



SPECIFICATION INFORMATION
Technical Data
FIRE RATED LAMINATE

1. Product Identification

NEVAMAR® Fire Rated 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® Fire Rated Laminate is manufactured for use on interior surfaces where a flame resistant and low smoke generation product is required. Fire Rated Laminates can be made in any color, pattern or finish offered in the Nevamar line for decorative applications. In addition, a Chemical Resistant (Fire Rated ChemArmor) and Fire Rated Backers are available. NEVAMAR Fire Rated Laminate is classified in the U.S. and Canada by Underwriters Laboratory, Inc. under File R4642 and is available in various thicknesses.

Product Types: Table 1

NEVAMAR TYPE	NEMA GRADE	NOMINAL THICKNESS	APPLICATION
K32	VGF	0.031"	Vertical Decor
K51	HGF	0.048"	General Purpose Decor
K61	SGF	0.059"	General Purpose Decor
HK2	Not applicable	0.039"	Chemical Resistant
KBO	BKV	0.031"	BACKER
KB8	BKH	0.048"	BACKER
KBX	Not applicable	0.059"	BACKER

4. Technical Data

Fire Rating:

Nevamar Fire Rated Laminate, when bonded to specified substrates and adhesives, obtained the following results per US Standard UL-723 / ASTM E 84 and Canadian Standard ULC-S102 Test for Surface Burning Characteristics of Building Materials. See Underwriters Laboratory website at WWW.UL.com under the certifications tab for more information.

Type K32, K51, K61 and HK2: Table 2

	FR BOARD 3/8" OR GREATER	FR BOARD 3/4" OR GREATER ²	INORGANIC REINFORCED CEMENT BOARD
Flame Spread	25	20	20
Smoke Developed	75	45	5

Type KBO, KB8, KBX Backer: Table 3

	FR BOARD 3/4" OR GREATER ²	INORGANIC REINFORCED CEMENT BOARD
Flame Sread	20	20
Smoke Developed	5	5



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Physical Properties:

TABLE-4 NEMA TEST VALUES						
Test	NEMA Requirements			Typical Nevamar Values		
	VGF	HGF	SGF	K32	K51	K61
Wear Resistance(min)	400	400	400	1000 cycles typical on Armored Protection™		
Ball Impact Resistance(min)	20	45	55	28	50	50
Dart Impact Resistance(min)	200mm	450mm	550mm	635mm	711mm	750mm
Dimensional Change	0.7	0.5	0.5	.23	.27	.27
%MD, max.	1.2	0.9	0.9	.34	.30	.30
%CD, max.						
Room Temp Dimensional Stability	0.7	0.5	0.5	.17	.18	.20
%MD, max.	1.2	0.9	0.9	.22	.40	.50
%CD, max.						
Resistance to Boiling Water	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
Resistance to High Temperature	Slight Effect	Slight Effect	Slight Effect	No Effect	No Effect	No Effect
Radiant Heat Resistance:(min)	50 sec. Min.	75 sec. Min.	75 sec. Min.	205	211	211
Stain Resistance	Unaffected by reagents 1-10; moderate 11-15	Unaffected by reagents 1-10; moderate 11-15	Unaffected by reagents 1-10; moderate 11-15	Unaffected by reagents 1-15	Unaffected by reagents 1-15	Unaffected by reagents 1-15
Light Resistance	Slight Effect	Slight Effect	Slight Effect	No Effect	No Effect	No Effect
Cleanability(max)	20	20	20	3	3	3

Codes and Certifications:

General Standards

NEMA LD-3 Nevamar Fire Rated Laminate is manufactured to meet ANSI (American National Standard Institute) / NEMA (National Electrical Manufacturers Assoc.) Publication LD3 – current edition, which provides the performance values for High Pressure Laminate Industry in the U.S.

NSF International (National Sanitation Foundation) Standard # 35 for work and non-work surfaces. Visit www.nsf.org

Greenguard Indoor Air Quality for a copy of the certification visit WWW.greenguard.org

Fire Standards Class A or 1 Nevamar Fire Rated Laminate meets requirements of major Building Codes (IBC, NFPA)

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

TYPE IV - Fire Rated Grade (Type K51 and K61 comply)

NOTE: Mil Spec 17171E will refer to MIL-STD-1623 requiring a UL label on each sheet of laminate.



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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. (All Types comply)

F. A. R. 25.853 Airplanes.

Interior trim on passenger planes carrying more than 6 passengers requires Fire Rated Grade. (All Types comply)

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

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

Mobile Home safety Standard #280 HUD

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

5. Usage

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

Each order of Nevamar Fire Rated 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 rated 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 Rated Grades.

Composition and Materials:

Nevamar Fire Rated 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. Fire Rated Grades are only made with brown core.

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.

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. Contact your NEVAMAR representative or distributor on optional finish availability.

6. Installation

Nevamar brand Fire Rated Grade Laminates and Fire Rated 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



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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.

7. Availability and cost

Nevamar Fire Rated 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.



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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 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