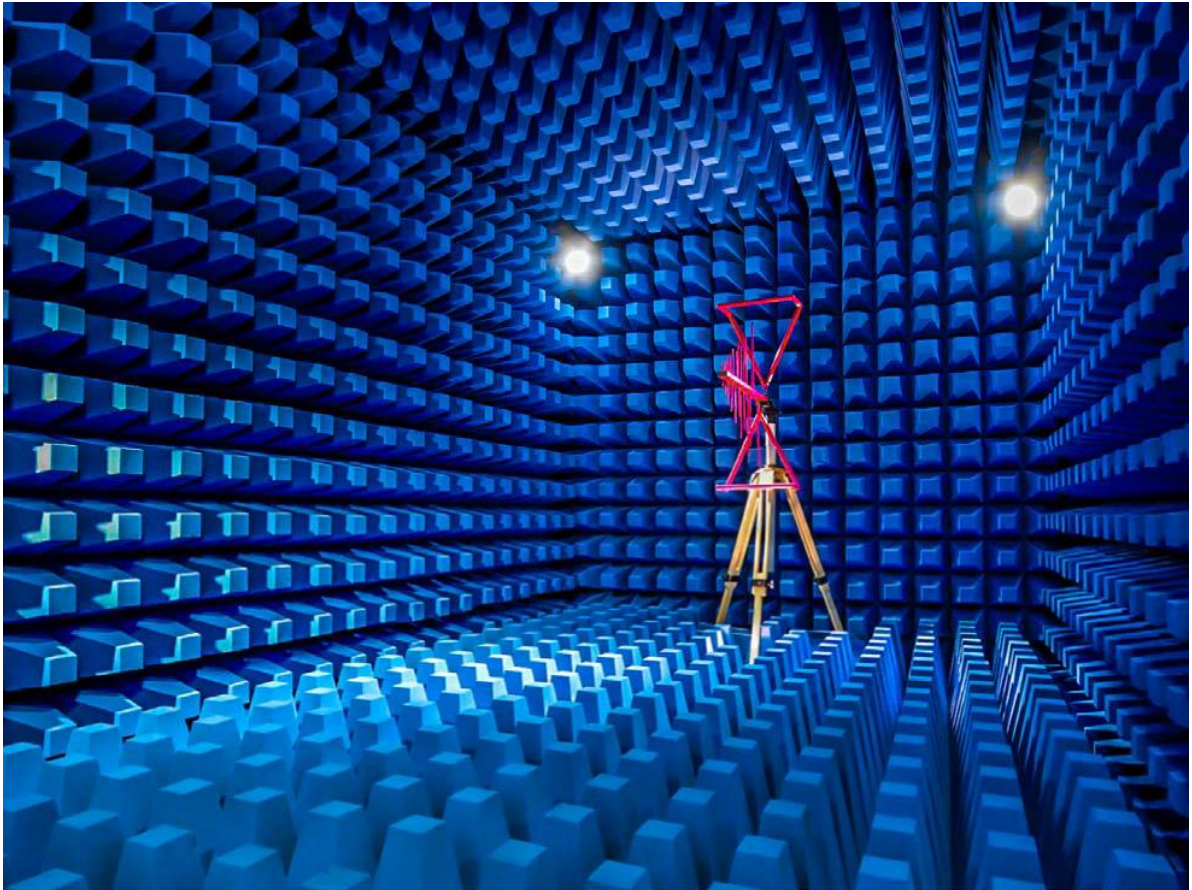


RF ABSORBING MATERIAL



MICROWAVE INSTRUMENTATION

2024 – Version 31/01/24

COMPANY PROFILE

Specialist in EMC (Electromagnetic Compatibility) EuroMC is located in Stains (93), northern side of Paris. The vocation of EuroMC is to promote and commercialise a complete range of products and services in the EMC field.

In January 2003, EuroMC took over I.M.O Company (Instrumentation Micro Onde) which was established in 1980. Since more than 40 years I.M.O is producing absorbing material for industry application with a frequency range from 30 MHz to 40 GHz.

With our large range of electromagnetic absorbers high performance, EUROMC IMO can answer to all kind of request from the EMC market.

In 2012, IMO transferred his production site from Corbehem to Brebières
Current factory location :
6, Chemin de la Ventelle
62117 Brebières

The aim of this transfer is to modernise the production factory and increase the production capacity.



