

User Manual

DURAION® Ionomer



Anion exchange ionomer for alkaline water electrolysis.

GENERAL INFORMATION

DURAION® anion exchange ionomer is 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.

CATALYST APPLICATION

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

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

SAFETY, HANDLING AND STORAGE

DURAION® ionomer (amber-colored) is supplied as a 15 wt.% solution in DMSO and stored under protective gas atmosphere. Color might slightly differ without impact on the product performance.

Safety:

Please refer to the Safety Data Sheet (SDS).

Handling:

Thoroughly mix the ionomer before application. The ionomer is hygroscopic and will absorb moisture when opened. To minimize water absorption, we recommend covering the container with a protective gas atmosphere immediately after opening.

Storage:

Store the **DURAION®** ionomer in a sealed container under protective gas atmosphere in a dark, dry environment at a temperature between 20 °C and 30 °C. The product is best used within six months.

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