

Code	Description	Size	Colour
146557	Soudal Soudafoam MAXTWO Iso XL	20,20 kg	N/A
146558	Soudal Soudafoam MAXTWO Poly XL	19,80 kg	Champagne

1. Description

Soudafoam MAXTWO HFO 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 produced in-situ. 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 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.

2. Characteristics

- Excellent adhesion on most materials (except PE/PP & PTFE)
- High thermal and acoustical isolation
- Very good filling capacity
- Excellent bonding and installing capacity
- Non-flammable propellants
- Meets latest EU & US regulations - ZERO CFC, HCFC, HFC propellants.

3. Technical Data

Property	Value	Unit	Method
Density	28	kg/m ³	EN 1602
Compressive strength @ 10%	+/-100	kPa	EN 826
Initial thermal conductivity @10°C	+/-21	mW/(m·K)	EN 12667
Closed cell content	>90	%	ISO 4590
Water absorption	<0,2	kg/m ²	EN 1609
Fire classification*	E		EN 13501-1
Dimensional stability (length & width / thickness) 70°C/90%RH	≤9 / ≤5	%	EN 1604
Gel Time	30	s	
	Temperature	Comments	
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	
Operating Temperature:	-100°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.	

*This varies according to ambient conditions such as temperature, humidity, substrate etc

4. Yield

Soudafoam MAXTWO HFO-XL		
Total net weight	40 kg	
Packaging	-1 box with 1 cylinder Soudafoam MAXTWO HFO-XL poly -1 box with 1 cylinder Soudafoam MAXTWO HFO-XL iso	
Theoretical yield*	1430 L	
	Layer thickness (cm)	Yield (m ²)
	1	143,0
	2	71,5
	3	47,7
	4	35,8
	5	28,6
	6	23,8
	7	20,4
	8	17,9
	9	15,9
10	14,3	

* 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.

** Applicable if the canisters were stored at 15-25°C. Higher storage temperature will speed up ageing resulting in a reduced shelf life.

5. Applications

- Provides thermal & acoustic insulation
- Supports structure
- Filling and sealing of voids & cracks
- Suitable for filling cavities in floors (including attic floors) 20 cm Wide & 10 cm Deep.
- Insulation of crawl spaces under floors
- Application of a soundproofing layer on motors
- Improving thermal isolation in cooling systems
- Adhering to many porous substrates e.g. concrete, wallboard, particleboard flooring, & timber

6. Packaging

ISO XL – 20,20 kg pressurised cannister
ISO POLY – 19.80 kg pressurised cannister

7. Shelf Life

18 months in unopened packaging in a dry and cool storage place. Upright storage is recommended.

8. Application Instructions

Surfaces

Type: Various porous surfaces such as wood, concrete, stone and other materials commonly used in construction. Not suitable for polyethylene and polypropylene

State: Clean, dry, free of grease and loose particles. 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.

Foam layers		
Layer thickness	Approx. 50 mm	High foam thickness can be reached using several layers of max 50 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.

Application

Best Practice	
Preparing the system:	<ul style="list-style-type: none"> • 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:	<ul style="list-style-type: none"> • 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:	<ul style="list-style-type: none"> • 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 • 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. 50 mm thickness. While spraying the

	<p>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</p> <ul style="list-style-type: none"> • 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:	<p>Empty cylinder(s):</p> <p>When the cylinders are empty, 2 new tanks should be connected. Make sure both cylinders are completely empty for disposal (see manual):</p> <ul style="list-style-type: none"> • 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
	<p>When cylinders are not empty and should be stored for a short period (1-7 days):</p> <ul style="list-style-type: none"> • 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
	<p>When cylinders are not empty and should be stored for a period longer as 1 week:</p> <ul style="list-style-type: none"> • 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

		<p>as the system is not used</p> <ul style="list-style-type: none"> • 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.
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Limitations

- Soudal Soudafoam MAXTWO HFO XL can be applied to a wide variety of substrates. Due to the fact that specific substrates may differ from Supplier to Supplier, Soudal recommends preliminary compatibility tests.
- Soudal Soudafoam MAXTWO HFO XL is not UV-Resistant.
- The foam should not be exposed to temperatures over 100°C.

Remarks:

- Always moisten surfaces in order to improve curing and cellular structure
- Cured Soudal Soudafoam MAXTWO HFO XL must be protected from UV-radiation by painting or applying a top layer of sealants (silicone, MS Polymer, etc)
- For the filling of large volumes apply product in layers and moisten between each layer
- Always store canister with the valve pointed upwards

Soudal recommends preliminary compatibility tests on surfaces on which PU Foams have not been applied previously.

9. Health and Safety Recommendation

- Apply the usual industrial hygiene.
- Wear appropriate safety equipment when working with this product.
- 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.

Remark

*The directives and data contained in this documentation is provided in good faith and accurately reflect Soudal's knowledge when its products are properly stored, handled and applied under normal conditions in accordance with Soudal's recommendations. In practice, the diversity of the materials, substrates, environments, site conditions, product storage, handling and application are such that no warranty can be given in respect to the merchantability or fit for purpose, of any product. All users must determine the product suitability for their purposes through testing. This technical data sheet and product properties may change without notice so users, suppliers and retailers of Soudal products should always check that the data sheets they have are the latest. To the maximum extent permitted by law, Soudal disclaims all warranties in relation to either the manufacture, storage and end use of the product. All orders are accepted subject to our current terms of trade. **If any clarification is required, please contact Soudal Technical Services or email info@soudal.co.nz.***

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