

# SereneB

- Option for green methanol
- 60/40 Methanol-Water pre-mix, ratio by volume
- Methanol compliant to IMPCA standard
- Compliant to SerEnergy fuel specification
- Available in 20 l or 1000 l containers
- Fire class II and packing group II
- Approved for shipment

## CLEAN, SIMPLE AND SUSTAINABLE POWER

The blend applied for Advent fuel cell technology is a pre-mix consisting of 60 % methanol and 40 % demineralized and de-ionized water (on a volume basis). The typical feedstock used in the production of methanol is natural gas. There is an option for green methanol, which is the cleanest methanol variant. This is sourced from renewable sources such as wood, municipal solid wastes, renewable electricity, and waste CO<sub>2</sub>.

Compared to conventional fuels, renewable methanol cuts carbon dioxide emissions by up to 95%, reduces nitrogen oxide emissions by up to 80%, and eliminates sulphur oxide and particulate matter emissions. In contrast to fossil fuels are not emitted either sulfur oxide (SO<sub>x</sub>) or particles, similar nitrogen filter emissions (NO<sub>x</sub>) is low. Independent of methanol types, methanol applied in Advent's Reformed Methanol Fuel Cell system (RMFC) is compliant to the IMPCA-standard. Methanol is also liquid at atmospheric pressure and can be distributed in the same way such as gasoline and diesel. Thus, possible to ship by land/ sea and air – available in 20 and 1000 Liters containers in European countries and worldwide.

This Advent SereneB pre-mixture provides many advantages, since it is less flammable (fire class II) than pure methanol and, therefore cheaper to transport. Moreover, there is no water condenser needed, which again means lower weight resulting in higher efficiency.

The standards and specification of blend used with RMFC systems from Advent, is outlined and available in our methanol blend specification.

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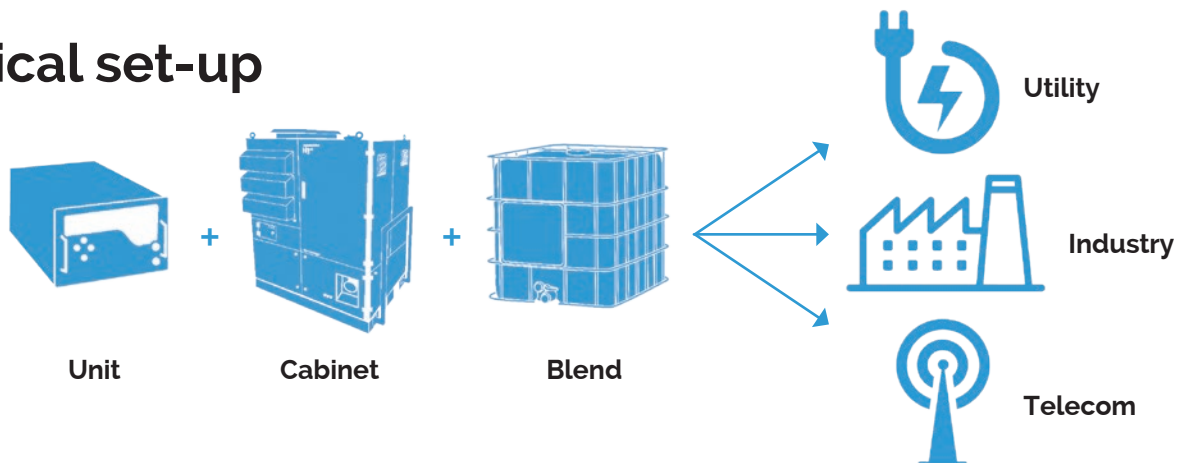
MIXTURE	
CAS/EC-no.	67-56-1 / 200-659-6
REACH-no.	01-2119433307-44-XXXX
Trade name	SereneB
Content [% vol.]	60-40 Methanol - Water pre-mix
Classification CLP	Flam. Liq. 2; H225, Acute Tox. 3; H301+H311+H331, STOT SE 1; H370

MIXTURE		
Standard	<b>ADR/RID</b>	<b>IMDG/IMO</b>
UN number	1230	
UN proper shipping name	FLAMMABLE LIQUID, TOXIC, N.O.S. (Methanol solution)	
Transport hazard class(es)	3 + (6.1)	
Packing group	II	
Environmental hazards - MP	No F-E, S-E	
Other informations	LQ: 1 L. TUNNEL: D/E	

MIXTURE	
Appearance	Liquid
Color	Colorless
Odor	Alcohol-like
Viscosity 25°C [mPas]	0.544-0.59*
Flashpoint [°C]	23
Boiling point [°C]	64.7*
Vapor pressure 20°C [hPa]	128*
Density 20°C [g]/[ml]	0.9071
Freezing point [°C]	-40
Auto-ignition [°C]	>455*
Explosive limits [% vol.]	5.5 - 44*
Solubility in water	Complete soluble*

\* Methanol.

## Typical set-up



## Dimensions

