

## DEFENSOR-Flex® ML-Z

ML-Z 9U05EMLZ01-35

IMDS available on request



The DEFENSOR-Flex® multilayers can consist of a tailor-made combination of high-tech needle mats and fabrics.

As the basis of the DEFENSOR-Flex® multilayers needle mats are used, which are manufactured in a modern manufacturing process, without the addition of binders, by purely mechanical needling. Alternative high-performance fabrics can be used for producing thinner solutions than with needle mats.

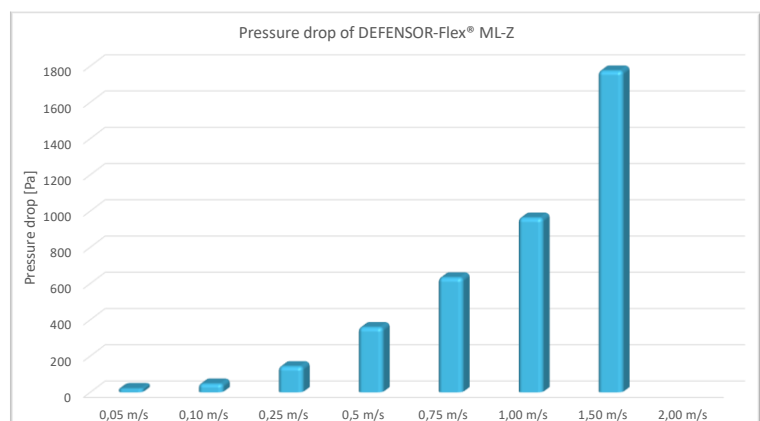
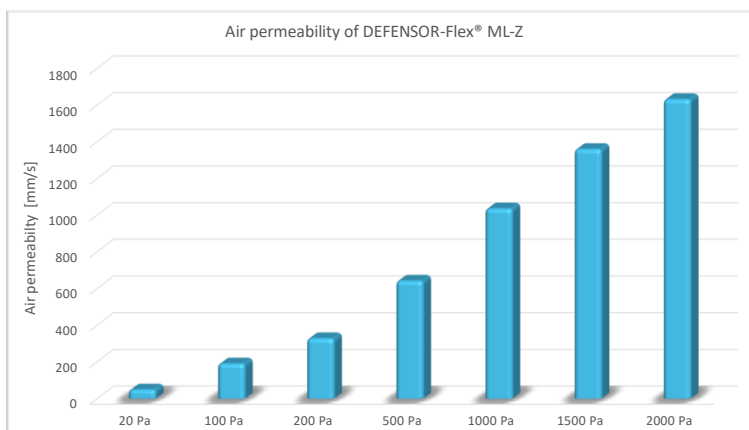
According to WHO guidelines, the fibres used are considered as harmless to health as they are not respirable with a diameter of  $\geq 6 \mu\text{m}$ . DEFENSOR-Flex® multilayers offer extreme fire protection against the special features of lithium-ion fires. They also have very good resistance against low temperatures.

Applications of DEFENSOR-Flex® multilayer ML-Z:

- Fire barrier in the battery, in the gas flow during thermal runaway, in front of the outlet openings of the bursting discs
- Reduction of particles and fumes to reduce the load outside the battery case. Reducing the toxicity of explosion gases during thermal runaway
- Benefit: Reduction of the risk to people in and around the vehicle.
- Reducing the risk of flames escaping due to the flammable gaseous electrolyte.
- USP All raw materials are internally made of inorganic fibres that are non-flammable and have high temperature resistance. The final green reinforcing layer increases the strength several times that of the base product.

DEFENSOR-Flex® ML-Z can be delivered in rolls or customized as make-to-order-product, designed to functional requirements. Cut edge sealing optionally available.

functional layers	2
width [mm]	max 1.000
construction	unbalanced
MATIFIL® needle mat	C-Glass
one sided THERMO-E-Glass fabric, woven from effect yarns	E-Glass
operating temperature [°C]	-40 to 400
total area weight [g/sqm]	750
thickness [mm]	4,0
REACH / RoHS	compliant
Airpermeability:	
Tested according	ISO 9237:1995
	at 100 Pa [mm/s]
	at 200 Pa [mm/s]
	at 500 Pa [mm/s]
Pressure loss	
	at 0,05 m/s [Pa]
	at 0,50 m/s [Pa]
	at 1,00 m/s [Pa]



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