

## Two Coat Chemical Resistant Wall Systems

### PRODUCT DESCRIPTION

Thermal-Chem Chemical Resistant systems are solid color seamless 100% solids resinous wall systems that combines two coats of Chemical Resistant novalac epoxy that resist high concentrations of many chemicals. Finished thickness of the two (2) coat system is approximately **32 to 36 mils or approximately 1/32"**

### ADVANTAGES

- Superior surface protection
- Extremely durable
- Seamless and sanitary flooring
- Chemical resistant
- Can be applied by roller or sprayer
- Smooth surface profile
- Can be installed over new or old concrete
- 100% solids and VOC compliant

### TYPICAL USES

The **Acid Resistant** seamless Wall system is it ideal for many commercial and industrial environments.

- Chemical manufacturing facilities
- Pharmaceuticals
- Battery charging areas
- Primary and secondary containment areas
- Acid dip and immersion rooms
- HAZMAT facilities
- Pulp and paper industry

### LIMITATIONS

- Below-grade walls require vapor/moisture testing. If a vapor drive in excess of 3 lbs. per 1,000 sq. ft. per 24 hours (ASTM F 1869) is present, an epoxy vapor barrier coating must be installed below the **Acid Resistant Wall System** for proper performance.
- Do not install system if the ambient temperature and/or concrete substrate temperature is below 45° F or above 90° F. Product cure times are significantly affected by temperatures and can have a major affect on working time. Typically a 50°F decrease of substrate and material temperature will cause a doubling of the cure time of epoxy.
- Allow epoxy to cure for 48 hours prior to exposure to chemicals

### TYPICAL PHYSICAL PROPERTIES

#### WallGard 776, 777 and 779

<b>Color</b>	To be selected
<b>Solids</b>	Epoxy 100 %
<b>VOC</b>	Compliant
<b>Cure Rate</b> @77° F	Recoat 6-7 hrs
<b>Hardness, Shore D</b> ASTM D 2240	89-93
<b>Elongation</b> ASTM D 638	1%
<b>Adhesion</b> ACI 503R	350 psi (100% concrete failure)
<b>Abrasion Resistance</b> ASTM D 4060, CS-17 wheel, 1000 cycles	20-25 mgs loss
<b>Flammability</b>	Self-extinguishing over concrete

ASTM D = Resin only

### COLOR

The **Chemical Resistant Systems** are available in 12 color patterns. Custom colors are available upon request. Refer to Thermal-Chem Color Chart and color matching policy.

### OPTIONS

- The contractor should submit a texture sample and receive sign off approval by customer before installation
- A cove base can be installed to provide an integral seal between the floor and wall surfaces.
- Expansion and control joints must be treated to allow for movement. Prior to installation, the different methods should be discussed with the appropriate method per environment selected.
- Deteriorated concrete should be repaired to achieve a smooth level surface.
- The epoxy topcoat may discolor if exposed to sunlight or other UV sources.



**SURFACE PREPARATION**

Proper surface preparation is essential for proper system installation. New concrete should be cured a minimum of 28 days. The substrate must be dry, clean, and sound. All surface contaminants such as dirt, oil, grease, paint, fats, wax, and concrete laitance should be removed.

**GENERAL SUBSTRATES**

Thermal-Chem systems can be applied to a variety of substrates if the surface is properly prepared. Surfaces other than concrete such as wood and concrete block require different degrees and types of prep methods. Thermal-Chem should be consulted prior to start of project.

**CONCRETE SUBSTRATE**

To insure proper system adhesion, concrete surfaces can be prepared by shot blasting or diamond grinding. Refer to Installation Guide # 2001-IG for proper floor prep recommendations.

**REPAIR**

"Bug holes" and surface imperfections should be filled with 774 WallGard Gel Spackle version prior to applying the coating.

