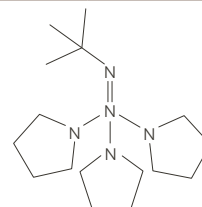


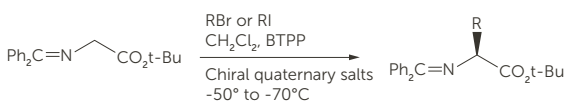
# *tert*-Butylimino-tri(pyrrolidino)phosphorane

Product number: 1726 | Alternative name: BTPP | CAS number: 161118-67-8 | C<sub>16</sub>H<sub>33</sub>N<sub>4</sub>P | Molecular weight: 312.43

BTPP (b.p. 119° – 122°C [346° – 252°F], density = 1.022) is a bulky, neutral, non-coordinating strong base with a pKa measured to be ~17 in DMSO, 20.8 in THF, and 28 in MeCN.<sup>1,2</sup> BTPP does not react with alkyl halides.

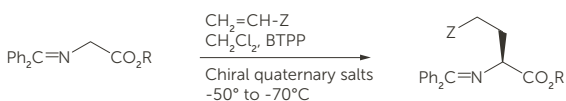


## SYNTHESIS OF $\alpha$ -AMINO ACID DERIVATIVES VIA ASYMMETRIC PHASE TRANSFER<sup>1,2</sup>



R = alkyl, benzylic

83 – 97% ee

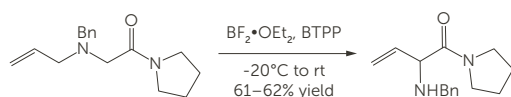


Z = -CO<sub>2</sub>Me, -CN, -C(O)Me, -C(O)Et, -SO<sub>2</sub>Ph

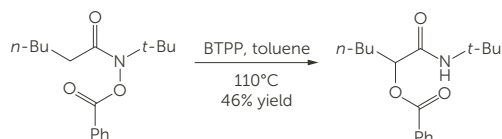
R = *t*-Bu: 65 – 87% ee

R = Wang Resin: 56 – 75% ee

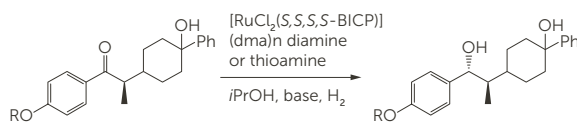
## LEWIS ACID MEDIATED [2,3]-SIGMATROPIC REARRANGEMENT OF ALLYLIC $\alpha$ -AMINO AMIDE<sup>3</sup>



## [3.3]-SIGMATROPIC COPE REARRANGEMENT OF N-ALKYL-O-ACYL-HYDROXYAMIC ACID DERIVATIVES<sup>4</sup>

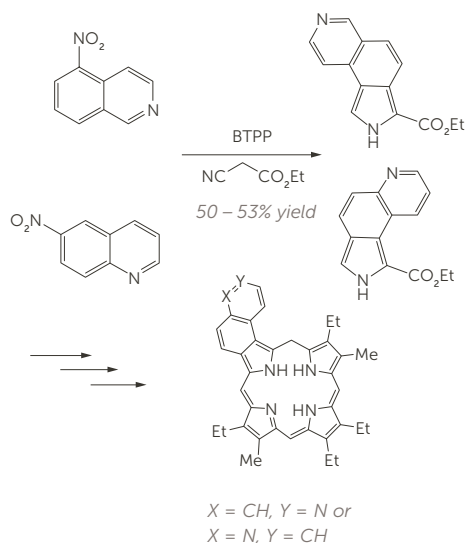


## BASE USED IN ASYMMETRIC HYDROGENATION OF AN ARYL KETONE<sup>5</sup>



95 – 98.5% de

## PREPARATION OF ISOQUINOPYRROLES AND QUINOPYRROLES<sup>6-11</sup>



## References

- Marzabadi, M.R., Wetzel, J.M., Chen, C.-A., Deleon, J.E., Jiang, Y., and Lu, K. US Patent Appl. 2005/0154020, 2005.
- O'Donnell, M.J., Delgado, F., Hostettler, C., and Schwesinger, R., *Tetrahedron Lett.*, **1998**, 39, 8775.
- Blid, J., Brandt, P., and Somfai, P., *J. Org. Chem.*, **2004**, 69, 3043.
- Clark, A.J., Al-Faiyz, Y.S.S., Patel, D., and Broadhurst, M.J., *Tetrahedron Lett.*, **2001**, 42, 2007.
- Tucker, C.E. and Jiang, Q. US Patent 6,743,921, 2004.
- Lash, T.D., Thompson, M.L., Werner, T.M., and Spence, J.D., *Synlett*, **2000**(2), 213.
- Lash, T.D., Werner, T.M., Thompson, M.L., and Mantley, J.M., *J. Org. Chem.*, **2001**, 66, 3152.
- Lash, T.D. and Gandhi, V., *J. Org. Chem.*, **2000**, 65, 8020.
- Murashima, T., Tamai, R., Fujita, K., Uno, H., and Ono, N., *Tetrahedron Lett.*, **1996**, 37(46), 8391.

### FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit [entegris.com](http://entegris.com) and select the [Contact Us](#) link to find the customer service center nearest you.

### TERMS AND CONDITIONS OF SALE

All purchases are subject to Entegris' Terms and Conditions of Sale. To view and print this information, visit [entegris.com](http://entegris.com) and select the [Terms & Conditions](#) link in the footer.



#### Corporate Headquarters

129 Concord Road  
 Billerica, MA 01821  
 USA

#### Customer Service

Tel +1 952 556 4181  
 Fax +1 952 556 8022  
 Toll Free 800 394 4083

Entegris®, the Entegris Rings Design®, and other product names are trademarks of Entegris, Inc. as listed on [entegris.com/trademarks](http://entegris.com/trademarks). All third-party product names, logos, and company names are trademarks or registered trademarks of their respective owners. Use of them does not imply any affiliation, sponsorship, or endorsement by the trademark owner.

©2018-2020 Entegris, Inc. | All rights reserved. | Printed in the USA | 9000-11221TAN-1120