Strem Chemicals, Inc.

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Catalog # 44-0518 $Dimethylammonium\ dichlorotri(\mu\text{-chloro}) bis [(R)-(+)-5,5'-bis(diphenylphosphino)-4,4'-bi-1,3-bis(diphenylphosphino)-4,4'-bis(diphenylphos$ benzodioxole] diruthenate(II)

Note: Sold in collaboration with Takasago. Takasago SEGPHOS Catalyst Kit component.

Technical Notes:

- 1. Highly enantioselective, highly active catalyst for hydrogenation of functionalized ketones. The chlororuthenate salts show catalytic activity at relatively low temperature. See <u>15-0136</u>.
- Catalyst for enantioselective hydrogenation of enamines.

Ph OEt Ru, H₂ Ph OEt Tech. Note (1) Ref. (1)

$$Ar \underset{H}{\bigvee} R$$

$$Ru, H_{2}$$

$$Ar \underset{H}{\bigvee} R$$

$$Ru, H_{2}$$

$$Ar \underset{H}{\bigvee} R$$

$$Ref. (2)$$

References:

- Adv. Synth. Catal., 2001, 343, 264.
 U.S. Pat. 8188307.