



Metalleido Components srl

Abet Group



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ITALY FEDERATION OF QUALITY MANAGEMENT

www.io-net-certification.com

CERTIFICATO N. 11482/04/S CERTIFICATE No.

SI CERTIFICA CHE IL SISTEMA DI GESTIONE PER LA QUALITÀ DI
IT IS HEREBY CERTIFIED THAT THE QUALITY MANAGEMENT SYSTEM OF

METALLEIDO COMPONENTS S.r.l.

VIA IV NOVEMBRE 113 16010 BORGIO FORNARI (GE) ITALIA

NELLE SEGUENTI UNITÀ OPERATIVE / IN THE FOLLOWING OPERATIONAL UNITS

VIA IV NOVEMBRE 113 16010 BORGIO FORNARI (GE) ITALIA

È CONFORME ALLA NORMA
IS IN COMPLIANCE WITH THE STANDARD

ISO 9001:2000

PER I SEGUENTI CAMPI DI ATTIVITÀ / FOR THE FOLLOWING FIELD(S) OF ACTIVITIES

EA:15

FABBRICAZIONE DI PANNELLI SANDWICH IN TESSUTO DI VETRO, ALTRE FIBRE, NIDO D'APE E RESINE TERMOINDURENTI.

CONSTRUCTION OF SANDWICH PANELS WITH GLASS/OTHER FIBERS, HONEYCOMB CAVE AND THERMOSETTING RESINS.

La validità del presente certificato è subordinata a sorveglianza periodica annuale / semestrale ed al riesame completo del sistema di gestione con periodicità triennale
The validity of this certificate is dependent on an annual / six monthly audit and on a complete review, every three years, of the management system
L'uso e la validità del presente certificato sono soggetti al rispetto del documento RINA: Regolamento per la Certificazione di Sistemi di Gestione per la Qualità
The use and validity of this certificate are subject to compliance with the RINA document: Rules for the certification of Quality Management Systems

Prima emissione First Issue	06.08.2004
Emissione corrente Current Issue	01.02.2008
Data scadenza Expiry Date	31.07.2010

Dott. Ing. Domenico Andreis
(Direttore della Divisione Certificazione e Servizi)

RINA SpA
Via Corsica 12 - 16128 Genova Italy

Riferirsi al Manuale della Qualità per i dettagli delle esclusioni ai requisiti della norma

Reference is to be made to the Quality Manual for details regarding the exemptions from the requirements of the standard

CISQ è la Federazione Italiana di Organismi di Certificazione dei sistemi di gestione aziendale

CISQ is the Italian Federation of management system Certification Bodies

SINCERT

ACCREDITED

SGQ N° 000A - SGA N° 000D
PRG N° 000B - PEG N° 000C
SCE N° 000F - SEN N° 000G

Membro degli Accordi di Mutuo Riconoscimento EA e IAF
Signatory of EA and IAF Mutual Recognition Agreements



Form. C2301002-13/02

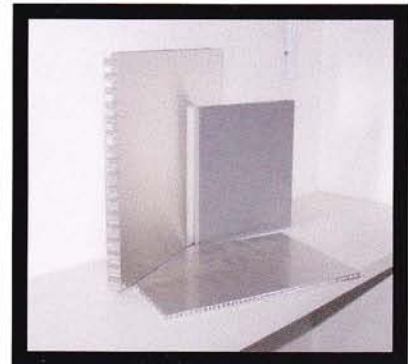
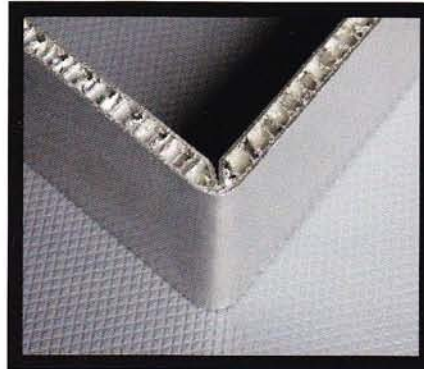
ESACORE

Sandwich panels with aluminium honeycomb used to manufacture components of compound furniture.

