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TECH TIPS
a technical bulletin by the experts at Gaco Western

GacoWallFoam 183M Application Procedures

Last month we looked at application procedures for GacoWallFoam 052N. This month, we will go over application procedures for GacoWallFoam 183M. Keep in mind that 183M is a gas blown formula and 052N is a water blown formula, so their set of parameters are totally different. Pay close attention to drum storage and prep, substrate limitations and thickness of passes. This is where the application procedures differ the most.

DRUM PREP

Drums must be stored at 60-80°F. In order for the drum to be serviceable – (meaning ready to spray) - the drum must be in a temperature range that your reactor can take it the rest of the way to spray temps. *Example – If your drum temperature is 80°F and you have an E-20 with a delta T of 50 degrees, your max spray temperature can only be 130°F. With this information it is important to know the delta T of your reactor and drum temperature to achieve the proper spray temperature. 183M is a gas blown 2 pound formula, which means you do not recirculate or agitate this product.

SPRAY PRESSURES

Spray pressures should be 1200-1400 psi for optimal performance. 1200 psi is minimum for an .01 mix chamber (AR4242) and 1400 psi is minimum for an .02 mix chamber (AR5252). We are looking for good atomization and mix of chemical with a proper spray pattern.

SPRAY TEMPERATURES

110 to 125°F. The lower spectrums of temps are used in warmer climates as to where the higher temps are used in colder climates. The foam should react at a rate of rise in 3 seconds and tack free in 5 seconds. Any slower than this and you should increase the temp and possibly pressure, and any faster than 3-5 seconds means you should decrease temp and possibly pressure.

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Have an idea, suggestion or questions?

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SUBSTRATE LIMITATIONS

Three things we want on all substrates are: clean, dry, and warm. While clean and dry give us the best success for adhesion, warmer substrates give us better yields. 183M does have a cold substrate limitation of 35°F. Colder than 35°F can result in the foam cracking and popping off of the substrate.

APPLICATION DEPTHS

You can spray anything from a flash pass- (.5 inches) to a full pass- (2 inches). A pass greater than 2 inches can result in charring of the foam which diminishes the physical properties of the foam such as R value and dimensional stability. So any applications greater than 2 inches will require multiple passes. While flash passes are not the most desired pass it is sometimes necessary to heat substrates and for better adhesion.

APPLICATION TECHNIQUES

There are several different styles and techniques used by thousands of applicators. The most common is holding the trigger and moving the gun from side to side while working from bottom to top of cavity. Another would be triggering the gun in an up and down motion within the cavity. Regardless of your style as an applicator, your job is to seal the cavity and fill to proper depth. For a smoother application you can either lower the pressure and spray close into the substrate or keep your pressure higher and spray further away from the substrate.

INSPECT APPLICATION

Look for good cell structure and adhesion. Remove any unreacted chemical from wall (due to pressure imbalances while triggering gun). Press on cured foam and feel for voids, if voids are found inject foam into void.

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