

Technical Information

DURAION® Ionomer S101**Anion exchange ionomer
for alkaline water electrolysis.**

Associated documents:

- User manual DURAION® Ionomer

GENERAL INFORMATION

DURAION® anion exchange ionomer has been specifically developed for catalyst formulations used in combination with **DURAION®** anion exchange membranes in alkaline water electrolyzers. Catalyst coatings containing **DURAION®** ionomer provide exceptional ionic conductivity, outstanding chemical stability in harsh environments, and superior hydrogen transfer rates (low hydrogen to oxygen, HTO). Evonik's polymer expertise has been key in achieving the well-balanced properties of both **DURAION®** membranes and ionomer, fulfilling the quality triangle for membrane-based water electrolysis.

SPECIFICATIONS

The **DURAION®** ionomer is amber-colored, but color might slightly differ without impact on the product performance.

PROPERTY	UNIT	DURAION® IONOMER
Viscosity ^a	Pa s	< 20
Solid content	wt. %	15 ^b
Solvents	–	DMSO

- a) Viscosity measured using a rheometer at 30 °C and a shear rate of 1 s⁻¹.
b) Solid content measured by gravimetric balance (± 2 wt. %)

PROCESSING RECOMMENDATION

DURAION® membranes and ionomer support catalyst application either as **catalyst coated substrate (CCS)** or directly on the membrane as **catalyst coated membrane (CCM)**.

Formulation recommendations for spray, slot-die, and bar coating using the **DURAION®** ionomer are available upon request.

A processing temperature range of **20 °C to 160 °C** is recommended, depending on the coating technique. Detailed information on miscibility, solubility in various solvents, and formulation recommendations are available upon request.

SAFETY, HANDLING AND STORAGE

The **DURAION®** ionomer is hygroscopic and must be stored in a sealed container under a protective gas atmosphere.

Proper handling and use of the **DURAION®** anion exchange ionomer are described in the User Manual and Safety Data Sheet (SDS).

ORDER INFORMATION

The **DURAION®** ionomer (amber-colored) is supplied as a **15 wt.% solution in DMSO** and stored under protective gas atmosphere.

Available package sizes:

0.5 kg and 5.0 kg

Samples are available upon request.

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