

The logo features a large, stylized letter 'N' on the left, with a dark blue arc above it. To the right of the 'N', the word 'National' is written in a large, black, serif font. Below 'National', a horizontal line separates it from the words 'WALL SYSTEMS', which are written in a smaller, dark blue, all-caps, sans-serif font.

National WALL SYSTEMS

HOMOGENEOUS HEAT WELDED WALL SYSTEMS

*High
Performance*

*Guaranteed
Success*

Office Locations:

186 Pinecrest Road
Princeton, NC 27569
919-795-9434

50 E Esva Road
Peerless, MT 59253
406-939-3460

NationalPBS.com

We take pride in our clientele as it is a reflection of the quality of our work. Our company creates value through the level of repeat business we earn.

Our quality over quantity mindset translates to the amount of business we conduct throughout the year. We devote complete attention to every client we have, big or small.

Each new opportunity is seen as our chance to begin a long term relationship in keeping our clients on track and compliant.

PHARMACIA



stryker®



Wyeth®



National WALL SYSTEMS

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***25 Years Experience as a
Consumer, Installer
and Health Care Professional.***

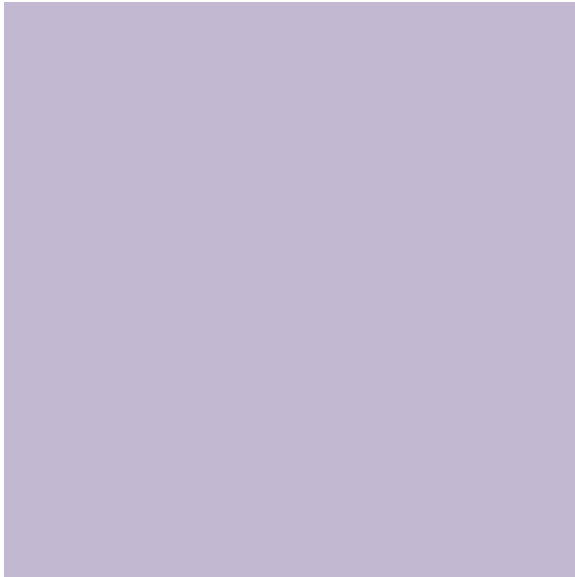


NationalPBS.com

HEAT WELDED SEAMLESS WALL SYSTEMS



WALL SYSTEMS - 2mm THICKNESS - WHITE



WALL SYSTEMS - 2mm THICKNESS - BEIGE

Specifications

Seamless Wall and Ceiling Systems Heat-Welded Wall Systems

Characteristics (Wall Systems)

- Seamless, high impact resistance
- Heat weldable to itself and to PVC floors resulting in a seamless monolithic room
- Ultra hygienic
- Durable, thermoformed corners
- Used on ceilings
- Used as wainscot or to cover entire wall
- Minimal maintenance required
- Install over most smooth walls

Sizes, Color and Finishes

- White and Beige
- Semi-gloss finish
- Sheets 4'x8' and 4'x10' in 2mm thickness
- Special colors, finishes and sizes are available; contact office for minimum quantity requirements.

Applications

Class 10 to 100,000 clean rooms, laboratories, hospitals, animal holding areas, morgues, corridors with cart traffic, bumpers from swinging doors, wet rooms, food processing areas, fermentation rooms, operating suites, burn centers, and whenever absolutely hygienic cleanliness is a requirement and where walls are being marred by repeated bumping by wheeled vehicles. EXCELLENT FOR AIDS AND CANCER RESEARCH FACILITIES.

Maintenance

Wall Systems never require painting or any sealer. Easily maintained by washing with a mild soap solution as necessary.



SEAMLESS WALL SYSTEMS

Class 1/A Rated Thermoplastic Sheet General Information

NWPT-53 is a thermoplastic sheet that is used for laminating and thermoforming applications requiring a CLASS 1/A rating. Unlike many other thermoplastics, NWPT-53 is less hygroscopic and frequently does not require pre-drying. NWPT-53 meets Class 1/A building code ratings up to .125” (3.175mm) and is UL listed up to .080” (2.03mm).

