



SPECIFICATION INFORMATION FIRE RETARDANT GRADE HGF & VGF PLASTIC LAMINATE

1. Product Identification

NEVAMAR® Fire Retardant Grade Plastic Laminate

2. MANUFACTURER

NEVAMAR DECORATIVE SURFACES

One Nevamar Place

Hampton, South Carolina 29924

Phone: (803) 943-7200 or (800) 638-4380

www.nevamar.com

3. Product Description

Basic Uses: NEVAMAR® brand Fire Retardant Grade Laminate is manufactured for use on interior, horizontal and vertical surfaces where a flame and fire resistant product is required. UL- listed NEVAMAR Fire Retardant Laminate is available in 0.048” (1.2mm) Horizontal Grade (HGF) and 0.032” (0.8mm) Vertical Grade (VGF).

Nevamar Fire Retardant Laminate when bonded to Inorganic Reinforced Cement Board¹ or Fire Retardant Wood Particle Board² using Cascophen G1149 - A and G1131 - B hardener (BORDEN Chemical Inc.) obtained the following classification in UL - 723 or ASTM E 84 ,Test for Surface Burning Characteristics of Building Materials (Table Below).

¹ Inorganic Reinforced Cement Board bearing Classification Marking of UL. Inc. with Flame Spread and Smoke Developed values being zero (0).

² Fire Retardant Wood Particle Board bearing Classification Marking of UL. Inc. with Flame Spread and Smoke Developed values being 20 and 25.

	FR BOARD 3/8” OR GREATER	FR BOARD 3/4” OR GREATER	INORGANIC REINFORCED CEMENT BOARD
1*	25	20	20
2**	75	45	5

1* = Flame Spread

2** = Smoke Developed

4. Technical Data

Nevamar Fire Retardant Laminate Grades are manufactured to meet the Standard of the High Pressure Decorative Laminate Industry. ANSI (American National Standard Institute) / NEMA (National Electrical Manufacturers Assoc.) Publication LD3 – current edition. NEMA provides the performance value for High Pressure Laminate Industry in the U.S.

Class I Nevamar Fire Retardant Laminate meets requirements of major Building Codes and the following:

U.S. Navy - MIL - P-17171E (SH), May 25,1990

TYPE I - Horizontal General Purpose

TYPE IV - Horizontal Fire Retardant Grade

NOTE: TYPE IV will refer to MIL - STD - 1623 requiring a UL label on each sheet of laminate.

U.S. Coast Guard 164.012

Specification for all laminate used on passenger vessels, registered in the U.S. or picking up passengers in U.S. ports. Horizontal Fire Retardant Grade only.

F. A. R. 25.853 Airplanes.

Interior trim on passenger planes carrying more then 6 passengers requires Fire Retardant Grade.

Mobile Home safety Standard #280 HUD



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Refers to interior finishes used in mobile homes. Unless otherwise specified, all surfaces can use General Purpose Grade. Fire Retardant Grade must be used for areas within 6 inches of range top or walls and door of furnace closet.

NSF International (National Sanitation Foundation) Standard # 35

States and Localities.

M.E.A. #240-93-M New York City

Requires U.L. Class A or I Fire Retardant Grade plus a toxicity test approval.

5. Usage

Nevamar® Fire Retardant Laminate must be used as listed. That is, adhesive and substrate cannot be changed.

Each order of Nevamar Fire Retardant Grade is shipped to the customer with the UL label affixed. These Class I panels are typically used for corridors, stairwells, entries, elevators, fixtures, cabinetry in multi-family dwellings, educational buildings, religious buildings, hospitals, public entertainment buildings, hotels and motels, restaurants and shopping centers. Specific uses for this product include: Wood doors (solid core), paneling, walls, store fixtures, counters, elevator interiors, partitions, compartments and cubicles, or wherever fire retardant surfacing is required or desirable.

Limitations: Nevamar Laminate is not recommended for exterior use or direct application over gypsum wallboard, concrete walls or plastered walls. Fabrication should not be done below the temperature of 65°F (18°C). Do not use in areas exposed to temperatures exceeding 275°F (135°C).

Postforming is not available in Fire Retardant Grades.

Composition and Materials:

Nevamar Fire Retardant laminate is manufactured by pressing melamine resin impregnated decorative paper over layers of phenolic resin impregnated kraft paper at pressures approximating 1200 lbs. per square inch at temperatures not exceeding 300°F (148°C). The back is sanded to maintain uniform thickness and to facilitate bonding.