The following products are part of the Esacore group:

ESACORE-AL; ESACORE-ST; ESACORE-AL/ST; ESACORE-LF; ESACORE-LEM; ESACORE-PW.

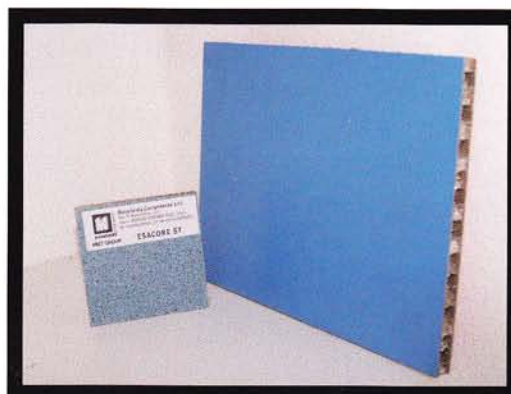
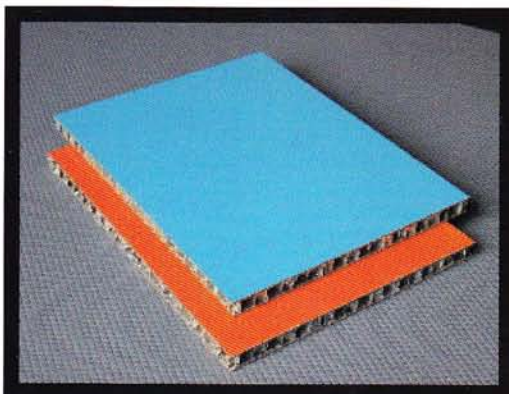
ESACORE-AL (for shelves, partition walls, luggage vans, ceilings, floors etc..)



Panel composition:

- **CORE:** aluminium 3003 honeycomb, cell dimensions (1/4" ; 3/8" ; 1/2" ; 3/4");
- **SKINS:** raw aluminium league from 1050 to 5000, thickness from 0.5 to 2.5 mm (anodized or pre-painted skins on demand);
- **FORMATS:** 1.000x2.000 mm; 1.250x2.500 mm; 1.250x3.000 mm; 1500x3.000 mm; total thickness from 5 to 50 mm;
- **WEIGHTS:** standard configuration (3/8" core, 0.5 mm skins on both sides):
Total thickness 5 mm: 3,20 Kg/m² -- Total thickness 20 mm: 4,20 Kg/m²

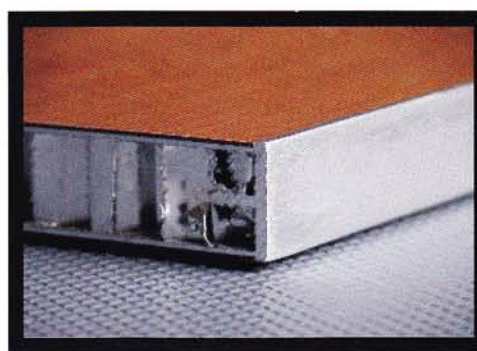
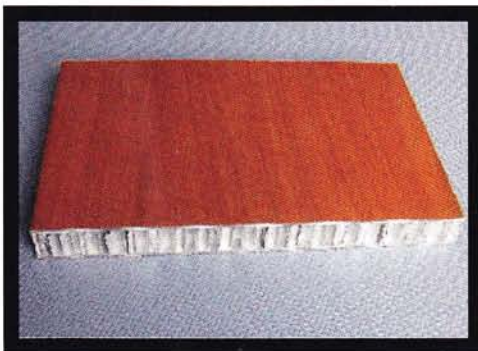
ESACORE-ST (panelling, ceiling, boats renovation etc..)