**SYSTEM INSTALLATION**

**BASE COAT**

Premix the A component of the basecoat, then pour both A and B components together into a clean mixing container and mix for 2 minutes. Mix only the amount of material that can be applied in approximately 20 minutes. Typically apply the base coat at 80 sq. ft./gal. or 20 mils. To obtain the desire mils, mark the square foot area on the wall appropriate for the number of gallons mixed. Apply evenly. For edges and the top and bottom of the wall use a paintbrush. Cross roll with a ¼ inch mohair roller. Do not over roll or whip air into the coating. Maintain a wet edge and do not roll back into the epoxy after 15 minutes otherwise the entire wall may require rerolling due to color changes. Do not allow the material to "run". Recoat time is approximately 5 to 7 hours for each product provided the substrate, ambient and material temperature is all at 72 degrees F.

Caution: Unfilled "bug holes" have a tendency to cause bubbles due to air being trapped and as the coating cures it generates heat, which causes the entrapped air to expand and bubble.

776 WALLGARD HP IS A 2 PARTS A TO 1 PART B VOLUME MIX RATIO

777 WALLGARD AR AND 779 WALLGARD SR ARE BY WEIGHT MIX RATIO. (NOT THE SAME AS VOLUME) MIX ONLY FULL UNITS OR WEIGH OUT

THE A COMPONENT AND THE B COMPONENT BASED UPON THE LABEL OR DIVIDE THE UNITS INTO EQUAL A PARTS AND B PARTS IF LESS THAN A FULL UNIT IS REQUIRED.

**TOP COAT**

Premix the resin as described above and apply at the rate of rate of **100 to 110 square feet per gallon**. Do not allow the material to "run". Apply the topcoat within 24 hours after applying the base coat; otherwise the base coat must be thoroughly sanded with 80 to 100 grit paper.

Wait 48 hours before exposing the system to chemicals.

**FINISHED TEXTURE**

A smooth texture is typically achieved with a rolled or spayed application.

**CLEANUP**

Clean up mixing and application equipment immediately after use. Use xylene and be careful to observe all fire and health precautions when handling or storing solvents.

Safe and proper disposal of excess materials shall be done in accordance with applicable federal, state, and local codes.

**SYSTEM MAINTENANCE**

Thermal-Chem Chemical Resistant Wall Systems, when properly maintained, will retain their useful life for many years.

**GENERAL CARE**

**ALWAYS WASHDOWN OR WIPE UP CHEMICAL SPILLS TO AVOID STAINING AND LOSS OF GLOSS.**

Avoid nicks and dings from the use of equipment.

**DISCLAIMER**

The data on this sheet represent typical values obtained by the methods indicated. Since application variables are a major factor in product performance, this information should serve only as a general guide. Such information and recommendations are subject to change and pertain to the products(s) offered at the time of publication. Published technical data is subject to change without notice.

**SYSTEMS**

THE FOLOWING SYSTEM APPICATION APPLIES TO ALL THREE CHEMICAL RESISTANT WALL SYSTEMS.

776 WALLGARD HP IS THERMAL-CHEM'S ALL PURPOSE CHEMICAL RESISTANT SYSTEM. IT IS THE SAME FORMULATION AS 750 VERSIGARD IN THE FLOORING LINE BUT HIGHER VISCOSITY FOR WALL APPLICATION.



777 WALLGARD AR IS THERM-CHEM'S BEST ACID RESISTANT SYSTEM. IT IS COMPATITABLE TO 755 ACIDGARD IN THE FLOORING LINE.

779 WALLGARD SR IS THERMAL-CHEM'S BEST SOLVENT RESISTANT SYSTEM AND IS COMPATITALBE WITH 757 SOLVENTGARD IN THE FLOORING LINE.

REFER TO THE CHEMICAL RESISTANT CHART FOR THE RESISTANCE TO CHEMICALS BY EACH PRODUCT.

**SYSTEM APPLICATION TABLE**

	<b>Material</b>	<b>Mix Ratio</b>	<b>Theoretical Coverage</b>	<b>Packaging</b>
<b>Base Coat</b>	Any of the three	776 Volume 777, 779 Weight	80 to 90 sq. ft./gal.	776 - 1,3 and 15 gal. 777, 779 - 1 and 5 gal
<b>Top Coat</b>	Any of the three	776 Volume 777, 779 Weight	100 to 110 sq. ft./gal.	776 - 1,3 and 15 gal. 777, 779 - 1 and 5 gal