SOUDAL

Soudafoam MAXTWO HFO E84

Technical Data Sheet

Product description:

Soudafoam MAXTWO HFO E84 is a high quality, quick rise, 2-component, polyurethane spray foam for insulating, filling and sealing in professional and industrial applications. It is air and watertight, but vapor open. The foam is class 1 (A) fire rated (flamespread index <25 and smoke developed index <450) which makes it suitable for many industrial and commercial applications which demands a high quality foam. It is supplied in a box containing two portable, disposable and pressurized cylinders requiring no external power source, no extra pressure and no pumps. The two tanks are connected by hoses to the dispensing gun equipped with special developed nozzles to assure a high quality foam is produced. Soudafoam MAXTWO HFO systems are containing a non-flammable, non-VOC, ultra-low GWP (<1) and zero ODP propellant which complies with the latest US regulations banning all CFC-, HCFC- and HFC-propellants.

Technical properties of the foam product:

Properties	**Value**	**Unit**	**Method**
Nominal density	1.76	lb/ft³	ASTM D1622
Compressive strength	21.2	psi	ASTM D1621
Tensile Strength	43.8	psi	ASTM D1623
Thermal resistance per inch (R-value)		ft²·h·°F/Btu	ASTM C518
Initial 1"	6.7		
Initial 2"	13.2		
Aged 1"	5.8		
Aged 2"	12.4		
Flame spread/smoke developed* @ 2” thick, full coverage	20/350		ASTM E84/UL723
Air leakage rate at 75 Pa (1” thick)	0.02	L/s/m²	ASTM E283
Dimensional stability			ASTM D2126
-40°C (-40°F)	-0.2	%	
70°C/97% RH (158°F/97% RH)	6.6	%	
37.8°C/97% RH (100°F/97% RH)	3.5	%	
Water vapor transmission (2” thick)	1.869	perms	ASTM E96
Gel time	30	s	

Mentioned values are typical for production samples, but are no sales specifications.

* *Note: fire classifications are not intended to reflect hazards presented by this or any other material under actual fire conditions.*

Tested as applied at 2” foam thickness, full coverage

Application area:

Soudafoam MAXTWO HFO E84 is developed for many uses in professional building and industrial applications. It can be used as thermal insulation, structural support, for repair jobs, filling and sealing of voids and cracks. This product is not suitable for load bearing applications (eg floors, roofs,…) which require a higher compressive strength.

Recommendations of use:

Storage		
Temperature	59°F - 77°F	Higher storage temperature will speed up ageing
Conditions		Store in upright position and dry conditions

Application		
Ambient temperature	59°F - 95°F	
Substrate temperature	40°F - 95°F	A too low or too high temperature can have a negative effect on foam (adhesion)
Component temperature	59°F - 77°F	Too high or too low temperatures can have a negative influence on the mix ratio and foam quality
Substrate conditions	Dry and clean	Good adhesion on all surfaces (except for PE, PP and PTFE). Materials such as oil, grease, dust, loose debris, water and ice can affect adhesion. Substrates like aluminium and steel might require treatment with a primer or a coating. A damp surface can cause pin holes, blisters, a high percentage of open cells, poor mechanical strength, potential shrinkage and poor adhesion. Due to the exothermic reaction, substrates should be resistant to heat. When in doubt, the adhesion and/or heat resistance should be checked on the substrate or on a comparable sample.

For more product info and detailed instructions: check Product and Application guide.

Best Practice	
Preparing the system:	• Before use, shake both cylinders for approximately 20 seconds • Apply an amount of gun lubricant to the inside of the dispensing gun • Attach the end of the red hose to the ISO cylinder and the end of the blue hose to the polyol cylinder. Tighten securely with the included wrench. The wrench is developed to deform if excessive pressure is applied • Slowly open the valves of both cylinders until fully open and check for leaks and liquid flow inside hoses

Purging and checking the system:	• Purge the system for 5 seconds into a waste container by first activating the red safety trigger and subsequently the main black trigger completely. Both product flows should be equal in volume to assure good foam quality • When both flows are visually equal in volume, clean the gun with Soudal Gun & Foam Cleaner and re-apply some gun lubricant to the inside of the gun • Insert the nozzle into the front of the gun. Make sure the nozzle fits perfectly in the dispensing gun until a “click” is audible • Before spraying it is advised to do some test shots in a waste container to check if foam quality is good and if color of produced foam is homogeneous. A homogeneous foam indicates a good mix ratio. Before starting with the spray process, it is advised to do some test shots to get used to the spraying process if this is not the case	
Applying:	• Check if the application conditions are conform the prescriptions mentioned in Product properties • Hold the dispensing gun about 6” - 24” away from the surface/space that has to be sprayed • Gun is equipped with a red safety trigger and a black variable action trigger. Both triggers should be activated. When a new foam kit is used it’s advised to not completely activate the black trigger as this may result in a (too) high foam output. As foam is sprayed and created from the kit, this trigger can be activated more to obtain similar output as in the beginning of the spray process • Move the dispensing gun under controlled movement to cover the desired surface/space with foam • Spray in foam layers of approx. 1” - 2” thickness. While spraying the product an amount of heat is released because of the exothermic nature of the chemical PU reaction. Make sure that the substrate is not affected by this heat release. It is advised to do a test shot to verify this • Replace nozzle when not been used for more than 20 seconds (earlier at higher component temperatures as 68°F) • Check during spraying continuously if the foam is homogeneous of color and if a rigid, hard foam is formed after some minutes	
Application interruption:	Empty cylinder(s):	When the cylinders are empty, 2 new tanks should be connected. Make sure both cylinders are completely empty for disposal (see manual): • Close the valves of both cylinders • Empty remaining liquid in hoses into a waste container by activating the dispensing gun trigger

