



THE DRYWALL JOINT AND REPAIR COMPOUND WITH SUPERIOR MOLD, MILDEW, AND MOISTURE RESISTANCE

TECHNICAL DATA SHEET

MasterFormat Section 09 29 00

PRODUCT DESCRIPTION

Basic Use

Use Rapid Set® *OnePass*® to finish or repair gypsum board drywall, cement-based backer boards, and other compatible building materials. Unlike ordinary joint and repair compounds, *OnePass* is made with special cements that are intrinsically resistant to the growth of mold or mildew and damage due to moisture. This means *OnePass* can be used in wet environments such as kitchens, bathrooms, laundry rooms, locker rooms, walls subject to condensation, exterior applications, and areas that require frequent washing.

In addition, *OnePass* creates a surface that is harder and more scratch-resistant than other joint compounds so it can resist the wear given to walls in commercial and institutional buildings like hospitals and schools.

Mold growing on conventional joint compound can be visible through paint.

Joint Compound: Use *OnePass* with joint tape to cover and finish joints and corners in drywall.

Skim Coat: Use *OnePass* as a skim coat where the highest level of drywall finishes are required. A skim coat provides a uniform surface that helps to conceal the location of joints and fasteners, and provide a more consistent substrate for painting.

Veneer Plaster: Use *OnePass* as an exposed finish to simulate the appearance of concrete, portland cement plaster, and decorative finishes like “venetian” plaster. *OnePass* can be left unpainted.

OnePass scores a Perfect 10 against mold growth (ASTM D3273 and D3274).

Mold on paint over conventional joint compound.

No mold on paint over Rapid Set *OnePass*.

Mold on conventional joint compound.

No mold on paint over Rapid Set *OnePass*.

Repairing and Patching: Use *OnePass* to repair holes and damage to wallboard, plaster, wood fascia boards, and other materials. Other repair compounds shrink as they dry and must be built-up with multiple thin layers to avoid cracking. *OnePass*, however, does not shrink when used as directed and can be applied in a single layer 5/8-inch or more thick.

Benefits

Mold And Mildew Resistance: The ingredients in *OnePass* do not provide nutrients on which mold or mildew can feed. *OnePass* can be used with confidence — even in damp, dark areas where fungi flourish.

Water Resistance: Other joint compounds soften or decay when damp. *OnePass* is made from hydraulic cement that cures in water and will not deteriorate when wet.

Durability: The cement in *OnePass* is more scratch resistant than ordinary joint compounds so *OnePass* will withstand heavy wear and tear, and stay looking its best.

Better Looking: *OnePass* sands to an ultra-smooth finish, can be burnished to a sheen if desired, and can be tinted or given a textured finish. Its cement-gray color is similar to the color of drywall paper and cement board, and its pH is less than 10 and will not chemically burn paint; these features help to avoid visual telegraphing or discoloration of joints or patches through paint.

Faster Application: *OnePass* reduces the time required to finish drywall: It can be installed from a featheredge to 5/8-inch or more thick in one application — without the time required waiting for multiple layers to cure. Moreover, *OnePass* cures so quickly that it can be sanded in 45 minutes and painted 90 minutes after application. This enables small projects and repairs to be completed in a single day.

More Versatile: *OnePass* is a “setting-type” joint compound. According to Gypsum Association GA-236 — *Joint Treatment under Extreme Weather Conditions*:

- **In Hot, Dry Weather:** “Use setting-type joint compounds with shorter setting times to minimize the effect of the ‘too-fast’ drying conditions. Use setting-type compounds for embedding tape because these materials have higher resistance to edge cracking caused by hot, dry weather.”
- **In Wet, Humid Weather:** “Select setting-type compounds, especially when conditions are cold and wet.”
- **In Cold Weather:** “Use setting-type compounds to avoid many cold weather related problems.”



USE MOLD-RESISTANT JOINT COMPOUND WITH THESE MOLD-RESISTANT WALLBOARDS.