Panel composition:

- CORE**: aluminium 3003 honeycomb, cell dimensions (1/4" - 6,3 mm - ; 3/8" - 9,5 mm -);
- SURFACES** : Print HPL Abet on both sides (804 décor models, more than 40 kinds of texturization) thickness from 0.7 to 1.2 mm.
- FORMATS** : 1.250x2.500 mm; 1.250x3.000 mm;
panel total thickness from 6 to 30 mm;
- WEIGHTS**: standard configuration (3/8" core, 0.9 mm surfaces on both sides),
Total thickness 6 mm 2,90 Kg/m² - Total thickness 20 mm 3,60 Kg/m².

ESACORE-AL/ST (for shelves, partition walls, luggage vans, forniture etc..)



Example of border

Panel Composition

- CORE**: aluminium 3003 honeycomb, cell dimensions (1/4" ; 3/8" ; 1/2")
- SKINS**: raw aluminium, league from 1050 to 5000 according to customer requests, thickness from 0.5 to 1 mm;
- SURFACES**: Print HPL Abet on both sides (804 décor models, more than 40 kinds of texturization) thickness from 0.7 to 1.2 mm;
- FORMATS** : 1.250x2.500 mm; 1.250x3.000 mm;
total thickness from 6 to 50 mm.
- WEIGHTS**: standard configuration (3/8" core, 0,5 mm on both sides 0.9 mm Abet surfaces on both sides),
Total thickness 10 mm : 5,90 Kg/m² -- Total thickness 20 mm : 6,40 Kg/m²

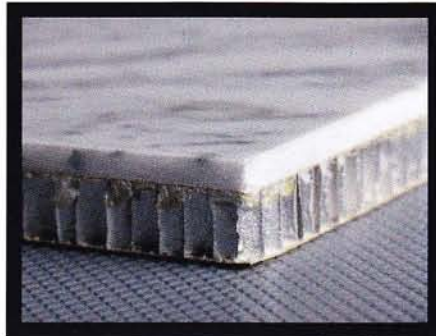
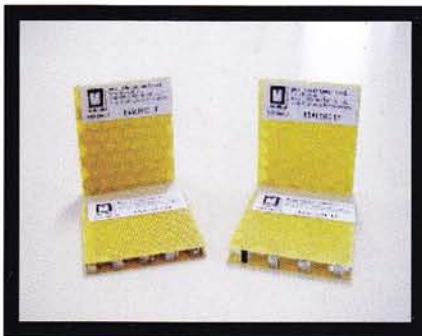
ESACORE-PW (for shelves, partition walls, yachts furniture etc..)



Panel composition

- CORE**: aluminium 3003 honeycomb, cell dimensions (1/4" - 6,3 mm ; 3/8" - 9,5 mm);
- SKINS**: Plywood Okumè (marine plywood), thickness 1,5 - 2 - 3 and 4 mm ;
- FORMATS**: 1.200 x 2.500 mm, total thickness from 7 to 30 mm;
- WEIGHTS**: standard configuration (3/8" core, 3 mm skins),
Total thickness: 10 mm $3,60 \text{ Kg/m}^2$ - Total thickness 15 mm: $3,90 \text{ Kg/m}^2$.

ESACORE-LF03 e ESACORE-LE M (Light weight bearing)

