



# HYNADECOR<sup>®</sup>

ALUMINIUM COMPOSITE PANELS

1<sup>st</sup>   
**FR**  
COMPANY IN INDIA



Version 2.1

## ABOUT COMPANY

**HYNADECOR** is one of the leading manufacturers of Aluminium composite panels (ACP) in India. HYNADECOR, an ISO 9001-2015, ISO 14001:2015 & OHSAS 18001:2007 certified company was set up since 2013 in New Delhi. We are manufacturing aluminium composite panels (ACP) under the brand name of "HYNADECOR". Our manufacturing facilities are located at Sonipat in Haryana and it's spreading in an area of 8093 SqMtr. We have a fully automatic high tech FR grade ACP manufacturing compatible machine and has an integrated infrastructure as well as a talented pool of professionals operate it. The production capacity is approx. 1, 44, 000, 00 Square fts per annum. The plant is equipped with all safety measures and generator to ensure uninterrupted production. We have in house all raw materials facilities as well as quality check labs to maintain highest international standards and where quality endurance tests are conducted as per ASTM Standards.

We have India's first a fully automatic high tech fire retardant ACP manufacturing compatible machine and it's specialize in manufacturing fire retardant aluminium composite material with international standards. We tend to implement best practices and also invent new practices as to stay above the rest in the manufacturing sectors. The main parameters which determine HYNADECOR FR are quality, cost effective, flexibility and innovation. It's used to be very difficult to extrude mineral-filled core, but our advanced technology has enabled us to produce HYNADECOR (FR) as efficient as ordinary core materials. It is green material, as there is no harmful burning.

**HYNADECOR FR** grade meet the highest requirements of the fire regulations and is therefore the ideal material for all areas where fire protection plays an important role– be it for high-rise or industrial buildings, public buildings, hospitals, hotels, tunnels or underground stations. Furthermore, with its proven product and processing properties, HYNADECOR FR grade aluminium composite panels offer architects designers' unlimited opportunities for realizing their ideas.

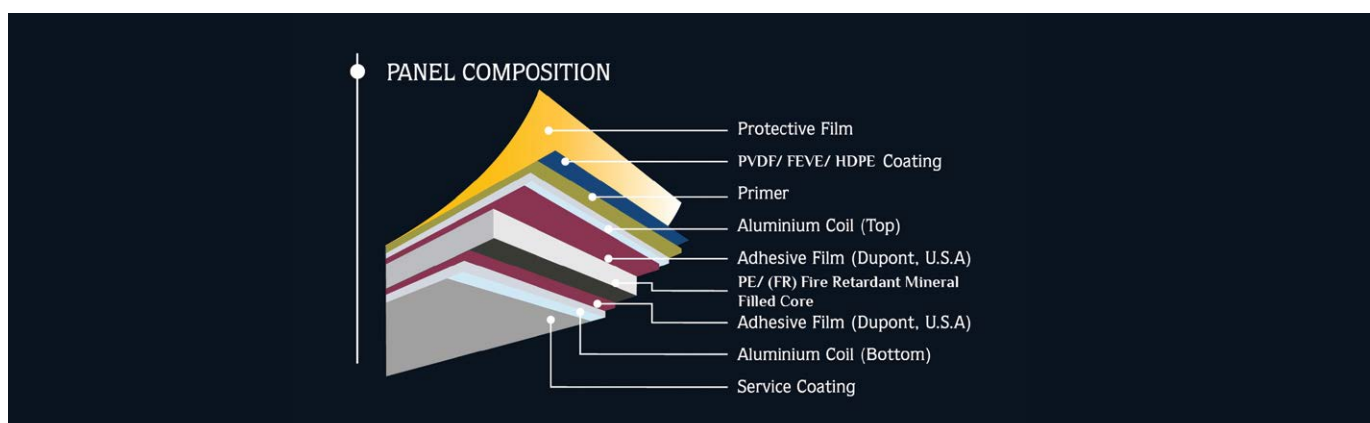
**We are also committed to innovation in designing building products....**