There is a growing trend to use types of gypsum and cement wallboards that provide enhanced resistance to mold, water, and abuse. However, up to 40% of a drywall installation gets covered with joint compound. If the joint compound is not up to the job, it becomes the weakest link in a wall.

If you use any of the following products, or moisture-resistant gypsum greenboard, CTS Cement Manufacturing Corporation recommends *OnePass* for across the board protection:

Certainteed Gypsum

GlasRoc^{®W}
ProRoc[®] Moisture Resistant^W

Custom Building Products

WonderBoard^{®MW}

James Hardie

HardieBacker^{™MW}

Georgia-Pacific

DensArmor^{®M}
DensGlass^{®MW}
DensShield^{®MW}
ToughRock^{®A}

Lafarge

Mold Defense^{™M}
Sagcheck^{®W}
Soffitboard^W

National Gypsum

Gold Bond^{®XP™M}
Hi-Impact[®] and Hi-Abuse^{®A}
PermaBase^{®W}

USG

Mold Tough^{™M}
Humitek^{®MW}
Durock^{®W}
FiberRock[®] Aqua-Tough^{™AMW}

Legend:

^A Abuse Resistant

^M Mold Resistant

^W Water or Moisture Resistant

Trademarks are property of the identified manufacturers. Claims about performance of wallboards are based on literature published by the identified manufacturers and are not warranted by CTS Cement Manufacturing Corp.

TECHNICAL DATA

| Criteria | Minimum | OnePass | Comment |
|---|--|--------------------------------|---|
| ASTM C475 — Joint Compound and Joint Tape for Finishing Gypsum Board | | | |
| 4.2.1 Check Cracking | No cracks in the thinner half of the wedge and no deep fissure cracks in the thicker half of the wedge. | Superior | <i>OnePass</i> shows no cracking. |
| 4.2.2 Putrefaction | No putrefaction in less than 4 days. | Superior | No foul odor or visible evidence of microbial growth. |
| 4.2.3 Shrinkage | Not more than 35% shrinkage by volume. | Superior (3.8%) | <i>OnePass</i> contains non-shrink cement. |
| 4.4.2.1 Bond | Bond between paper joint tape and joint compound shall be not less than 90%. | Not applicable | For mold and moisture resistance, glass mesh joint tape is recommended for use with <i>OnePass</i> . |
| 4.4.2.2 Edge Cracking | Edge Cracking shall be not more than 10% along the edges of the tape specimen. | Superior | No cracking observed. |
| ASTM D3273 — Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber and ASTM D3274 — Evaluating Degree of Surface Disfigurement of Paint Films by Microbial (Fungal or Algal) Growth or Soil and Dirt Accumulation | | | |
| Tested per ASTM D3273 and evaluated per ASTM D3274 | Resistance to microbial growth is evaluated from 0 through 10; 10 indicating a surface totally free of disfigurement by microbial growth. | A Perfect 10 | <i>OnePass</i> does not support the growth of mold, mildew or algae. (See photos on page 1.) |
| Federal Emergency Management Agency (FEMA) | | | |
| Technical Bulletin 2-93 — <i>Flood Resistant Materials Requirements</i> | Materials are classified on resistance to damage from floodwater (including acid or alkali in the water) and ability to be put back into use after a flood. Classes range from 1 – not resistant to water damage, to 5 – highly resistant to floodwater damage and acceptable for use in unmitigated flood exposure. | Class 5 | Cement-based <i>OnePass</i> is not damaged by exposure to water. (Note: Regular gypsum board is Class 2. Where higher flood resistance is required, use a water-resistant wallboard.) |
| Mohs Scale of Mineral Hardness | | | |
| Scratch Resistance | Rates relative hardness from 1 = Talc to 10 = Diamond. (Gypsum-based ordinary joint compound has Mohs hardness of 2 and can be scratched by fingernails.) | 3 (similar to gold and silver) | The absolute hardness of Mohs 3 is three to four times harder than Mohs 2. |

Fire Resistance

According to the Gypsum Association, joint compounds complying with ASTM C475 can be used in fire-resistant gypsum board assemblies; *OnePass* complies with ASTM C475.