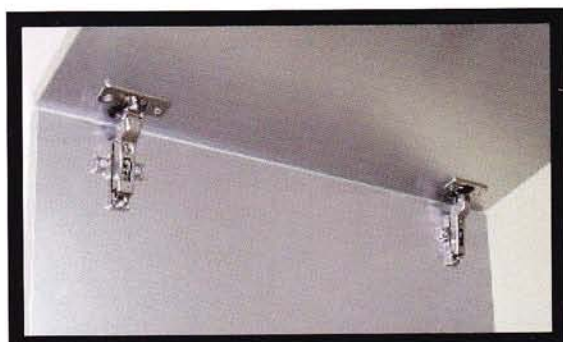


Example of light weight marble panel

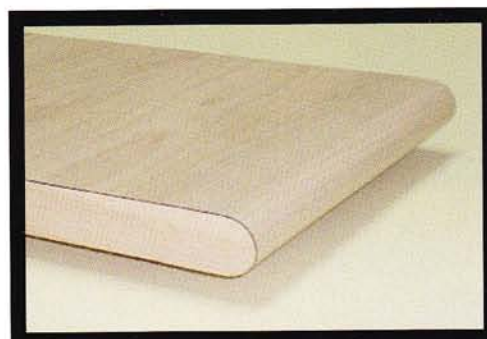
Panel composition

- CORE**: aluminium 3003 honeycomb, cell dimensions (1/4" - 6,3 mm; 3/8" - 9,5 mm)
- SKINS**: phenolic glass fabric laminate (- **LF 03**) thickness 0,25 mm
Epoxy glass fabric laminate (- **LE M**) thickness 0,25 mm (for light weight marble)
- FORMATS**: 1.250 x 2.500 mm; 1.250 x 3.000 mm; 1.500 x 3.000 mm
- WEIGHTS**: standard configuration (1/4" core , 0.25 mm skins),
Total thickness 10 mm: $1,30 \text{ Kg/m}^2$ - Total thickness 15 mm: $1,60 \text{ Kg/m}^2$

ESACORE APPLICATIONS



ESACORE-AL (Anodized)



ESACORE-AL/ST (HPL Postformed)



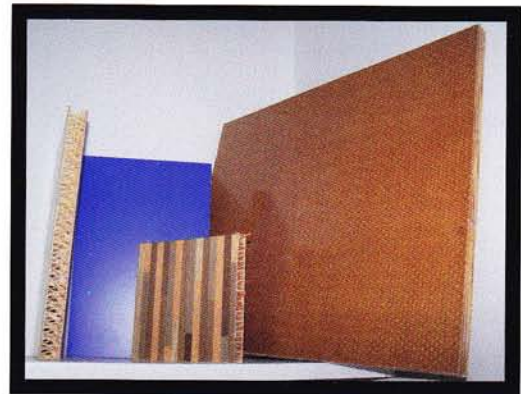
ESACORE-PRAL (SSM Abet)



MONOCORE®

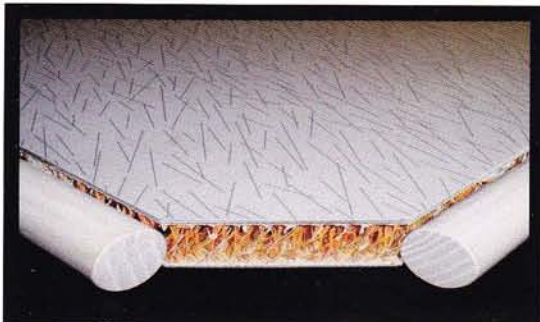
Sandwich panels produced according to Metalleido's patent which combines fiberglass fabric with phenolic resins impregnation. It is used for furniture, partition walls, yachts floors and structural supporting floor panels. The following products belong to the monocoore group: **MONOCORE-3D-ST** and **MONOCORE-FP**.

MONOCORE-3D-ST® (panelling, ceiling, boats renovation etc..)



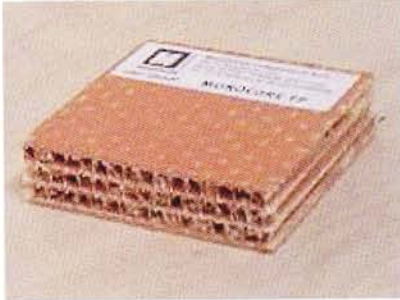
Panel composition

- CORE**: tridimensional glass fibre soaked with phenolic thermosetting resin;
- SURFACES**: Abet post forming laminate (one color or woods), thickness 0,9 mm;
- FORMATS** : 1.220x2.440 mm; panel thickness from 7 to 27 mm;
- WEIGHTS**: Total thickness 7 mm: $3,00 \text{ Kg/m}^2$ -- Total thickness 20 mm: $3,50 \text{ Kg/m}^2$
- ACUSTIC ISOLATION**: 25-27 dB (when used for walls dividing compartments)