Production unit (Brebières)



HPT Absorbers before painting



HPT Absorbers

MAIN REFERENCES - ANECHOIC CHAMBERS

FRANCE

ARMING

THOMSON CSF AIRSYS
DASSAULT ELECTRONIQUE
DASSAULT AVIATION
CENTRE D'ESSAIS EN VOL
CENTRE D'ESSAIS DES LANDES
CENTRE D'ETUDES DE GRAMAT

ONERA
COMMISSARIAT A L'ENERGIE
ATOMIQUE
MATRA
BASTIDE ELECTRONIQUE
INSTITUT DE SAINT LOUIS

ENSTA
AEROSPATIALE
EUROCOPTER
DCN
ATELIER DE L'INDUSTRIE DE
L'ARMEMENT

TELECOMMUNICATIONS

ALCATEL
CNET (France Télécom)
RADIO FREQUENCY SYSTEMS
(CGTI)

TRT
HYPTRA
AMP C3C
TDF

CS TELECOM
COMECA COMPOSANTS
BOUYGUES TELECOM

RESEARCH / EDUCATION

CNRS
IRESTE
ECOLE CENTRALE DE LYON
ECOLE DES MINES DE DOUAI
INRIA

FAC. DES SCIENCES GRENOBLE
FAC. DES SCIENCES LIMOGES
ESIM
FAC. DES SCIENCES BORDEAUX

SERVICE DE SANTE DES ARMEES
CEMAGREF

INDUSTRY

CENTRALP AUTOMATISME
AEMC MESURES
TECHNOMED INTERNATIONAL
EMITECH
SEMAP
GEMPLUS
GENERAL ELECTRIC
HAZTEC
GERAL
SFIM INDUSTRIES

THOMSON L2R
TALCO ALARME
PRANA
CGA
ATMH
ELECTRONICS SYSTEMS
MITSUBISHI ELECTRIC
SCHNEIDER AUTOMATION
EDF GDF Research Center
MERLIN GERIN

RECIF SA
TRW
ASCOM
MAGNETI MARELLI
PEUGEOT CITROEN
MAG
AIR PRECISION
SAGEM
ASTRIUM

FOREIGN COUNTRIES

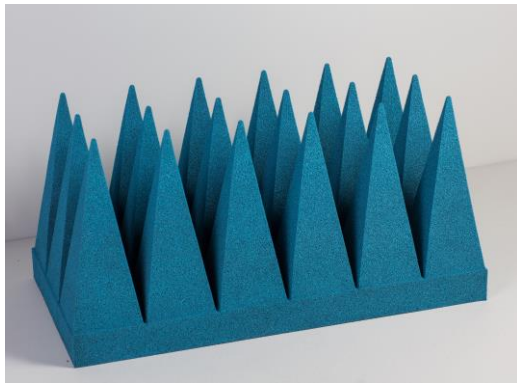
TELINDUS BELGIUM
MEDECINE UNIVERSITY ULM
AIR FORCE BELGIUM
COMTEST ITALIA
TESEO TORINO IT
CIM D'OR BARCELONA SP
AMELEC MADRID SP
SINGAPORE AIR LINES

STANDARD TESTING CENTER
HONK KONG
ADT CORPORATION TAIWAN
ANCO ATHENA
SISGRETIION TAIWAN
UNIVERSITY OF BOLOGNA IT
SIEMENS AG BERLIN
SOLIANI ITALIA

NUCLEAR INSTITUTE YAVNE
ISRAEL
RAFAEL SYSTEMS DIVISION HAIFA
ISRAEL
EPICOM RATIGEN GERMANY
SY CORPORATION KOREA
APLUS TECH KOREA
FRANKONIA GERMANY

RANGE OF PRODUCTS

- **IMOCELL HPP**
Microwave Pyramidal Absorber
- **IMOCELL HPT**
EMC Truncated Pyramidal Absorber
- **IMOCELL HPF**
EMC Hybrid Pyramidal Absorber
- **IMOCELL HPFT**
EMC Hybrid Truncated Pyramidal Absorber
- **IMOCELL HPE**
Flat Absorber
- **IMOCELL HPS**
Flat Laminate Absorber



IMOCELL HPP

Microwave Pyramidal Absorber

Designation

IMOCELL HPP is an ultra broadband absorber, which has been specially designed for microwave applications.

The IMOCELL HPP absorbing materials are based upon a conventional pyramid having a square base with a uniform base thickness, tapered to a point.

Impregnation procedure has been established to ensure that complete impregnation with both the dielectric lossy material and the fire retardant chemicals are achieved.

