

QUIK-SHIELD 108YM: Yield Monster - Quick-Start Processing

PRECONDITIONING



- Layer of separation in the drum is normal.
- Material should be a minimum of 70°F, and optimal performance is between 70°F and 90°F.

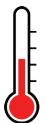
MIXING (B-SIDE ONLY)

- 1. Mix for 10 20 minutes, depending on weather conditions, with any approved mixer.
- 2. Check to see if the layer of separation has been thoroughly blended into the resin. If not, keep mixing and check every 5 minutes until it is thoroughly mixed.
- 3. Continually mix product while applying.





PRIMARY AND HOSE HEATERS TEMPS



Temperature Settings



Summer: 115 - 140°F



Winter: 120 - 150°F



Pressure Settings

Dynamic Pressure: 1000 psi minimum

Static Pressure: 1200 - 1500 psi







QUIK-SHIELD 108YM: Yield Monster - Dial-In Guide

In order to maximize expansion and optimize yield on Yield Monster, it is important to dial-in the foam at each job-site. Dialing-in not only improves yield, but it also improves the quality of the foam, making the job more profitable with fewer issues. QUIK-SHIELD 108YM expands greater and faster than most open-cell foams. It is important stay in front of the rising foam by adjusting your speed and/or spray technique.

After mixing the Yield Monster resin as per SWD's recommendations, do the following:

- 1. Recirculate both A-side (iso) and B-side (resin).
- 2. Determine temperature settings starting point.

Substrate Temp	Set Equipment Temp At
<40°F	140°F
40-50°F	135°F
50-70°F	130°F
70-115°F	125°F
>115°F	120°F

Temperature Settings:

125°F

Standard Starting point

- 3. Test spray on cardboard to make sure you are making good foam.
- 4. Start spraying on the jobsite.
- 5. After spraying approximately six cavities, check expansion time of foam. Adjust equipment temperature settings until rise time is dialed-in. Note that the foam rises for 1.5 2.5 seconds, and then it will speed up. This is normal.

Foam Rise Time	Status
<2.25 sec.	Foam too hot—turn down temp settings
2.25-3 sec	OK, but foam running a little hot—if retracting from the studs, turn temp down
3-3.25 sec	Temp dialed-In Properly
>3.25 sec	Foam too cold—turn up temp settings

Rise time:

1.5-2.5 sec, then speeds up

total rise time:

3-3.25 sec

6. Dialing in Pressure—start at 1200 psi. Optimal pressure settings for maximum output of product will likely be 1200-1500 psi. Higher pressure will typically lead to greater performance and fewer issues.

Pressure Settings:

1200 psi

Starting point for new Yield Monster sprayers

Optimal Pressure Settings:

1200-1500 psi

7. In higher humidity areas and at higher altitudes, pressure adjustments and or higher temperatures might be needed. Rise times can also be affected depending on your humidity levels and altitude. Please contact technical support with further questions.







QUIK-SHIELD 108YM: Yield Monster -**Seasonal Processing Guide**

Techniques for optimal Yield Monster open-cell foam differs from summer to winter applications. Adherence to these specific techniques will help maximize both the physical and thermal properties of the foam.



Winter (temperatures below 70°F)



Summer (temperatures above 70°F)

STORAGE

Storage temperatures should be 50-100°F (10-38°C). Store out of direct sunlight, in a cool, dry place, and avoid freezina.

PREHEATING



A & B liquid components need to be preheated in the drums to a minimum of 70°F (21°C), but between 70°F-90°F (21-32°C) is acceptable.



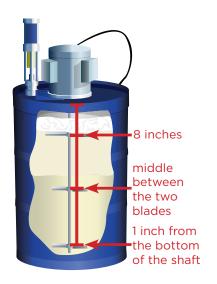
If the core temperature of the material is already greater than 70°F (21°C), no preheating is necessary, but preheating to 70°F-90°F (21-32°C) would be acceptable.

*If your heater size is less than 10,200 W, it may be necessary to preheat the material to 85° - 95°F using drum heaters and/or recirculation through your proportioner's primary heaters at no more than 125°F heat settings. If recirculating at 125°F, close observation is required so as not to overheat the A-side or B-side. Otherwise, it is recommended not to exceed 95°F.

MIXING - B-SIDE ONLY

Mix B-side Drum Only - Complete these steps before pushing any material through the lines (e.g. using the material to flush, purge, re-circulate the lines, or transferring material into another drum).