Features

NWPT-53 is available in 6 standard gauges from .028” (0.71mm) to .125” (3.175mm)

- Nine textures
- Large variety of colors - including custom color matching
- Custom blank sizes
- Very low minimums
- NWPT-53 sheet is more resistant to a wider range of concentrated chemicals than any other thermoplastic. Its’ superior chemical resistance allows for excellent cleanability because stronger cleaning agents can be used with no discoloration or surface damage to the material.

Thermoformability

NWPT-53 extremely easy to work with once formed.

Thermoplastic Sheet for Applications Requiring a Class 1/A rating up to .125”

PHYSICAL PROPERTIES (UNITS)	AVERAGE VALUES	TEST METHODS
SPECIFIC GRAVITY	1.35	ASTM D-792
TENSILE STRENGTH, MACHINE DIRECTION (PSI)	5800	ASTM D-638
FLEXURAL STRENGTH	9500	ASTM D-790
FLEXURAL MODULUS	3.2	ASTM D-790
IMPACT STRENGTH @ 72F (FT-LB/IN NOTCH)	12.0	ASTM D-256
NOTCHED IZOD		
HARDNESS (ROCKWELL SCALE R)	100	ASTM D-785
HEAT DEFLECTION @264 PSI (F)	180	ASTM D-648
TEMPERATURE (ANNEALED)		
THERMAL CONDUCTIVITY(BTU/IN/HR/FT/F)	1.01	ASTM C-177
COEFFICIENT OF (IN/IN Fx10)	4.5	ASTM D-696
THERMAL EXPANSION		
THERMOFORMING	330	MACHINE
TEMPERATURE RANGE HIGH (F)	380	
MOLD SHRINKAGE (IN/IN)	0.004-0.006	
FLAMMABILITY RATING		
MOTOR VEHICLE STANDARD	PASSES	FMVSS 302
UNDERWRITERS LAB	LISTED (1)	UL 90 V-O
UNDERWRITERS LAB	LISTED (2)	UL 94-5V A
UNDERWRITERS LAB	LISTED (3)	UL 94-5V B
FLAME SPREAD INDEX	<6	ASTM E-162



SEAMLESS VINYL WALL COVERING

NWPT-53

Part 1 - General

1.01 Scope

- A. Description of Work
1. This section includes vinyl wall coverings and installation materials.
 2. Extent of vinyl wall coverings and accessories as shown on drawings in schedules.

1.02 Quality Assurance

- A. FIRE TEST PERFORMANCE: Provide vinyl wall covering which complies with the following fire test performance criteria as determined by and not limited to the following (supply certificate of compliance from independent testing lab):
1. FLAME SPREAD: Class A/Class1 <6 Per ASTM E-162
 2. Must be USDA (United States Department of Agriculture) approved.
- B. INSTALLERS QUALIFICATIONS: Installer shall be certified by supplier, in writing, as qualified for installation of vinyl wall covering with at least 5 years experience in the installation techniques of the vinyl wall covering. Only certified installers will be permitted on the project.

1.03 Submittals

- A. PRODUCT DATA: Submit suppliers technical data for each type of specified product.
- B. SAMPLES FOR INITIAL SELECTION PURPOSES: Submit suppliers standard color charts in form of actual pieces of vinyl wall covering required showing full range of color and pattern variations: 1.) 12"x12" sample of wall coloring. 2.) 12" piece of welding rod colors and accessory items. 3.) Other materials requested.
- C. CERTIFICATION FOR FIRE TEST PERFORMANCE: Submit certification from an independent testing laboratory that wall covering complies with fire test performance requirements.
- D. MAINTENACE INSTRUCTIONS: Submit two (2) copies of manufacturer's recommended maintenance practices for each type of wallcovering required.