### PANEL DIMENSIONS

Al. Skin Thickness	0.25mm to .5mm	<b>STANDARD SIZES</b>	1220 mm x 3660 mm
Thickness	2mm to 6mm		1220 mm x 3050 mm
Coating	PVDF		1220 mm x 2440 mm
Length	Upon Request		
Width	1220mm		

### PRODUCT TOLERANCE

Width	0/±4.0mm
Length	0/±6.0mm
Thickness	4mm thick ±0.2mm
Bow	0.5% of length & Width
Squareness	Max 5.0mm





**Hynadecor (FR)** is an Aluminum Composite Material (ACM) for exterior cladding. It's composed of core material and aluminum skins. The core material contains a non-combustible mineral and small content of thermoplastic, which ensures high performance of fire safety of this material. The skin is 0.5mm thick aluminum of 3005 H-16. The surface is finished with high-performance PVDF/Lumiflonbased paint and the back is a service coating. We use high-performance PVDF/Lumiflon-based fluorocarbon paint for the surface coating, ensuring both high durability and consistent coating quality. PVDF/Lumiflon-based fluorocarbon coating has a coating warranty of 10 years.

The greatest concern in external cladding is upward flaming over a vertical exterior wall, particularly in high-rise buildings. Various types of fire tests are required to examine the fire performance and non-combustibility of building materials. HYNADECOR (FR) not only passes all tests, but it is also certified to meet NBC for external cladding without any height restrictions.

## GENERAL SPECIFICATION

DIMENSIONS	MEASUREMENT
Thickness	3mm, 4mm, 5mm, 6mm (±0.2mm)
Width	1200mm (±2mm)
Length	Less than 6000mm (±4mm)
Bow	Max 0.5% of any dimensions
Diagonal Lines Difference	Max 5mm

PHYSICAL PROPERTIES	STANDARD	MEASUREMENT
Panel Weight	ASTM D-792	3MM=4.6 Kg/m <sup>2</sup>
4MM=5.5 Kg/m <sup>2</sup>		
Thermal Expansion	ASTM D-696	3X10-5/°C
Thermal Conductivity (4mm)	ASTM D-976	0.39Kcal/M.hr.°C
Deformation temperature	ASTM D-648	115°C

MECHANICAL PROPERTIES	STANDARD	MEASUREMENT
Tensile Strength	ASTM D-638	49MPa
Yield Strength	ASTM D-638	44MPa
Bending Strength	ASTM C-393	120MPa(4mm)
Flexural Elasticity	ASTM C-393	2.6X10 <sup>4</sup> (4mm)
Shearing Strength	ASTM D-732	33MPa
Penetrating Resistance	ASTM D-732	11 kN
Adhesive Peel off Strength	ASTM D-903	10N/MM
Wind Pressure resistance	ASTM E-330	Passed
Resistance against water	ASTM E-331	Passed
Resistance against air	ASTM E-283	Passed



**SGS**

Report No.: MAN TR 9530053560 DATE: 20/03/2018

**TEST REPORT**

This test was conducted as per DIN 4102-15:1999 DIN 4102-16:1999 and DIN 4102-1:1999 Clause 6.2, and Classification as according to DIN 4102-1 (May 1996) Clause 6.1 Class B1 materials.

**II. Sample details**

Structure	Aluminum composite panel
Color	White
Density	About 7.3 kg/m <sup>3</sup>
Size of sample	1500mmx1500mmx4.0mm & 1500mmx3000mmx4.0mm

**Conditioning**

Prior to testing, the sample was conditioned at least 14 days to constant mass at a temperature of 23 ± 2 °C, and a relative humidity of 50 ± 5 %.

**III. Test results**

1) "Brandschachtel" Test according to DIN 4102-16:15

Exposed surface: The front face

Line No.	Unit	Test assembly No.			
		A	B	C	D
1	Specimen foraging according to DIN 4102 part 15, table	-	-	-	-
2	Max. flame height above lower sample edge:	cm	40		
3	Time "	min:s	0:51		
4	Flaming/Smoking/Through	min:s	NO		
5	Time "	min:s	NO		
6	Back of specimen	min:s	NO		
7	Flaming/glowing, Time "	min:s	NO		
8	Discoloring, Time "	min:s	NO		
9	During discolored	min:s	NO		
10	Specimen material falling off in separate droplets	min:s	NO		
11	Specimen material falling off continuously	min:s	NO		