- 1. It is recommended you use three folding blades: the top blades should be 8" below the collar of the shaft, the bottom blades should be 1" above the bottom of the shaft, and the middle blades roughly in the middle between the top and bottom blades. Make sure the top blade is about 4" below the top layer of separation in the liquid (see diagram). All three blade sets should be inverted downward and blade fasteners secured with Loctite.
- 2. Mix rigorously for 10-20 minutes, depending on weather conditions. Turn off the mixer and remove the mixer lid to check that the top layer of separation has been thoroughly blended into the resin. If not, keep mixing for another 5 minutes or until the top layer of separation has been thoroughly blended into the resin. Continuously mix B-Side (Resin) while applying material.
- 3. As temperatures increase, separation occurs more rapidly in the B-side drum. Therefore, it becomes more important to mix thoroughly. If the resin is not mixed properly, you may observe longer expansion times, reduced expansion, longer tackfree times, and the foam could appear darker in color.



TEMPERATURE & PRESSURE SETTINGS



Hose Heaters Primary Heaters (A&B) Dynamic Pressure (A&B) 1000 psi minimum Static Pressure (A&B)

120-150° F (49-66° C) 120-150° F (49-66° C) 1200-1500 psi



Hose Heaters Primary Heaters (A&B) Dynamic Pressure (A&B) Static Pressure (A&B)

115-140° F (46-60° C) 115-140° F (46-60° C) 1000 psi minimum 1200-1500 psi

If the chemicals are too cold, coarse cell structure, shrinking, shiny skin on the foam, pulling away from the studs, not expanding like it normally does, and voids behind the foam may be observed.

If the chemicals are over heated, the foam expands too fast and may set back more than normal.

*These settings may vary according to specific jobsite conditions and should be maintained to the spray gun by heated hoses. These are recommendations only, individual variations may be needed.







QUIK-SHIELD 108YM: Yield Monster - Seasonal Processing Guide

APPLICATION TIPS

- When switching products, flush all hoses with freshly mixed QUIK-SHIELD 108YM prior to spraying. Contamination from other products may cause foam quality issues.
- Always hold spray gun perpendicular to the surface being sprayed. Spraying at an angle can cause a lack of adhesion to the substrate and an irregular surface of the foam.
- When applying the product, apply foam onto the sides of the studs, to ensure 100% adhesion to the cavities. Wetting the studs is important to ensure there is no pulling off of the studs.
- Shorten the distance between the spray gun and substrate to increase the heat to the foam. The ideal distance is approximately 18". The speed of the application will assist in placing sufficient chemicals to just fill the cavity, reducing the overall wastage of foam.
- Avoid spraying onto rising foam because this can cause displacement of the rising foam, which can lead to excessive dripping and voids.
- Ensure spray equipment is always maintained in proper operating condition with a regular maintenance program.
- If your proportioner's heater is less than 10,200 W, it may be necessary to preheat the drums to 80°-90°F and downsize the mixing chamber to an AR4242 (01) to prevent an up and down fluctuation of the primary heaters from target temperatures, ideally the temperature fluctuation should be no more than 2°. A 5°F fluctuation results in a 10° temperature swing that may still be manageable before it begins to affect the performance of the foam; however, bigger temperature swings will result in less than desirable material performance.

APPLICATION TIPS: ZIPPING

- "Zipping" is a term SWD has coined to describe the ability of QUIK-SHIELD 108YM to fill a wall cavity in a single motion by applying foam right up the middle of the cavity. It's an easy, 1-step motion, like taking a zipper and zipping a wall cavity shut.
- For zipping, it is recommended that you use a TP-100 fan pattern tip/adapter for the Fusion AP Gun with a minimum size 02 Round mixing chamber. For other gun types, contact SWD Tech Support for details.
- Zipping is a different spray technique that will help save jobsite time. However, it will take time for applicators to master this method.
- For proper spraying distance, observe the fan-shaped pattern of the spray. You want to be far enough away that the end of the fan wets the studs of the wall cavity, but not so far that you get overspray on the studs.
- For zipping, psi setting may need to be increased by an average of 200 psi from what is normally used for a round spray pattern.
- Always hold spray gun perpendicular to the surface being sprayed. Spraying at an angle can cause a lack of adhesion to the substrate and an irregular surface finish of the foam. Spray from one point to the other in a regular and continuous motion to regulate uniformity of foam thickness.

APPLICATION TIPS: LONG-RANGE

- Only QUIK-SHIELD 108YM, with its Long-Range Application, enables you to spray an 8" lift in one
 pass from up to 15 feet away. This is ideal for spraying roof decks without a ladder or scaffolding,
 thus saving time and effort.
- For best results we recommend using either ½ inch or 1 inch extension and adapter for a 02 Round mix chamber. For part details, contact SWD Tech Support.
- For best results when using a $\frac{1}{2}$ inch extension tip, apply foam at a distance between 4-8 feet.
- For best results when using a 1 inch extension tip, apply foam at a distance between 6-15 feet.







