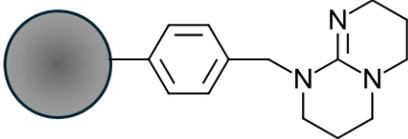


SABIT™ DVB-TBD

Material overview

SABIT DVB-TBD is a rigid polymeric resin with surface bound superbase TBD (Triazabicyclo[4.4.0]dec-5-ene) for use in catalytic reactions or as a novel strong anion exchanger. The resin chemistry backbone consists of highly rigid DVB-Styrene with mesopores and a well accessible surface in essentially all solvents.

Table of properties		Structure of the Resin and level of TBD loading
Property	SABIT DVB-TBD	 <p>TBD bound 1.1 mmol/g</p>
Resin backbone	DVB/Sty	
Particle size	75-200 μm	
Volume of resin, dry	2.1 ml/g	
Volume of resin, swollen in EtoAc	2.9 ml/g	
Pore volume	1 ml/g	
Pore area	600 m ² /g	
Av pore size	80 Å	

Application areas

SABIT DVB-TBD can be used to catalyze a number of reactions, such as Wittig reactions, Michael additions, Henry reactions and transesterifications. Resin-bound TBD is easily separated from substrates and product, facilitating the handling and work-up of product. The resin can be used instead of free TBD or TBD bound to soft resins with only 1-2 % DVB – but these are not compatible with all solvents and do sometimes not perform well. The morphological rigidity and permanent porosity of SABIT DVB-TBD enable its use in a much wider range of solvents and for certain reaction processes it may be the only tool able to catalyze a desired reaction.

Further, this novel resin-bound base can also be employed as a strong anion exchanger and thus as a scavenger for catch and release processes. As described, its unique structure and good water-wettability allow for effective binding in both polar aqueous and non-aqueous solutions.

Activation and regeneration of SABIT DVB-TBD for re-use

Before and after use, the resin may be (re-)activated with a strong base (each time ca 5 ml/g resin):

Step	Organic base regeneration	Water-based regeneration
Strong base wash	5% MeONa in MeOH	1 M NaOH, aqu.
Removal of base	3 x MeOH	5 x water
Removal of organics	Optionally DCM	3 x MeOH
Drying	RT or 70 °C oven	RT or 70 °C oven

Typical application conditions

- Use 2-10 equivalents of catalyst to limiting reactant
- React for 1 – 20 hours while stirring or shaking
- Room temperature or to max 80 C (possibly higher, to be determined)
- Choice of solvents: all common solvents
- Resin is easily water-wettable and thus compatible with aqueous mixtures
- Filter off resin, or let sediment after use
- Re-activate following suggested regeneration procedure

Ordering information: Please see web shop or inquire directly at order@redstone-sep.com