1.04 Project Conditions

- A. Store the vinyl wall covering, adhesives, and accessories in areas where they are to be installed for a minimum of 48 hours prior to installation. NWPT-53 must be approved by manufacturer for use outside of normal temperature and humidity conditions.
- B. Maintain temperature and humidity in areas to receive the vinyl wall covering with a balanced HVAC system in permanent operating condition. Ideal conditions are at 65 degrees F minimum to 80 degrees F maximum with the relative humidity not to exceed 75 percent for at least 72 hours prior to, during and after the installation. Any lighting outside of normal operational lighting must be approved by manufacturer to maintain warranty.
- C. NWPT-53 may be approved for specific conditions with additional installation prep and installers approval.

- D. The extended temperature range after the installation shall be from 50 degrees F minimum to 85 degrees F maximum to maintain manufacturer's product warranty.

1.05 Delivery and Storage

- A. DELIVERY: Deliver and store materials as necessary in manufacturer's original unopened containers, with brands, names, and production lot numbers clearly marked thereon.
- B. TIMING AND COORDINATION: Deliver materials to allow for minimum storage time at the project site. Coordinate delivery with the scheduled time of installation.
- C. STORAGE: Store materials in a clean, dry location, protected from weather and abuse.
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Part 2 - Products

- A. Provide color and type as indicated, or if not otherwise indicated, as selected by Architect of Owner from manufacturer's standard color range.

2.01 Wall Systems

- A. Rigid Wall covering
- B. Homogeneous vinyl wall covering with the color extending throughout by National Wall Systems.
1. Sheet size: 4 foot x 8 foot or 4 foot x 10 foot
Flame spread: Class A/1 (<6) per ASTM ASTM D-162,
Smoke developed, Class A/1 (450 or less)per ASTM E-162
 2. Color: White or Beige
 3. Finish: Semi-gloss Flat
 4. Thickness: 2mm

Welding Rod: PVC welding rod as produced by vinyl wall covering manufacturer and intended for heat sealing of joints.

1. Color: As selected by Architect
2. Coil Size: 4mm x 110 linear feet approximately

2.02 Accessories

- A. ADHESIVES: Use adhesive as recommended by the vinyl wall covering manufacturer, including primers, in accordance with specified coverage's and installation instructions provided by National Wall Systems. At the present time primers and adhesives must be water-based contact cement. If the local and environmental laws allows, a solvent-based contact cement can be used.
- B. LEVELING AND PATCHING: In areas where these products must be used, follow manufacturer's instructions. Manufacturer of patching compound must warranty its compatibility with the vinyl wall covering and adhesive. The use of a Portland cement based patching product is recommend.

3.01 Inspection

- A. Require installer to inspect surfaces to determine that they are satisfactory. A satisfactory surface is defined as one that is smooth and free from cracks, holes, ridges, curing compounds, and sealers, oil, grease, wax, etc. preventing adhesive bond and other defects impairing performance or appearance.
 - 1. Verify flatness tolerance of surfaces does not vary more than 1/8 inch in 10 feet nor vary at a rate greater than 1/16 inch per foot.

3.02 Preparation

- A. Prepare surfaces as follows:
 - 1. Leveling and patching compounds: In areas where required, the underlayment must be compatible with the vinyl wall covering; old adhesive must be sanded off and surfaces washed with trisodium phosphate, rinsed and neutralized. Wipe dry.
- B. Vacuum surfaces to be covered and inspect.
- C. Apply primer sealer as recommended by vinyl wall covering manufacturer, prior to application of adhesive. Apply in compliance with manufacturer's directions.

3.03 Installation, General

- A. Install wall covering before installation of bases, hardware, or items attached to or spaced slightly from wall surface.
- B. Adhere wall covering to substrates using full spread of adhesive applied in compliance with manufacturer's directions. Adhere resilient wall covering with a 1/16" inch gap in all directions, raising and puckering at joints, telegraphing of adhesive spreader marks, or other surface imperfections. Hand roll wall covering.
- C. Maintain reference markers, holes, or openings that re in place or plainly marked for future cutting by repeating on wall covering as marked. Use chalk or other non-permanent marking device.