QUIK-SHIELD 108YM: Yield Monster - Changeover Guide

If you are changing to Yield Monster Ultra-Low Density foam from closed-cell foam or from a competitor's foam, you must not allow the first product to contaminate the Yield Monster resin drum.

CHANGING TO YIELD MONSTER

After mixing the Yield Monster resin as per SWD's recommendations, do the following:

- 1. If changing from an open-cell foam, keep hose heat at 125°F during changeover. If you are changing from a closed-cell foam, turn the hose heat off.
- 2. Make sure the drum mixer, dip tubes, drum pump, and pump housing are completely free of the previous resin.
- 3. Allow some air into the drum pump.
- 4. Place drum pump into the Yield Monster resin drum.
- 5. If you have a recirculation/pressure relief line, pump the contents into the previous drum or into a waste container with the transfer pumps.
- 6. Connect the recirculation/pressure relief to the new drum lid.
- 7. Remove the gun from the hose manifold and pump the hose contents into the previous drum until you see a color change or until you reach the air pocket in the line. Some liquid in the line may remain as a mixture of the two resins. Run this mixture into a container or spray out as foam for disposal.
- 8. Spray a test out onto a sheet of cardboard or wood, and watch for good foam with no collapse. For Yield Monster, you may need to spray more foam out than what is normally required in a changeover in order to eliminate contamination.





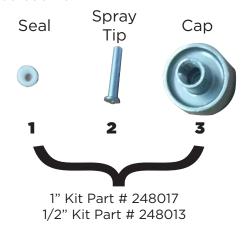


QUIK-SHIELD 108YM: Yield Monster - Long Range Application

Only Yield Monster, with its Long-Range Application, enables you to spray up to an 8" lift in one pass from up to 15 feet away. This is ideal for spraying roof decks without a ladder or scaffolding, saving time and effort.

GUN TIP ASSEMBLY

For best results, we recommend using either a ½ inch or 1 inch extension and adapter for a O2 Round mix chamber (AR5252) for a Graco Fusion Gun. For other types of guns, contact SWD Tech Support at 888-380-2022.





Insert the seal on the tip of the mixing over the seal. chamber.



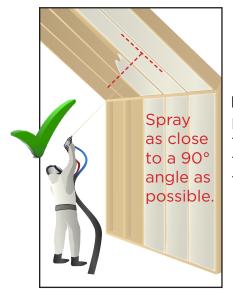
Insert the spray tip



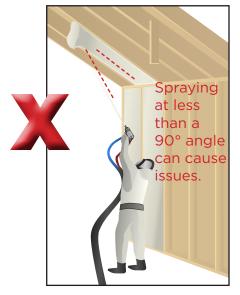
Screw on the cap over the spray tip

APPLICATION BEST PRACTICES

- Start at the bottom of the roof deck (at roof to wall transition), and work your way up to the peak
- Apply foam in an even and consistent lift with a side-to-side motion
- Hold the spray gun perpendicular to the substrate
- For best results when using a ½ inch extension tip, apply foam at a distance between 4-8 feet.
- For best results when using a 1 inch extension tip, apply foam at a distance between 6-15 feet.
- If you spray too close to the substrate, it can cause the foam to splatter and create a very uneven surface.
- Heat and pressure settings may need to be adjusted as necessary.



DO spray perpendicular to the deck, from the bottom to the top.



DON'T spray at an angle because it may negatively affect the adhesion of the foam.







QUIK-SHIELD 108YM: Yield Monster - Troubleshooting Guide

Adhesion Issues	Probable Causes	Recommended Solutions
Foam begins to shrink after expansion complete	Cold material in resin drum, inadequate spray heat, material not mixed properly, storage-degraded material	 Increase heat (primary and hose heaters). Re-circulate until material in the drums reaches a minimum of 70°F, but 70-90°F is acceptable (re-circ temp not to exceed 125°F). If your heater size is less than 10,200 W, it may be necessary to preheat the material to 80°-90°F. Check to make sure the mixer is functioning properly. If the above has been tried, but foam is still shrinking, foam may be too hot—decrease heat.
Foam pulls away from stud after expansion complete	Cold material in resin drum, inadequate spray heat, material not mixed properly, cold substrate, poor application (i.e., not wetting the studs)	 Increase heat (primary and hose heaters). Re-circulate until material in the drums reaches a minimum of 70°F, but 70-90°F is acceptable (re-circ temp not to exceed 125°F). If your heater size is less than 10,200 W, it may be necessary to preheat the material to 80°-90°F. Check to make sure the mixer is functioning properly. Pre-warm substrate if possible. If not, flashing technique can be used—spraying a thin layer of foam on the substrate to heat it up. Make sure you are wetting the studs when applying foam. If the above has been tried, but foam is still shrinking, foam may be too hot—decrease heat.
Foam falls away or is easily removed from substrate	Cold substrate, storage- degraded material, off-ratio mix, moisture or excessive dust on substrate	 Increase heat (primary and hose heaters). Re-circulate until material in the drums reaches a minimum of 70°F, but 70-90°F is acceptable (re-circ temp not to exceed 125°F). If your heater size is less than 10,200 W, it may be necessary to preheat the material to 80°-90°F. Pre-warm substrate if possible. If not, flashing technique can be used—spraying a thin layer of foam on the substrate to heat it up. Make sure you are wetting the studs when applying foam. Clean excess moisture and dust from substrate.