Sheet Sizes: (In inches and metric)

Widths – 30" (762 mm), 36" (914 mm), 48" (1219 mm), 60" (1524 mm)

Lengths – 96" (2438 mm), 120" (3048 mm), 144" (3658 mm)

These are nominal dimensions obtainable from oversized sheets.

Thickness:

Horizontal Grade (HGF) 0.048" ± .005 (1.2mm ± .12)

Vertical Grade (VGF) 0.032" ± .005 (0.8mm ± .12)

These are nominal dimensions obtainable from oversized sheets.

Finishes: Typically, Nevamar high pressure laminates are stocked in textured (T) finish. Some stock line items come standard in another finish as indicated in the product guide. Other finish options are available upon request under made-to-order guidelines. Typical finish for patterns and woodgrains are shown in Table I. Contact your NEVAMAR representative or distributor on optional finish availability. Black laminate will have a natural core in Fire Retardant Grade. Black core items are not available in Fire Retardant Grade.

6. Installation

Nevamar brand Fire Retardant Grade Laminates and Fire Retardant Wood Particle Board or Inorganic Reinforced Cement Board should be equilibrated at the same environmental condition for 48 hours before bonding. Mixing of adhesive, application and curing conditions should be done according to manufacturer procedure. Care should be taken to assure that a moisture imbalance does not exist between NEVAMAR laminate and the substrate prior to fabrication. Inside corners of all cutouts should have a minimum radius of 1/8" (3.2mm) with edges filed smooth to prevent stress cracking.



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7. Availability and cost

Nevamar Fire Retardant Grades are not in stock and must be special ordered. Call for current time delivery. This material can be ordered from Nevamar distributors located throughout the country.

Contact Nevamar for distributor location closest to you. Cost varies according to locale, quantity, patterns and finish; however, the cost would be approximately 1.2 times the price of standard surface material.

8. Maintenance

Surfaces of NEVAMAR® laminate may be cleaned with a damp cloth and ordinary soap or household ammoniated liquid detergent. Abrasive cleaners or cleaners containing five percent or more of chlorine bleach solution should not be used. Stubborn stains may require use of organic solvents such as alcohol, acetone, ketone (MEK), lacquer thinner or paint solvent. (Note: Although these solvents will not harm NEVAMAR, they will attack the contact adhesive at the glue line around the edges and are flammable.) Complete care instructions are available upon request.

9. Limitation of Warranty and Liability

(a) We warrant solely to the original Buyer that the Products will be free from defects in materials and workmanship, when given normal, proper and intended usage, for a period of one year from the date of sale to the Buyer.

(b) At our expense, we agree to repair or replace at our option all defective Products not performing substantially in accordance with applicable Product specifications, provided that Buyer has given us written notice of such warranty claim within the one year warranty period. If we are unable, after reasonable efforts, to repair or replace such defective Product, Buyer's sole remedy shall be the refund of an amount not to exceed the actual payments received by us for such Product. All replaced items shall become our property.

(c) Buyer is responsible for inspection of the product upon receipt and prior to any cutting, gluing or attaching of the product to any other material ("Fabrication"). Any claim by Buyer for breach of warranty shall be deemed waived to the extent it could have been determined by such inspection and any claim by Buyer for breach of warranty shall also be deemed waived if, after the Buyer determines the existence of a possible claim, fabrication is not delayed until we have been notified and have had an opportunity to resolve it in accordance with this warranty.

(d) We shall have no obligation to make repairs, replacements or corrections which result, in whole or in part, from (i) normal wear and tear, (ii) fault or negligence of Buyer, (iii) improper or unauthorized use of the Products, (iv) use of the Products in a manner for which they were not designed, (v) modifications of the Products by anyone other than us, (vi) any act of nature, act of God, fire, casualty, flood or war, (vii) any other causes external to the Products, or (viii) use of the Products in combination with equipment or materials not supplied by us.

(e) If notified within 10 days in writing of any action (and all prior related claims) brought against Buyer based on a claim that a Product infringes any valid United States patent, copyright or trade secret, we shall defend such action at our expenses and pay all costs and damages finally awarded in such action or settlement which are attributable to such claim. We shall have sole control of the defense of any such action and all negotiations for its settlement or compromise. Buyer shall cooperate fully with us in the defense, settlement or compromise of any such action. In the event that a final injunction is obtained against Buyer's use of a Product by reason of infringement of a valid United States patent, copyright or trade secret, or if in our opinion any Product is likely to become the subject of a successful claim of such infringement, we may, at our option and expense, (i) procure for Buyer the rights to continue using the Product, (ii) replace or modify the Product so that it becomes non-infringing (so long as its functionality is



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essentially unchanged), or (iii) accept the return of the Product and refund the Buyer the purchase price therefore. We may withhold further shipments of any such Products.

