SOUDAL

SOUDAFOAM MAXTWO HFO HD

Technical Data Sheet

Product description:

Soudafoam MAXTWO HFO HD is a high quality, quick rise, 2-component, polyurethane spray foam for insulating, filling and sealing in professional and industrial applications. The foam is produced in-situ. It is air and water tight, but vapor open. 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 HD contains a non-flammable, non-VOC, ultra-low GWP (<1) and zero ODP propellant which complies with the latest EU and American regulations banning all CFC-, HCFC- and HFC-propellants.

Technical properties of the foam product:

Property	Value	Unit	Method
Density	40	kg/m^3	EN 1602
Compressive strength @ 10%	+/-140	kPa	EN 826
Initial thermal conductivity @10°C	+/-21	mW/(m·K)	EN 12667
Closed cell content	>90	%	ISO 4590
Fire classification*	E		EN 13501-1
Dimensional stability (length & width / thickness) 70°C/90%RH	≤6 / ≤2	%	EN 1604
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.*

Application area:

Soudafoam MAXTWO HFO HD 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… Because of the higher compressive strength, the product is useful for applications which demand high mechanical properties (eg. roof and floor surfaces < 1m²).

Recommendations of use:

Storage		
Temperature	15°C – 25°C	Higher storage temperature will speed up ageing
Conditions		Store in upright position and dry conditions

Application		
Ambient temperature	15°C – 35°C	
Substrate temperature	15°C – 35°C	A too low or too high temperature can have a negative effect on foam (adhesion)
Component temperature	20°C – 25°C	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.
Operating temperature	-150°C – 100°C	This is applicable to the cured foam. In case of operation temperatures below +15°C it is very important that an entirely closed vapour barrier is present and that the best practices for cryogenic applications are followed. Cured foam is combustible and will burn if exposed to fire or sparks. These products should not be used when there is potential contact with hot surfaces, such as heaters, furnaces, fireplaces, or recessed lighting fixtures. The foam should not be exposed to temperatures over 100°C.

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 anti-crossover 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 color 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 15-60 cm away from the surface/space that has to be sprayed by pressing down the trigger. • 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. Towards the end of 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. 25 mm 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 20°C) • 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 in gun 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

More info: check manual

Foam layers		
Layer thickness	Approx.25 mm	High foam thickness can be reached using several layers of max 25 mm. It is advisable to wait 20 minutes between applying more layers onto each other, when a total thickness of >100 mm is required.
UV-Protection	Coating	For outside applications, foam should be protected against UV-radiation.

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

Packaging:

	Soudafoam MAXTWO HFO **HD**	**Soudafoam** MAXTWO HFO **HD-XL**
Total net weight	12 kg	29,2 kg
Packaging	1 box with: -1 cylinder Soudafoam MAXTWO HFO HD poly -1 cylinder Soudafoam MAXTWO HFO HD iso	-1 box with 1 cylinder Soudafoam MAXTWO HFO HD-XL poly -1 box with 1 cylinder Soudafoam MAXTWO HFO HD-XL iso
Theoretical yield*	300 L	730 L
Colour	Champagne	
Shelf life	12 months	
Accessories (available separately)	-1 Soudal dispensing gun -2 hoses of each 4,6 m -**12 HD 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 (<15°C) have a negative impact on yield, mix ratio and foam properties in general.*

***Soudafoam MAXTWO HFO HD can only be used in combination with HD nozzles. These nozzles can be recognized by the black static mixer.*

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. It is recommended to wear respiratory protection while operating the Soudafoam MAXTWO HFO system (e.g. half facemask respirator) in combination with safety goggles. Check SDS for further information on personal protection and protection of the environment.