Appearance Issues	Probable Causes	Recommended Solutions
Foam rises slower than usual or excessive dripping is observed	Cold material in resin drum, inadequate spray heat, material not mixed properly, cold substrate	 Increase heat (primary and hose heaters). Re-circulate until material in the drums reaches a minimum of 70°F, but 70-90°F is acceptable (re-circ temp not to exceed 125°F). If your heater size is less than 10,200 W, it may be necessary to preheat the material to 80°-90°F. Check to make sure the mixer is functioning properly. Pre-warm substrate if possible. If not, flashing technique can be used—spraying a thin layer of foam on the substrate to heat it up.
Foam is very white, sticky, and soft after rise is complete	Blockage on Iso side at the gun, not enough material from Iso side	 Check and clean in-line filters at proportioner and gun (if over 20% plugged, replace). Check for empty drum. Check for blocked side seal. Check ball valves on transfer pump, then ball valves and seals on proportioner unit.







QUIK-SHIELD 108YM: Yield Monster - Troubleshooting Guide

Appearance Issues	Probable Causes	Recommended Solutions
Foam is noticeably darker and somewhat brittle	Blockage on Resin side of the gun, not enough material from Resin side	 Check and clean in-line filters at proportioner and gun (if over 20% plugged, replace). Check for empty drum. Check for blocked side seal. Check ball valves on transfer pump, then ball valves and seals on proportioner unit.
Air Pockets	Cold material in resin drum, inadequate spray heat, spraying too close or too far from substrate, not spraying at right angle, improper spray pressure	 Increase heat (primary and hose heaters). Re-circulate until material in the drums reaches a minimum of 70°F, but 70-90°F is acceptable (re-circ temp not to exceed 125°F). If your heater size is less than 10,200 W, it may be necessary to preheat the material to 80°-90°F. Ensure proper distance as determined by pressure and mix chamber size. Spray at 90° angle to substrate to ensure best possible results.

Other Issues	Probable Causes	Recommended Solutions
Overspray—foam adheres to surfaces outside of spray area	High wind, area not sealed off, spraying too far from substrate, pressures set too high for application	 Protect areas not to be foamed with poly and be aware of surroundings and wind conditions. Ensure proper distance as determined by pressure and mix chamber size.
Poor Yield (less than 20,000 board ft.)	Cold material in resin drum, inadequate spray heat, too much overspray, too much scarfing (over-fill of cavity), cold substrate, too many passes, storage-degraded material, resin rich/Iso rich foam, resin not thoroughly mixed	 Increase heat (primary and hose heaters). Re-circulate until material in the drums reaches a minimum of 70°F, but 70-90°F is acceptable (re-circ temp not to exceed 125°F). If your heater size is less than 10,200 W, it may be necessary to preheat the material to 80°-90°F. Pre-warm substrate if possible. If not, flashing technique can be used—spraying a thin layer of foam on the substrate to heat it up. Check and clean in-line filters at proportioner and gun (if over 20% plugged, replace). Check for empty drum. Check for blocked side seal. Check ball valves on transfer pump, then ball valves and seals on proportioner unit. Maintain sufficient speed of application for pressure and mix chamber size. Continually mix resin as recommended by SWD
Pressure Imbalance: Guage pressure differential greater than 400 psi or E24 on Graco Reactor	Cold material, blockage at the gun, lack of material from Resin or Iso side (ball valves, pump seals or proportioner packings leaking)	 Increase heat (primary and hose heaters). Re-circulate material until drum temperature reaches 80°F - not to exceed 100°F (use in-line temperature gauges). Check and clean in-line filters at proportioner and gun (if over 20% plugged, replace). Check for empty drum. Check for blocked side seal. Check ball valves on transfer pump, then ball valves and seals on proportioner unit.



