

TULSION®



T-45 BD **ION EXCHANGE MEDIA FOR BIODIESEL APPLICATIONS**

Tulsion *T-45 BD* is a premium grade, solid acid catalyst based on a cross-linked polystyrene matrix containing sulfonic acid groups. Tulsion *T-45 BD* is manufactured using controlled particle size synthesis and is used for many process applications.

The first step in biodiesel production involves esterification of fatty acids and trans-esterification of triglycerides, commonly found in raw oil feedstocks. This process yields a fatty-acid-methyl-ester or “biodiesel” component in the hydrophobic phase and a glycerine component in a hydrophilic phase.

In the purification step, Tulsion *T-45 BD* is used to remove trace levels of glycerine and soaps from the biodiesel exhibiting high conversions with excellent physical, chemical stability and operating characteristics. *T-45 BD* can be used in a wide range of temperature and pH conditions.

TYPICAL CHARACTERISTICS

Type	: Strong acid cation exchange resin
Matrix Structure	: Cross linked polystyrene
Functional group	: Sulfonic acid
Physical form	: DRY spherical beads
Ionic form	: Hydrogen
Particle Size	: 0.4- 1.2 mm
Screen Size U.S.S(wet)	: 16 - 40
Total Exchange capacity (meq/g)	: 4.5 min.
Particle size, Uniformity Coefficient	: 1.5 max
Moisture content (approx.) %	: < 10
Effective Size	: 500 – 600 microns
Operating pH range	: 0-14
Solubility	: Insoluble in all common solvents
Surface Area (m ² /g)	: < 1 max
Swelling in Methanol / Biodiesel (%)	: 100 – 110

PACKING

Super sacks	35 ft ³
Fiber Drums	7 ft ³
Polythene lined bags	1 ft ³



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THERMAX
CHEMICAL DIVISION
An ISO-14000 Company

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