Environmental Considerations

Indoor Air Quality: *OnePass* does not contain volatile organic compounds, nor does it support the growth of mold or mildew. When used as an exposed finish, it can qualify as a low-emitting coating under the US Green Building Council's LEED program.

Local and Regional Materials: CTS Cement Manufacturing Corporation has production facilities in Anaheim, CA; Mexico, MO; and Nazareth, PA using locally-sourced aggregates.

OnePass applies smoothly and easily using standard drywall tools and techniques.

Composition: *OnePass* is a powder that is ready to use when mixed with water. *OnePass* contains a hydraulic (water-curing) cement that, when used as directed, cures faster and harder than either portland cement or gypsum-based compounds, and is less prone to shrinkage cracking. It also contains polymers and finely-ground, sandable aggregates.

Limitations

Substrates: Do not use *OnePass* on flexible substrates or substrates with significant dimensional change due to flexure, hygroscopic or thermal expansion and contraction, or other movement. When applying *OnePass* to substrates that may swell or deteriorate due to moisture exposure, apply waterproofing sealer/primer approved by CTS Cement Mfg. Corp. for use under *OnePass* and on surrounding area.

Tape: Use glass mesh joint tape instead of paper joint tape where resistance to mold and moisture is required.

Repairs to Fire-Rated Assemblies: According to Gypsum Association GA-225 — *Repair of Fire-Rated Gypsum Board Systems*, "a gypsum board patch must be mechanically secured in the diaphragm; attachment with joint compound material only is not acceptable."

Mold Resistance

ASTM D3273 rates mold resistance from 0 through 10, with 10 indicating that a product does not support the growth of mold during four weeks of testing. In testing performed at California Polytechnic State University, *OnePass* was found to resist the growth of mold even when tested beyond the duration established by ASTM D3273. Ordinary joint compounds contain adhesives and organic material on which mold can feed and require mildewcides for mold resistance. Cement-based *OnePass*, on the other hand, contains nothing to feed mold.

Joint compound can cover 40% of a wall, even more if used as a skim coat. Using the right joint compound is as important as using the right wallboard.

Project Site Waste Management: *OnePass* boxes contain recyclable polyethylene bags and corrugated cardboard. *OnePass* sacks are laminated paper and plastic; verify recyclability with local recycled-material processors.

Life Cycle Assessment: *OnePass* will generally last for the life of a structure or for as long as the substrate to which it is applied remains

Conventional joint compounds shrink and crack as they dry.

Ordinary joint compound, on left, is visible beneath paint. But OnePass, on right, provides a superior substrate for paint and reduces potential for joint telegraphing and paint discoloration.

serviceable. It is compatible with gypsum board debris recycling programs.

Greenhouse Gas Emissions: The cement used in *OnePass* releases less carbon dioxide during manufacturing than does portland cement.

INSTALLATION

General: When applying *OnePass* to gypsum board, comply with ASTM C840 — *Application and Finishing of Gypsum Board*, except when more stringent instructions are contained on packaging or in this document.

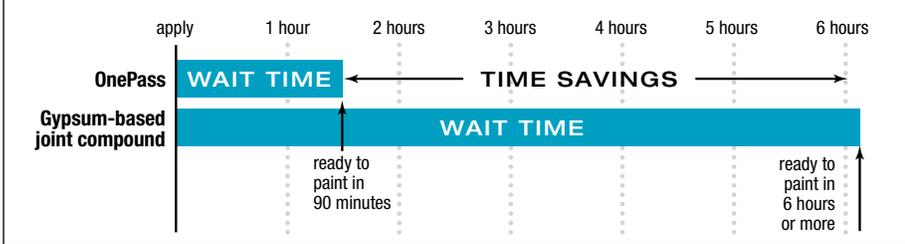
Storage: *OnePass* has a long shelf life and does not prematurely dry out as do premixed joint compounds. Store unused materials in dry location. Protect from freezing.

