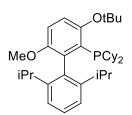
Strem Chemicals, Inc.

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(3-(Tert-butoxy)-2',6'-diisopropyl-6-methoxy-[1,1'-biphenyl]-2-yl)dicyclohexylphosphane GPhos, 98%

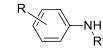


Technical Notes:

Novel mono-phosphine Buchwald ligand that supports a catalyst of improved stability. The GPhos-derived catalyst exhibits improved performance for room temperature C–N cross coupling reactions between a broad scope of primary amines and aryl halides.¹ The ligand is designed to promote C–N cross coupling across a wide range of substrate classes with low catalyst loadings. It shows an improved relative rate of productive catalysis versus catalyst deactivation compared to previous catalysts. The GPhos-supported catalyst exhibits better reactivity than previous catalysts both under ambient conditions and at elevated temperatures. Its use allows for the coupling of a variety of primary amine and aniline nucleophiles, including (1) unhindered, (2) five-membered-ring N-heterocycle-containing, and (3) α-tertiary primary amines, each of which previously required a different catalyst to achieve optimal results. The GPhos-supported catalyst is also well suited for coupling electron-deficient anilines as well as N-heterocycle-containing aryl halides and amines.

0.2–1.25 mol% PdGPhos catalyst (as low as 0.02 mol% at 90 °C)

> 1.4 equiv NaOtBu THF, rt, 1h



Tech Note (1) Ref. (1)

References:

1. J. Am. Chem. Soc. 2020, 142, 35, 15027–15037