Foaming Agents

Extruded Polystyrene / **Dimethyl ether (DME)**

Dimethyl Ether (DME): Foaming agent for XPS

Dimethyl ether is a single-component foaming agent in the form of liquefied gas, characterized by its versatility of application. Due to its chemical structure, it has a good vapor pressure, and good expansion ratio and is a great solvent, being compatible with both polar and non-polar solvents. Its ability to dissolve carbon dioxide is especially interesting because adding ethanol is not necessary for formulations that use carbon dioxide.

As it is an excellent solvent, it plasticizes polystyrene a lot, so it is usually used with other foaming agents such as isobutane or R152a.

Chemical Name:

Methoxy-methane

CAS Number:

115-10-6

Technical Characteristics:

> Extremely flammable, colorless liquefied gas with a characteristic odor.
> Good steam pressure.
> Good liquid-gas expansion ratio due to its low molecular weight.
> Miscible with water and polar solvents; facilitates single-phase formulations.
> Good solvent: It can act as a solvent in formulations.
> Low viscosity and vapor pressure.
> Requires the use of adapted gaskets due to its solvency power.

Packaging:

- Cylinder
- Roll drums
- Containers - Tank

Applications:

XPS panels

Properties:

Chemical Formula	CH3 - O - CH3	
Molecular Weight	46,07	g/mol
Boiling Point	-24,9	°C
Vapor pressure (20ºC)	4,1	bar
Vapor pressure (50ºC)	10,5	bar (abs)
Liquid Density (20ºC)	668,3	kg/m³
Liquid Density (50ºC)	615	kg/m³
Relative vapor density	1,59	(air = 1)
Water in DME Solubility	36	% (m/m)
Solubilidad agua en DME	5,5	% (m/m)
Net calorific value, liquid	28,43	kJ/kg
Ignition point	235	°C
LEL (Lower Explosive Limit)	3	% volume
UEL (Upper Explosive Limit)	18,6	% volume
Kauri - Butanol	91	
Liquid Viscosity (20ºC)	0,11	mPas

More information:

If you want more information about our products, contact us.

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