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**SHIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**  
(A unit of Shiram Scientific and Industrial Research Foundation)  
18, University Road, New - 110017 (India)  
AN ISO - 9001, 14001 & OHSAS 18001 Certified Institute E-mail id: customerservice@shiramindia.com

**TEST CERTIFICATE** NO.: C10000122820

Issued To: Client Code: 52346 Date: 05/04/2018  
SOMA PLASTIC PVT LTD Job No: 1803-1-141-3097  
3RD & 4TH FLOOR Booking No: RG1718/0212169  
D.C. BLOCK Building Date: 21/03/2018  
COMMUNITY CENTRE Customer Ref No: SPV/0218/TEST/MAAR/2018  
KARANDA VIBHAR Customer Ref Date: 14/03/2018  
NEW DELHI  
KALAM, NEW DELHI & KHANNA

**Sample Description:**  
ONE SAMPLE SUBMITTED AS HYNADECOR ALUMINUM COMPOSITE PANEL.  
40841 H0-013 GLAIRE WHITE, WAS RECEIVED.  
The sample was not carried out by Bureau Institute for Industrial Research. The sample details provided in the test certificate are based on the declaration by the party.

S.No	Tests	Results	Prescribed Adopted/ Instrument Used
1	Tensile Strength, MPa	39	ASTM E588-15a
2	Yield Strength (0.2 % Proof), MPa	38	ASTM E588-15a
3	Elongation, %	4	ASTM E588-15a
4	Hot Deflection Temperature, °C	More than 180	ASTM D 648-16
5	Panel Dimensions, mm	1500	Calibrated measuring Scale
6	Panel Weight, kg/m <sup>2</sup>	4.6	Calibrated Weighing Balance by FTR
7	Composition of core (Fusion Transmittance Infrared Spectroscopy (FTIR))	Spots attached	ASTM D 7091-13
8	Flash and Thickness, mm	26	ASTM D 7091-13
9	Chemical Resistance	3	ASTM D 7091-13
10	(a) 10 HCl for 30 minutes	No colour change observed.	
11	(b) 10% NaOH for 30 minutes	No colour change observed.	
12	(c) 5% Desigener for 72 hrs	No colour change observed.	
13	(d) Methyl for 24 hrs	No colour change observed.	

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AMLS/018-02/18001/484

**ARAI**

Page 2 of 4  
03/03/2018

**TEST REPORT**

Customer's Name: SOMA PLASTICS PVT. LTD.  
Service requirement: Testing of material for Flammability as per IS: 15061-2002  
Material Manufacturer's Name: SOMA PLASTICS PVT. LTD.  
Material Grade: NA  
Material Type: Aluminium Composite Panel  
Component Part No. and Batch No.: NA  
Identification Code: H0-013 GLAIRE WHITE  
Drawing No.: NA  
Date of Testing: 23.18

**2.0 Horizontal Burning Rate Test as per IS: 15061-2002; Clause 3.2 and Annex A**

**2.1 Observation Table: The sample under test is horizontal.**

Sr. No.	Description	Observations				
		Test Piece 1	Test Piece 2	Test Piece 3	Test Piece 4	Test Piece 5
1.	Horizontal Burning Rate, min:s	0	0	0	0	0

(P. refer Typical photograph Below)

**2. Remark:** Sample under test meets Horizontal Burning Rate test requirement when tested as per IS: 15061-2002; Clause 3.2, and Annex A.

Note: The Automotive Materials laboratory is accredited as per ISO/IEC 17025 to carry out above said test.