3.04 Installation of Vinyl Wall Covering

- A. Lay wall covering to provide as few seams as possible with economical use of materials. Match edge for color shading and pattern in compliance with manufacturer's recommendations. Where possible, run seams from light sources to reduce shadows.
- B. Prime the areas using Kilz Water Based (latex) primer which is recommended by vinyl wall covering manufacturer.
- C. Adhere vinyl wall covering to areas using full spread of adhesive applied in compliance with manufacturer's printed directions.
- D. Spread only enough adhesive to permit installation of materials before initial cure.
- E. Install vinyl wall covering in place roll with a hand roller to ensure full adhesion to surface.
- F. Scribe, cut and fit vinyl wall covering to permanent fixtures, built-in cabinets, pipes, outlets and permanent columns, walls, partitions, and doors leaving a 1/16" gap in all directions.
- G. Prepare seams in vinyl wall covering with routing tool and heat weld with vinyl thread in accordance with manufacturer's instructions.

3.05 Cleaning and Protection

- A. Perform following operations immediately upon completion of wall covering:
 - 1. Do not wash wall covering until time period recommended by vinyl wall covering manufacturer has elapsed to allow wall covering to become well sealed in adhesive. Minimum of 72 hours after seams have been heat welded.
 - 2. Damp clean walls being careful to remove marks and excessive soil.
 - 3. Remove any excess adhesive or other surface blemishes, using appropriate cleaner recommended by wall covering manufacturer.
- B. Protect wall covering against damage during construction period in accordance with manufacturer's directions.
 - 1. Cover wall covering with undyed, untreated building paper until inspection for substantial completion.
- C. Clean wall covering not more than 4 days prior to date scheduled for inspections intended to establish date of substantial completion in each are of the project. Clean wall covering by method recommended by the manufacturer.



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NWPT-53 (E-84 Approved)

CHEMICAL RESISTANCE CHARACTERISTICS FOR NWPT-53

Chemical	7 Days Immersion at 73 deg. F	Chemical	7 Days Immersion at 73 deg. F
Acetone	BAD	10% & 30% Nitric Acid	<u>very</u>
5% Acetic Acid	<u>very</u>	5 % Phenol	<u>very</u>
10% Ammonium Hydroxide	<u>very</u>	Oleic Acid	<u>very</u>
ASTM Oil No. 3	<u>very</u>	62% Perchlorid Acid	<u>very</u>
10% Citric Acid	<u>very</u>	50% Perchloric Acid	<u>very</u>
Cottonseed Oil	<u>very</u>	40% Potassium Dichromate	<u>very</u>
Ethyl Acetate	BAD	2% sodium Carbonate	<u>very</u>
95% Ethyl Alcohol	<u>very</u>	10% Sodium Hydroxide	<u>very</u>
50% Ethyl Alcohol	<u>very</u>	10% Sodium Chloride	<u>very</u>
Ethylene Dichloride	BAD	1% Sodium Hydroxide	<u>very</u>
Ethylene Glycol	<u>very</u>	30% Sulfuric Acid	<u>very</u>
Fuel Oil	<u>very</u>	3% Sulfuric Acid	<u>very</u>
Glycol	<u>very</u>	Trichloroethylene	BAD
Heptane	<u>very</u>	Toluene	BAD
10% Hydrochloric Acid	<u>very</u>	Vinegar	<u>very</u>
50% Hydrofluoric Acid	<u>very</u>	Water	<u>very</u>
30% Hydrofluoric Acid	<u>very</u>	Clorox	<u>very</u>
3% Hydrogen Peroxide	<u>very</u>	Household ammonia	<u>very</u>
Jet Fuel JP-4	<u>very</u>	Johnson's Wax	<u>very</u>
Jet Fuel JP-5	<u>very</u>	Isopropyl Alcohol	<u>very</u>
Kerosene	<u>very</u>	Water	<u>very</u>
Methyl Ethyl Ketone	BAD	Regular Gasoline	<u>very</u>
70% Nitric Acid	<u>very</u>	<u>Lestoil</u>	<u>very</u>
50% Nitric Acid	<u>very</u>	"All" Detergent	<u>very</u>
Revised as of March 2015			
NOTE: VERY = VERY GOOD/NOCHANGE (not all chemical tested are listed)			
Informational only, specific testing for specific need should be addressed by client.			