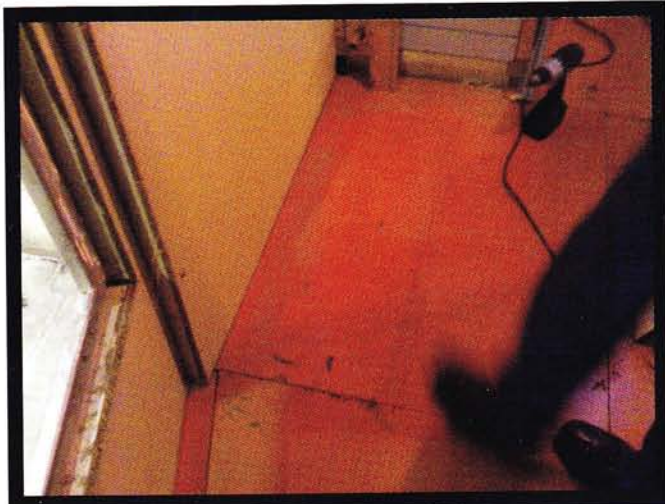
Example of PU borderei Top

MONOCORE-FP® (yachts dunnage, floor)



Panel composition

- CORE**: 3 layers of 6 mm tridimensional glass fibre soaked with phenolic thermosetting resin plus 3 500 gr/m² reinforcements of tridimensional glass fibre;
- SURFACES**: raw phenolic glass;
- FORMATS**: 1200x2400 mm; total thickness 18 mm;
- WEIGHTS**: 8,5 Kg/m² ;
- ACUSTIC ISOLATION**: 25-27 dB (when used for dunnage);
- CAPACITY**: 350÷400 Kg/m² with a 600 mm support wheelbase



Application to yacht dunnage



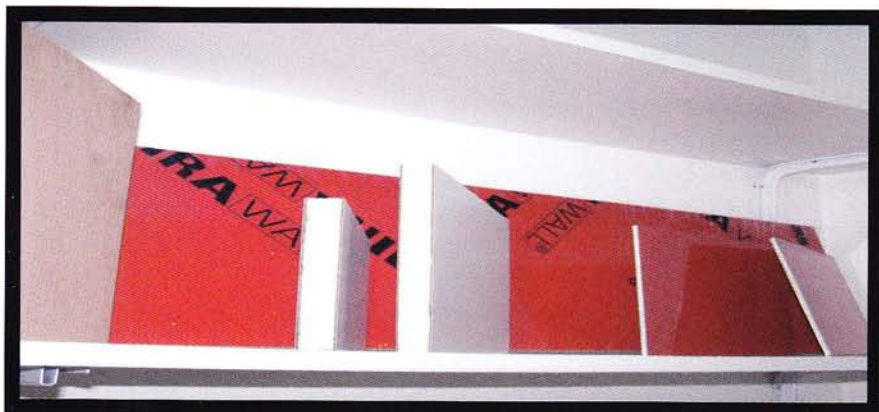
Monocore FP application on Alstom train

COMPOUND

Sandwich panels produced with foams like polystyrene and PVC or plywood and other closed pore materials covered with plastic laminate Abet Print HPL (one color, woods, metals) or with raw or painted aluminium sheets. These kinds of panel can be used in several field. The following products belong to the compound group:

COMPOUND-PO/ST, COMPOUND-PO/AL; COMPOUND-PW/ST; COMPOUND-PW/AL

COMPOUND-PO/ST



Compound - PO/ST

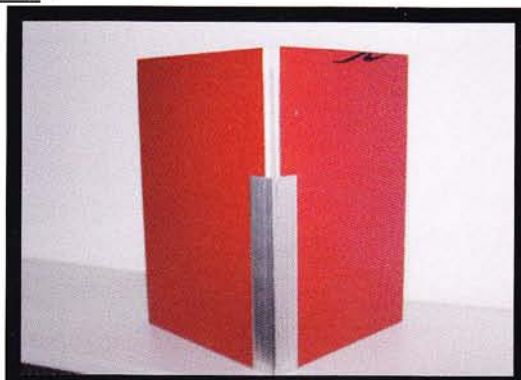
Panel composition

- **CORE** : self-extinguishing polystyrene foam; 25 Kg/m³ density;
- **SKINS** : 3 mm MDF on both sides (on request);
- **KINDS OF DECOR** : Print HPL Abet on both sides (804 décor models, more than 40 kinds of texturization);
- **FORMATS** : 1.300x3.050 mm ; 1.220x2.440 mm; 1.000x2.250 mm
- **TOTAL THICKNESS** : from 10 to 40 mm.

COMPOUND-PO/AL

Panel composition

- **CORE** : self-extinguishing polystyrene foam; 25 Kg/m³ density;
- **KINDS OF DECOR** : aluminium lamina on both sides (raw or painted);
- **FORMATS** : 1.250x3.000 mm ; 1.250x2.500 mm;
- **TOTAL THICKNESS** : from 6 to 20 mm .



Certificates IMO MED

LINEA PRODOTTO	MODULO B		MODULO D	
	N°	SCAD	N°	SCAD
ESACORE AL 03/30	MED325207CS/004	16/06/2012	MED159107GE/005	30/07/2010
ESACORE STT	MED325207CS/001	17/07/2012	MED159107GE/002	30/07/2010
ESACORE AL 03/30 ST	MED15704CS	20/04/2009	MED15208GE/003	23/01/2011
ESACORE LF 02-03-04-05	MED325207CS/003	07/03/2012	MED159107GE/004	30/07/2010
ESACORE	MED443206CS	30/10/2011	MED159107GE/001	30/07/2010
ESACORE AL 03/30-VP	MED205004CS	19/05/2009	MED015208GE/002	23/01/2011
ESACORE ST	MED325207CS/002	07/03/2012	MED159107GE/003	30/07/2010
MONOCORE	MED295506CS/001	07/06/2011	MED015208GE/001	23/01/2011
MONOCORE RA	MED295506CS/002	08/07/2011	MED177006GE/001	23/07/2009
MONOCORE 3D	MED144705CS/2	08/04/2009	MED015208GE/005	23/01/2011
MONOCORE 3D ST	MED144705CS/3	03/05/2010	MED015208GE/006	23/01/2011
MONOCORE 3D FP	MED144705CS/1	08/04/2009	MED015208GE/004	23/01/2011
MONOCORE ST	MED295506CS/003	08/07/2011	MED177006GE/002	23/07/2009

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.....History.....

Metalleido Components, former Metalleido srl, begins its activity in June 2000. Since 1937 Metalleido srl core business is the treatment of cotton fabrics with phenolic resins. In 1991 Metalleido srl takes part, together with other three companies, to a project (named Brite) aimed at the creation of an integral panel with a tridimensional glass fiber core: end 1993 Metalleido srl patents the machine for the production of the Mitlight panel (trade name: Monocore) and starts mass-production. Mitlight is the first to be produced according to IMO 653 regulation (a regulation regarding ferryboats manufacture) and is successfully used for the production of MDV ferryboats by Fincantieri. In June 2000 Metalleido Components srl becomes part of the Abet Group, a society known throughout the world because of its production of laminates characterized by matchless quality. In 2002 Metalleido Components srl is transferred in Borgo Fornari , Genoa. Here a new line of production is set up in order to manufacture compound panels with aluminium honeycomb (Esacore Al, Esacore Al St etc...). Furthermore Metalleido Components srl, in order to fully meet market requirements, has just started to manufacture other compound products with a core made up of polystyrene, PVC foams or Plywood.