(f) We shall not have any liability to Buyer to the extent that any infringement or claim thereof is based upon (i) the use of a Product in combination with equipment or materials not supplied by us where the Product would not itself be infringing, (ii) compliance with Buyer's designs, specifications or instructions, (iii) use of the Product in an application or environment for which it was not designed, (iv) modifications of the Product by anyone other than us, or (v) any claims of infringement of any patent, copyright or trade secret in which Buyer or any affiliate or customer of Buyer has an interest or license.

(g) Buyer shall not bring any suit or action against us for any reason whatsoever more than one year after the related cause of action has accrued.

EXCEPT AS STATED ABOVE, WE DISCLAIM ALL WARRANTIES, WHETHER EXPRESS OR IMPLIED, WRITTEN OR ORAL, WITH RESPECT TO THE PRODUCT, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

THE FOREGOING INDEMNIFICATION PROVISIONS STATE OUR ENTIRE LIABILITY WITH RESPECT TO INFRINGEMENT OR ALLEGED INFRINGEMENT OF PATENTS, COPYRIGHTS, TRADEMARKS, TRADE SECRETS AND OTHER INTELLECTUAL PROPERTY OR PROPRIETARY RIGHTS BY THE PRODUCTS.

OUR MAXIMUM LIABILITY ARISING OUT OF THE SALE OF THE PRODUCTS OR THEIR USE, WHETHER BASED UPON WARRANTY, CONTRACT, TORT OR OTHERWISE, SHALL NOT EXCEED THE ACTUAL PAYMENTS RECEIVED BY US IN CONNECTION THEREWITH. IN NO EVENT SHALL WE BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, OR LOSS OF USE DAMAGES, ARISING HEREUNDER OR FROM THE SALE OF THE PRODUCTS.

Consumers who purchase our Products for personal or household use may have other rights, which will vary from state to state or, in Canada, from province to province. Federal law and some states law do not permit the disclaimer or modification of implied warranties for consumers, but may permit limitation of the duration of the implied warranties for consumers. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages. Therefore, the above warranty limitations may not apply to you.

10. Technical Services

Nevamar maintains trained sales personnel servicing all sections of the country. Consult local telephone yellow page directory under "Plastic High Pressure Laminates" or contact Nevamar Decorative Surfaces, One Nevamar Place, Hampton, South Carolina 29924.

Phone: (803) 943-7200 or (800) 638-4380

Website: www.nevamar.com



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TABLE-I		
CATEGORY	TYPICAL FINISH	OPTIONAL FINISH
Patterns	Textured/Gloss/Hi-Luster	For details on all optional finishes available, contact Nevamar
Woodgrains	Textured/Gloss/Polished Velvet/Velvet	
Matrix	Textured/Crystal	
Solid Colors	Textured/Gloss/Crystal	

FINISH	GLOSS* READING	DESCRIPTION OF FINISH
Crystal	6-16	Dimensional high light reflectivity
Gloss	85-100	High gloss
Hi-Luster	30-40	Finely textured, highly reflective
Polished Velvet	25-35	Semi-gloss minutely grained finish
Textured	5-20	Low sheen matte
Velvet	10-20	Finely grained finish
*Gardner 60° Gloss Meter		

TABLE-2 TEST VALUES				
TEST	NEMA REQUIREMENTS		TYPICAL NEVAMAR VALUES	
	HGF	VGF	HGF	VGF
Wear Resistance: Wear Value (cycles)	400 min.	400 min.	1000 cycles typical on Armored Protection™ textured finish	
Impact Resistance: (Inch drop)	45	20	50	28
Dart Impact Resistance	450mm	200mm	711mm	635mm
Dimensional Change %MD, max. %CD, max.	0.5 0.9	0.7 1.2	.27 .30	.23 .34
Room Temp Dimensional Stability %MD, max. %CD, max.	0.5 0.9	0.7 1.2	.18 .40	.17 .22
Resistance to Boiling Water	No Effect	No Effect	No Effect	No Effect
Resistance to High Temperature	Slight Effect	Slight Effect	No Effect	No Effect
Radiant Heat Resistance	75 sec. Min.	50 sec. Min.	211	205
Stain Resistance	Unaffected by reagents I-10; moderate II-15		Unaffected by reagents I-15	
Light Resistance	Slight Effect	Slight Effect	No Effect	No Effect
Cleanability	20 max.	20 max.	3	3
Formability	N/A	N/A	N/A	N/A
Blistering	N/A	N/A	N/A	N/A