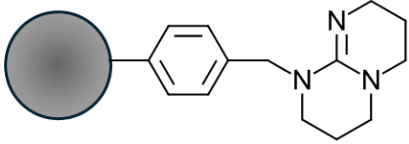


SABIT™ - Polymer-Supported Base		
Type: Product note		Version: 2026-V3

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	 TBD bound, approx 0.75 – 1.25 mmol/g
Resin backbone	DVB/Sty	
Particle size	50-200 µm	
Pore volume	1 ml/g	
Pore area	600 m ² /g	
Av pore size	80 Å	

Swelling behaviour in common solvents.	Swelling of Sabit DVB-TBD	volume / ml
	1 g dry resin	2,4
	DMA	2,4
	Toluene	2,6
	water	2,6
	Ethyl acetate	2,8
	IPA	2,8
	THF	2,8
	The resin is highly cross-linked and will only swell moderately or not all, depending on the nature of the solvent. High swelling solvents are THF, IPA and EtOAc. Whereas DMA leads to virtually no swelling and the solvents at the edge of the spectrum Toluene and water lead to only minor swelling.	

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 to retrieve reaction solution
- Re-activate following suggested regeneration procedure

Place your order at: order@redstone-sep.com.

Resin	Grams	Product code
Sabit DVB-TBD	1	31-01-0001
Sabit DVB-TBD	5	31-01-0005
Sabit DVB-TBD	10	31-01-0010
Sabit DVB-TBD	25	31-01-0025
Sabit DVB-TBD	100	31-01-0100