**TYPICAL PHOTOGRAPH**

Sample Before test

Sample After test

Test Report Compiled By: M. N. GHAVATE  
M. N. GHAVATE  
CHEMIST

Test Report Verified By: P. N. GHAVATE  
P. N. GHAVATE  
MANAGER

Test Report Approved By: M. N. GHAVATE  
M. N. GHAVATE  
DEPUTY GENERAL MANAGER



HD-200 ROYAL WALNUT ● ●



HD-201 CARISMA WOOD ● ●



HD-202 TROPICAL TEAK ● ●



HD-203 NEW EBONY ● ●



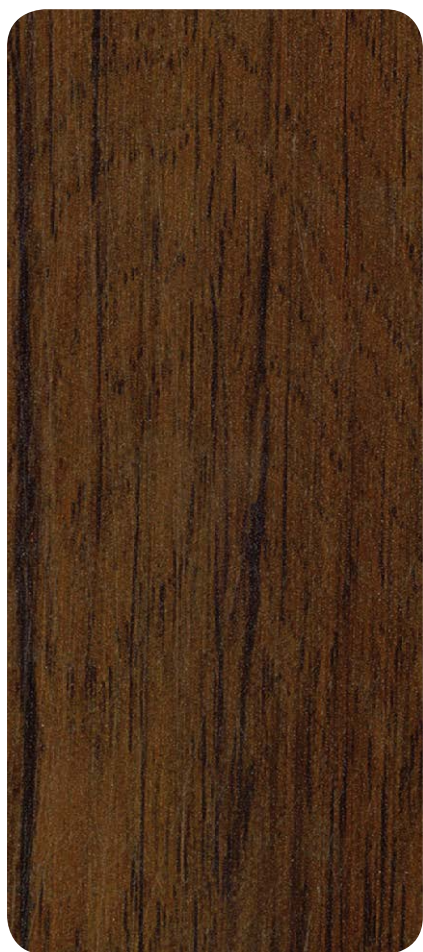
HD-204 SPLATED RUST WOOD ● ●



HD-205 ROSE WOOD ● ●

Also available in ● Exterior, ● Interior, ● 0.5 Series & ● HPL 6 mm





HD-206 NATURAL WOOD ●●



HD-207 INDIAN WALNUT ●●



HD-208 ROYAL WOOD ●●



HD-209 NEW OAK PINE ●●



HD-210 ZEBRA WOOD ●●



HD-211 AFRICAN WOOD ●●





HD-300 EMPERADOR ●●



HD-301 BLACK MARBLE ●●



HD-302 ITALIAN MARBLE ●●



HD-303 YELLOW STONE MARBLE ●●



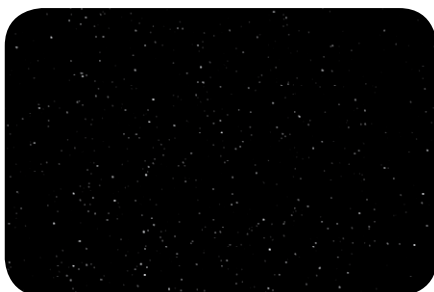
HD-041 MIRROR GOLD ●



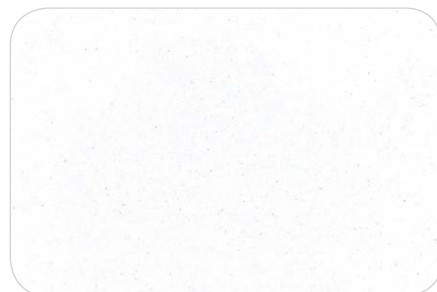
HD-042 MIRROR SILVER ●



HD-054 RED SPARKLE ●



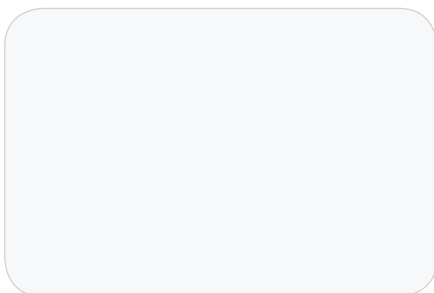
HD-055 BLACK SPARKLE ●



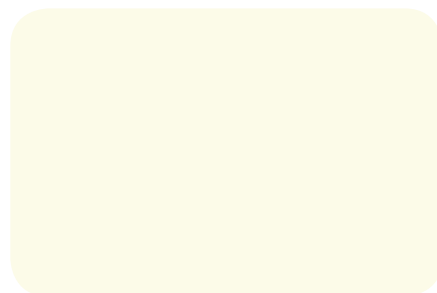
HD-056 WHITE SPARKLE ●



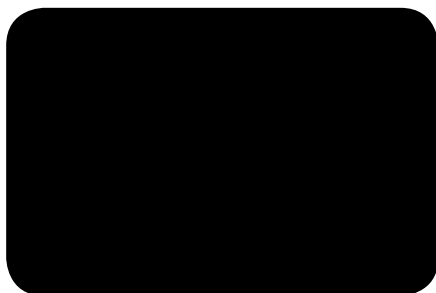
HD-050 RED GLOSS ●●