Application

- Radar Cross Section measurement (R.C.S)
- Antenna pattern measurement
- Telecom/wireless
- Satellite
- Automotive
- Military

Installation

- IMOPRENE 45 Glue
- IMOFIX Velcro system

Characteristics

Material	Carbon loaded polyurethane foam
Standard Colour	Blue
Service temperature	90° C
Power handling	0,2W/cm ²
Fire retardant standards	NRL 8093, Tests 1,2 & NF EN ISO 11925-2
Physical specifications	Specified in <i>Table 1</i>
Base dimensions	610 x 610 mm
Reflectivity	Specified in <i>Table 2</i>

Physical Specifications of HPP Serie Absorber

IMOCELL HPP Serie	Total Height	Base Height	Pyramid Height	Pyramids per Block	Nominal Weight
HPP 10	115 mm	25 mm	90 mm	256	0.9 Kg
HPP 20	200 mm	40 mm	160 mm	81	1,6 Kg
HPP 30	300 mm	50 mm	250 mm	36	2.3 Kg
HPP 40	455 mm	75 mm	380 mm	16	3,4 Kg
HPP 60	660 mm	100 mm	560 mm	9	4.8 Kg
HPP 90	905 mm	150 mm	764 mm	4	6.5 Kg
HPP 115	1150 mm	200 mm	950 mm	4	8,3 Kg

Table 1

Typical reflectivity (dB) at normal incidence

TYPE	FREQUENCY in GHz										
	0.08	0.10	0.30	0.50	1.0	3.0	6.0	10	18	24	40
HPP 10						30	36	42	50	50	50
HPP 20					30	38	45	50	50	50	50
HPP 30				25	35	40	45	50	50	50	50
HPP 40				30	38	42	47	50	50	50	50
HPP 60	7	11	25	35	40	45	50	50	50	50	50
HPP 90	9	15	30	37	42	50	50	50	50	50	50
HPP 115	12	18	35	40	45	50	50	50	50	50	50

Table 2

Options

Paint

All absorbers are painted blue unless otherwise specified
On special order, other colours are available

Environment

The material is designed for indoor use only.



IMOCELL HPT

EMC Truncated Pyramidal Absorber

Designation

IMOCELL HPT serie is an ultra broadband absorber, which has been specially designed to meet and exceed IEC 61000-4-3, MIL STD 462D, SAE performance requirements.

This solid truncated pyramidal absorber may also be used for microwave measurements, while high level of absorption are not required in the 20 → 40 GHz range.

For antenna characterization chambers, IMOCELL HPT are definitively the best solution in view of the highest performances in microwave range.

Application

- Electromagnetic Compatibility measurements
- Microwave measurements
- Automotive
- Military

Installation

- IMOPRENE 45 Glue
- IMOFIX Velcro system

Characteristics

Material	Carbon loaded polyurethane foam
Standard Colour	Blue
Service temperature	90° C
Power handling	0,2W/cm ²
Fire retardant standards	NRL 8093, Tests 1,2 & NF EN ISO 11925-2
Physical specifications	Specified in <i>Table 1</i>
Base dimensions	610 x 610 mm
Reflectivity	Specified in <i>Table 2</i>

Physical Specifications of HPT Serie Absorber

HPT Grade	Total Thickness	Base Height	Pyramid Height	Pyramids per Block	Nominal Weight
HPT 32	320 mm	74 mm	246 mm	16	3.6 Kg
HPT 50	510 mm	100 mm	410 mm	9	4.7 Kg
HPT 70	700 mm	150 mm	550 mm	4	6.7 Kg

Table 1

Absorption in dB of HPT Serie Absorbers at normal incidence Frequency (MHz)

HPT Grade	80	100	300	500	1000	5000	10000
HPT 32	-	-4	-21	-30	-34	-35	<-40
HPT 50	-7	-10	-26	-32	-35	-38	<-40
HPT 70	-13	-17	-29	-37	-40	<-40	<-40

Table 2

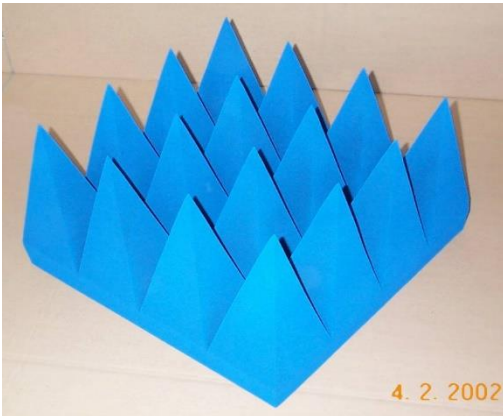
Options

Paint

All absorbers are painted blue unless otherwise specified
On special order, other colours are available

Environment

The material is designed for indoor use only.