		• Follow instructions mentioned in the disposal part (see manual) • Clean both hose ends with Soudal Gun & Foam Cleaner. Pay special attention for cleaning of the ISO hose end. If not cleaned properly blockages or leaks may occur • Connect the hoses to the new cylinders • Remove nozzle and clean dispensing gun with Soudal Gun & Foam Cleaner • Shake new cylinders thoroughly for 20 seconds • Open cylinder valves slowly and check for leaks • Purge system as mentioned before and visually check if both flows are equal in volume • Clean dispensing gun with Soudal Gun & Foam Cleaner • Apply sufficient gun lubricant and insert new nozzle • Spray process can be continued
	When cylinders are not empty and should be stored for a short period (1-7 days):	• Close both valves of the cylinders • Remove the nozzle and clean the gun with Soudal Gun & Foam Cleaner • Apply sufficient gun lubricant to the inside of the gun and reinsert the used nozzle • System can be stored according to storage conditions up to 1 week • If spray process has to be continued, remove nozzle, shake both canisters for 20 seconds and open valves of both cylinders • Follow “purging and checking the system” instructions before starting new spray job

	When cylinders are not empty and should be stored for a period longer as 1 week:	• Close both valves of the cylinders • Remove the nozzle and clean the gun with Soudal Gun & Foam Cleaner. Apply sufficient gun lubricant to the inside of the gun and reinsert the used nozzle • If the system has not been used for one week, it should be activated once a week • This is done by shaking both cylinders for 20 seconds and opening the valves of both cylinders completely • Remove nozzle and purge for few seconds in a waste container by pressing trigger completely. This will rinse the hoses • It is advised to repeat this once a week as long as the system is not used • Clean the gun with Soudal Gun & Foam Cleaner • Apply sufficient gun lubricant in the dispensing gun and reinsert the used nozzle for storage • Close both valves of the cylinders • System can be stored according to storage conditions • If the spray process has to be continued, remove nozzle, shake both canisters for 20 seconds and open both cylinder valves • Follow “purging and checking the system” instructions before starting new spray job

Foam layers		
Layer thickness	Approx. 2”	High foam thickness can be reached using several layers of 1” - 2”. It is advisable to wait 20 minutes between applying more layers onto each other.
UV-Protection	Coating	For outside applications, foam should be protected against UV-radiation.

Disposal cylinders: Check SDS/Check Product and Application guide.

Packaging:

	Soudafoam MAXTWO HFO **E84**	**Soudafoam** MAXTWO HFO **E84-XL (**)**
Total net weight	26.5 lb	88.2 lb
Packaging	1 box with: -1 cylinder Soudafoam MAXTWO HFO poly E84 -1 cylinder Soudafoam MAXTWO HFO iso E84 -GHA 9 or 15 ft -plastic bag with 8 Cone, 4 Fan nozzles, wrench and gun lubricant	-1 box with 1 cylinder Soudafoam MAXTWO HFO-XL poly E84 -1 box with 1 cylinder Soudafoam MAXTWO HFO-XL iso E84
Theoretical yield (Board ft)*	185	615
Colour	Champagne	
Shelf life	12 months	
Accessories (also available separately)	-Soudal dispensing gun with hoses (9, 15 and 30 ft hose lengths available) -Fan nozzles -Cone nozzles -tube gun lubricant -Soudal Gun & Foam Cleaner -Wrench	

* *Note: Theoretical volume yield calculations are determined in perfect laboratories conditions, without taking into consideration the loss of blowing agent during application. Lower component temperatures (<59°F) have a negative impact on yield, mix ratio and foam properties in general.*
*** GHA must be ordered separately*

Safety advice:

Both cylinders are under pressure. Do not puncture the cylinders, do not dispose before emptying. Avoid prolonged storage in direct sunlight or near heat sources.

Do not breathe vapors or spray. Use only in a well-ventilated area. Use proper protective clothing (e.g. impermeable coveralls, no skin should be exposed) and chemical resistant gloves. It is recommended to wear respiratory protection, according to OSHA requirements, while operating the Soudafoam MAXTWO HFO systems (e.g. half face mask respirator with appropriate filter) in combination with safety goggles. Check SDS for further information on personal protection and protection of the environment.

Certifcation:

-UL certified (R21831)
-ICC-ES (TBD)
-ICC-ES AC377 Appendix X
-NFPA 286