HD-051 WHITE GLOSS ●●



HD-052 IVORY GLOSS ●●



HD-053 BLACK GLOSS ●●



HD-040 BRUSH SILVER ●





HD-001 BRIGHT SILVER ●●●



HD-002 SILVER METALLIC ●●●



HD-003 CHAMPAGNE SILVER ●●●



HD-004 CHAMPAGNE GOLD ●●●



HD-005 METALLIC GREY ●●●



HD-006 BLUE METALLIC ●●●



HD-007 ROYAL GOLD ●●●



HD-008 PRECIOUS GOLD ●●●



HD-009 COPPER JEWELL ●●●



HD-010 DUCTILE COPPER ●●●



HD-011 MALLEABLE COPPER ●●●



HD-012 GREEN SEA ●●●



HD-013 VIVO BLUE ●●●



HD-014 SAMSUNG BLUE ●●●



HD-015 ROYAL RED ●●●



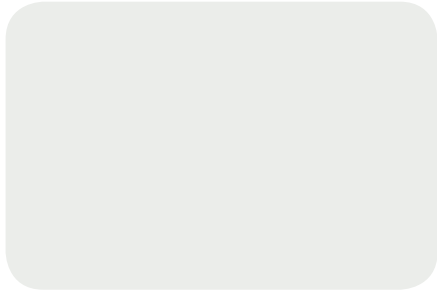
HD-016 RICH RED ●●●



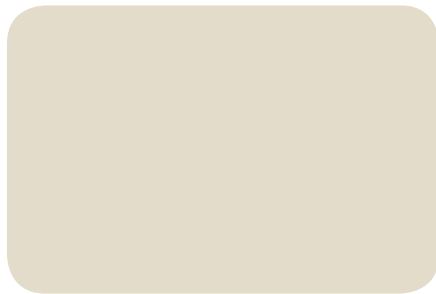
HD-017 BURGUNDY ●●●



HD-018 NATURAL IVORY ●●●



HD-019 GLAIRE WHITE ●●●●



HD-020 WHITE SMOKE ●●●



HD-021 SAND DUNE ●●●



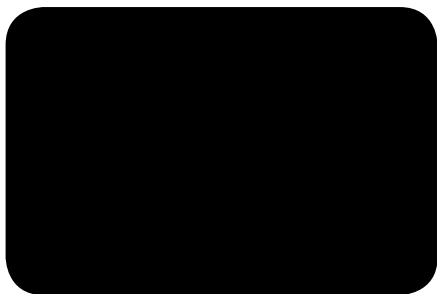
HD-022 BURNING SAND ●●●



HD-023 EVER GREEN ●●●



HD-024 OPPO GREEN ●●●



HD-025 COAL BLACK ●●●



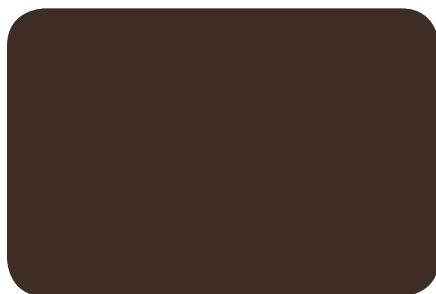
HD-026 ROYAL PURPLE ●●●



HD-027 MANDARIN ORANGE ●●●



HD-028 PINK CHARM ●●●



HD-029 DARK BROWN ●●●



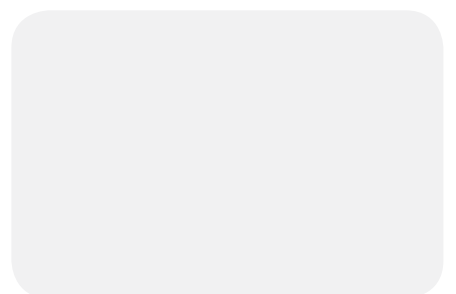
HD-030 YELLOW ●●●



HD-031 BLUE SKY ●●●

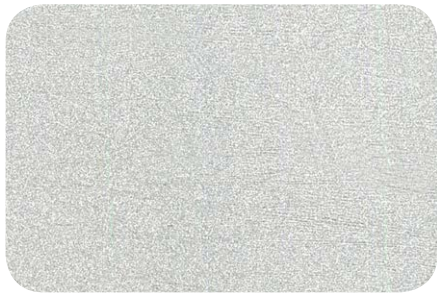


HD-032 LAKE BLUE ●●●