IMOCELL HPF

EMC Hybrid Pyramidal Absorber

Designation

IMOCELL HPF is a foam pyramidal, carbon loaded absorber, matched to a thin ferrite base.

This pyramidal part of the so called hybrid absorber is designed to optimise the poor reflectivity in the GHz range.

Thanks to a special chemical formulation, this pyramidally shaped resistive top part, anyway, achieves very high level of absorption in the lowest frequency range.

Application

- Electromagnetic Compatibility Measurements
- Microwave measurements
- Automotive
- Military

Installation

- IMOPRENE 45 Glue
- IMOFIX Velcro system

Characteristics

Material	Carbon loaded polyurethane foam
Standard Colour	Blue
Service temperature	90° C
Power handling	0,2W/cm ²
Fire retardant standards	NRL 8093, Tests 1,2 & NF EN ISO 11925-2
Physical specifications	Specified in <i>Table 1</i>
Base dimensions	610 x 610 mm
Reflectivity	Specified in <i>Table 2</i>

Physical Specifications of HPF Serie Absorber

IMOCELL HPF Serie	Total Thickness	Base Height	Pyramid Height	Pyramids per Block	Nominal Weight
HPF 20	200 mm	40 mm	160 mm	81	1,4 Kg
HPF 30	300 mm	50 mm	250 mm	36	2.2 Kg
HPF 40	455 mm	75 mm	380 mm	16	3,1 Kg
HPF 60	660 mm	100 mm	560 mm	9	5.2 Kg

Table 1

Reflectivity (with 6.5 mm ferrite tiles) in dB at frequency (GHz)

HPF Serie	0.03	0.1	0.3	1	3	10 and upper
HPF 20	-10	-13	-14	-9	-10	-15
HPF 30	-12	-15	-16	-11	-12	-17
HPF 40	-15	-18	-20	-14	-13	-18
HPF 60	-18	-22	-23	-19	-20	-30

Table 2

Options

Paint

All absorbers are painted blue unless otherwise specified
On special order, other colours are available



IMOCELL HPFT

EMC Hybrid Truncated Pyramidal Absorber

Designation

IMOCELL HPFT serie is a foam pyramidal truncated, carbon loaded absorber, designed to work with a thin ferrite under the base.

This pyramidal part of the so-called hybrid absorber is designed to optimise the poor reflectivity in the GHz range of ferrite. Owing to a special chemical formulation, this pyramidally shaped resistive top part, achieves very high levels of absorption in the upper frequency range without destroying the ferrite reflectivity in lowest frequency range.

Application

- EMC Test Chambers :
 - . Models HPFT 32 and 45 are used in 3 meters chambers fully compliant.
 - . Models HPFT 77 and 90 are used specially for 5 and 10 meters chambers fully compliant.

Installation

- IMOPRENE 45 Glue
- IMOFIX Velcro system

Characteristics

Material	Carbon loaded polyurethane foam
Standard Colour	Blue
Service temperature	90° C
Power handling	0,2W/cm ²
Fire retardant standards	NRL 8093, Tests 1,2 & NF EN ISO 11925-2
Physical specifications	Specified in <i>Table 1</i>
Base dimensions	610 x 610 mm
Reflectivity	Specified in <i>Table 2</i>

Physical Specifications of HPFT Serie Absorber

HPFT Grade	Total Thickness	Base Height	Pyramid Height	Pyramids per Block	Nominal Weight
HPFT 32	320 mm	74 mm	246 mm	16	2.2 kg
HPFT 45	450 mm	113 mm	337 mm	9	3.1 kg
HPFT 77	770 mm	90 mm	680 mm	4	5.9 kg
HPFT 90	914 mm	150 mm	764 mm	4	7.5 kg

Table 1

Reflectivity in dB at normal incidence Frequency (GHz)

HPFT Grade	0.03	0.1	0.3	0.5	1	3	6	10	18
HPFT 32	-12	-24	-18	-21	-17	-15	-17	-21	-31
HPFT 45	-14	-24	-25	-23	-20	-19	-25	-30	-42
HPFT 77	-16	-25	-25	-25	-22	-24	-32	-40	<-45
HPFT 90	-18	-25	-30	-25	-27	-32	-40	<-45	<-45

