



DOWEX™ DR-G8 Resin

A High Capacity Resin for Biodiesel Purification

Introduction

DOWEX™ DR-G8 is a dried cation resin designed as a processing aid to reduce and remove trace salts, soaps, glycerin and other organics from a crude biodiesel stream. This dried media will also serve as a desiccant media to retain and remove trace water.

This resin can be employed as a cost effective and simple to implement solution to purify the biodiesel after the phase separation and demethylation steps. This processing aid can assist you in cleaning your biodiesel and attaining ASTM or EU specifications.

Product	Type	Matrix	Functional group
DOWEX™ DR-G8	Strong acid cation	Styrene-DVB gel	Sulfonic acid

Guaranteed Sales Specifications		H ⁺ form
Total exchange capacity, min.	eq/L	4.5 dry weight min.
Bead size distribution range [†] 300 - 1,200 µm, min. (50 mesh - 16 mesh)	%	90

Typical Physical and Chemical Properties		H ⁺ form
Water content	%	< 3
Total swelling (Na ⁺ → H ⁺)	%	8
Particle density	g/mL	1.22
Shipping weight	Pounds dry resin/5 cuft drum	200
	Kg dry resin/5 cuft drum	90.7

[†] For additional particle size information, please refer to Particle Size Distribution Cross Reference Chart (Form No. 177-01775).

Typical properties and applications

DOWEX™ DR-G8 cation exchange resin is a high capacity resin with excellent kinetics and good physical, chemical and thermal stability for biodiesel processing. This dried resin can bind and retain unwanted cation salts, un-reacted catalyst, soaps, glycerin and water. The performance and effectiveness of this processing aid is directly related to the residual levels of contamination found in the processed biodiesel. Although this is a very effective tool to complete a final polishing of biodiesel, it is not a substitute for the bulk separation and washing steps.

Defining the levels of glycerin, salt, water and hydrophilic organics in the stream being processed is critical for the amount of resin required for processing, and thus, frequency of resin replacements.

The DOWEX DR-G8 cation exchange resin is well suited for both the removal of cation salts and water from other organic systems as well.

Packaging

5 cubic feet fiber drums

WARNING: A dried strong acid resin placed in a 100% aqueous stream will expand very rapidly, nearly doubling in volume in a very short time. This rapid expansion can crack vessels resulting in both equipment damage and potential injury. If water is being applied to this resin, allow ample free-bore for rapid resin expansion.

DOWEX™ Ion Exchange Resins For more information about DOWEX resins, call the Dow Liquid Separations business:

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Warning: Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

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