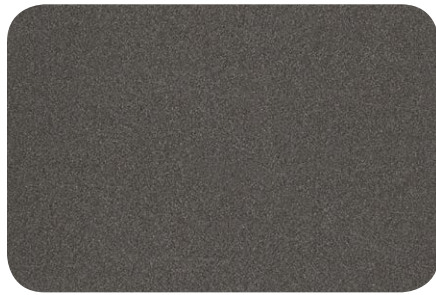


HD-033 GALAXY WHITE ●●●

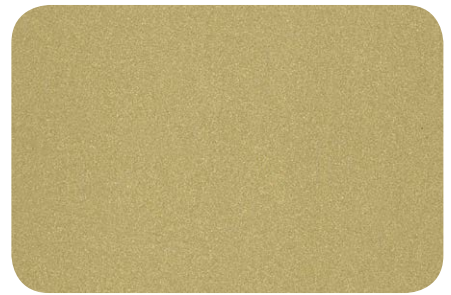




HB-001 BRIGHT SILVER



HB-005 METALLIC GREY



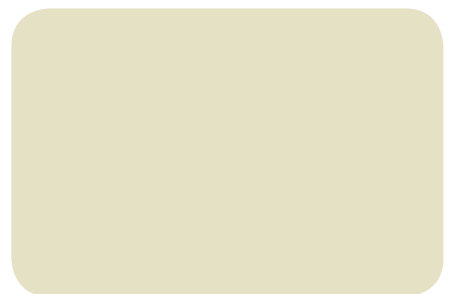
HB-007 ROYAL GOLD



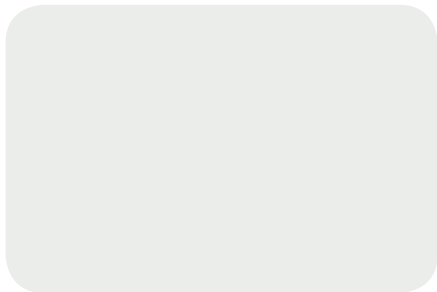
HB-010 DUCTILE COPPER



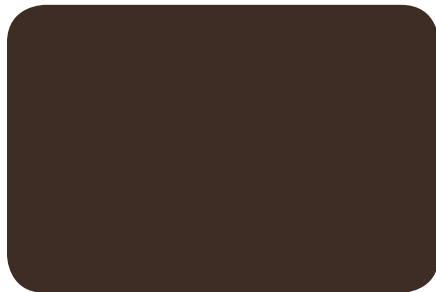
HB-016 RICH RED



HB-018 NATURAL IVORY



HB-019 GLAIRE WHITE



HB-029 DARK BROWN



HB-050 WALNUT TIMBER



HB-051 OXFORD CHERRY



HB-052 WENGE WOOD



HB-053 MAHAGONY





**HYNADecor**<sup>®</sup>  
ALUMINIUM COMPOSITE PANELS

An ISO 9001 : 2015 ISO 14001 : 2015 OHAS 18001 : 2007 Certified Company

**Head Office:** 701, 7th Floor, Kings Mall , Twin District Centre,  
Rohini , Sector-10 , Delhi -110085, INDIA

**Factory:** Khewat No 458, Khatta No-532, Killa No-32/1/2,  
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[www.hynadecor.com](http://www.hynadecor.com)



\*Colour may vary from batch to batch  $\Delta \pm 5$

To avoid colour variation, place an order the total quantity for one particular building.  
To avoid possible reflection of light variation, install panels in the same direction as  
marked on the protective film.