Substrate Preparation: Materials to which *OnePass* are applied must be dry, clean, sound, and free from oil, chalk, splinters, dirt, loose materials, and materials that may inhibit bonding. Painted, dense, and smooth surfaces should be sanded to assure adhesion.

Mixing: Clean mixing bucket and tools between batches. Do not exceed one part of clean, potable water to two parts *OnePass* powder. First, place water in clean mixing container. Then add *OnePass* powder. Mix to a smooth, uniform, and lump free consistency by hand or mechanical mixer; mixing usually requires 3 to 5 minutes. Do not add sand, aggregate, cement, or admixtures not described in this document.

OnePass has almost no shrinkage, even when used to patch deep holes in a single application.

Faster Project Completion. *OnePass* cures rapidly and can be applied full depth in a single application and ready to paint in just 90 minutes. Gypsum-based compounds take longer to install because they require more time to dry and must be applied in multiple, thin layers.



INSTALLATION (continued)

Colorants: If tinting is required, use pigments complying with ASTM C975 — *Pigments for Integrally Colored Concrete*. Compatibility of other colorants must be verified prior to use. Observe colorant manufacturers' instructions and verify acceptability of appearance.

Open Time: *OnePass* remains workable for approximately 20 minutes at 75°F; organize personnel and equipment before mixing. Open time can be adjusted by mixing with warm or cold mix water or using SET Control® retarder by CTS Cement Manufacturing Corporation. After initial mixing, do not add water to retemper mixture.

Installation: Surface and ambient temperatures must be at least 45°F (7.2°C) and rising. Apply with trowel, putty knife, or a compatible drywall taping tool. Use trowel or putty knife to finish *OnePass* so that it is smooth and flush with the adjacent surface. Use a trowel, float, or sponge if necessary to create texture. Clean tools and adjacent surfaces immediately after application of *OnePass*.

Sanding: *OnePass* may be sanded as soon as it has dried (about 45 minutes after mixing). Sanding is easiest if done within 24 hours, but can be done up to 28 days after application of *OnePass*.

Painting: *OnePass* may be primed and painted as soon as it has cured (about 90 minutes).

Precautions: *OnePass* contains cementitious materials and may cause irritation to lungs, eyes,

Repair deep holes in a single application.

and skin. Avoid contact. Use only in adequate ventilation. Do not breathe dust. Wet mixture may cause burns. Wear suitable gloves, eye protection, and protective clothing. In case of skin contact, wash thoroughly with soap and water. In case of eye contact, flush immediately and repeatedly with large quantities of water and get prompt medical attention. In case of difficulty breathing, remove person to fresh air. If difficulty breathing persists, seek medical attention. See MSDS and packaging for additional information.

AVAILABILITY

Availability: *OnePass* and the Rapid Set line of premium-grade repair and patching products are available at leading paint stores and building material dealers.

Packaging Sizes: 2 and 10 pound boxes. 25 pound sacks.

LIMITED WARRANTY

CTS Cement Manufacturing Corporation (CTS) warrants its material to be of good quality, and, at its sole option, within one year of sale, will replace defective materials or refund the purchase price thereof and such replacement or refund shall be the limit of CTS's responsibility. Except for the foregoing, all warranties, express or implied, including merchantability and fitness for a particular purpose are excluded. CTS shall not be liable for any consequential, incidental, or special damages arising directly or indirectly from the use of the material.

MAINTENANCE

OnePass does not require special maintenance. It can be used in building maintenance programs as a repair compound to patch damaged wallboard finishes and other surfaces.

ADDITIONAL INFORMATION

See www.rapidset.com for:

- * Test reports
- * Case studies
- * Material safety data sheet
- * Guide specification



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