Table 2

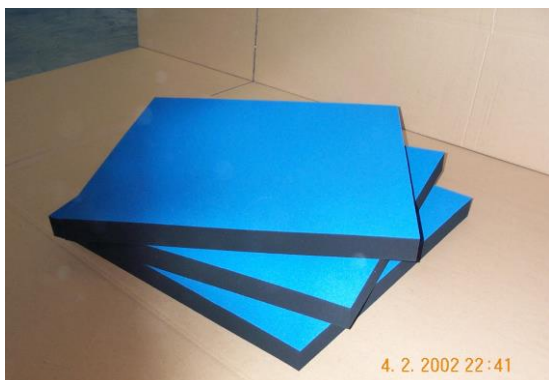
Options

Paint

All absorbers are painted blue unless otherwise specified on special order, other colours are available.

Environment

The material is designed for indoor use only.



IMOCELL HPE

Flat Absorber

Designation

IMOCELL HPE is a flat mono layer absorber specially designed for microwave applications. This absorber has been developed to be installed in corners of anechoic chambers instead of cutted pyramidal absorber. HPE absorber warranty the same global performances lining of the corners of anechoic chambers and microwave facilities.

Application

- Lining corners semi-anechoic and anechoic chambers

Installation

- IMOPRENE 45 Glue
- IMOFIX Velcro system

Characteristics

Material	Carbon loaded polyurethane foam
Standard Colour	Blue
Service temperature	90° C
Power handling	0,2W/cm ²
Fire retardant standards	NRL 8093, Tests 1,2 & NF EN ISO 11925-2
Physical specifications	Specified in <i>Table 1</i>
Base dimensions	610 x 610 mm

Physical Specifications of HPE Serie Absorber

IMOCELL HPE Serie	Total Thickness	Dimensions	Nominal Weight
HPE 20	20 mm	610 x 610 mm	350 gr
HPE 25	25 mm	610 x 610 mm	450 gr
HPE 50	50 mm	610 x 610 mm	900 gr
HPE 100	100 mm	610 x 610 mm	1.800 kg

Table 1

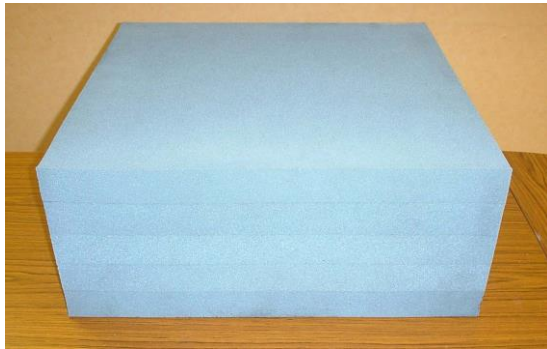
Options

Paint

All absorber is painted blue unless otherwise specified
On special order, other colours are available

Environment

The material is designed for indoor use only.



IMOCELL HPS

Flat Laminate Absorber

Designation

IMOCELL HPS is a multi layer flat absorber composed of few layers of polyurethane foam impregnated with graduated density of carbon. This impregnation gradient of layers produce matching impedance within air and metal barrier.

Application

- Compact anechoic chambers
- Angle lining of very high performance anechoic chambers
- RCS reduction on military targets
- Antennae side lobes reduction

Installation

- IMOPRENE 45 Glue
- IMOFIX Velcro system

Characteristics

Material	Carbon loaded polyurethane foam
Standard Colour	Blue
Service temperature	90° C
Power handling	0,2W/cm ²
Fire retardant standards	NRL 8093, Tests 1,2 & NF EN ISO 11925-2
Physical specifications	Specified in <i>Table 1</i>
Base dimensions	610 x 610 mm

Physical Specifications of HPS Serie Absorber

IMOCELL HPS Serie	Total Thickness	Dimensions	Nominal Weight
HPS 80	80 mm	610 x 610 mm	1.300 kg
HPS 100	100 mm	610 x 610 mm	2.000 kg
HPS 125	125 mm	610 x 610 mm	2.350 kg
HPS 250	250 mm	610 x 610 mm	4.700 kg

Table 1

IMOCELL HPS Serie	Minimum use Frequency
HPS 80	1 GHz
HPS 100	0.8 GHz
HPS 125	0.5 GHz
HPS 250	0.2 GHz

Options

Paint All absorber is painted blue unless otherwise specified
On special order, other colours are available

Environment The material is designed for indoor use only.