## Strem Chemicals, Inc.

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Catalog # 15-1605 (R)-(+)-7-[N-(2-Phenylthio)ethylamino]-7'-[diphenylphosphino]-2,2',3,3'-tetrahydro-1,1'-spirobindane, 97+% (>99% ee) [(R)-Ph-SpiroSAP-Ph]

\*This tech note is for the iridium complex 77-2510. This is an analogous ligand included in the reference below.

## Technical Notes:

1. Catalyst used for the asymmetric hydrogenation of  $\beta\text{-alkyl-}$   $\beta\text{-ketoesters}.$ 

$$\begin{array}{c} \text{OMe} & \begin{array}{c} \text{10-50 atm H}_2 \\ \text{O.1 mol\% cat.} \end{array} \\ \text{NaOH, NaOH, rt} \\ \text{R = alkyl, aryl} \end{array} \\ \begin{array}{c} \text{OH} \\ \text{OMe} \end{array} \\ \end{array}$$

## Reference:

1. Angew. Chem. Int. Ed., 2015, 54, 8791.