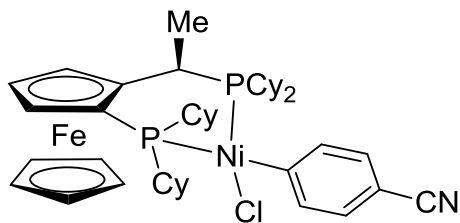


Catalog # 28-0172 Chloro(4-cyanophenyl)[(R)-1-[(S)-2-(dicyclohexylphosphino)ferrocenyl]ethyl]dicyclohexylphosphine]nickel(II)



#### Technical Notes:

1. Versatile air-stable low cost nickel catalyst alternative to palladium for carbon-carbon and carbon-heteroatom cross-coupling reactions.
2. Used to react substituted aryl and heteroaryl halides and tosylates with ammonia to produce diverse aryl and heteroaryl amines<sup>1</sup>
3. Used in monoarylation experiments using commercially available ammonia gas, ammonium salts or ammonia stock solutions<sup>2,3</sup>
4. Catalyzes the coupling of aryl chlorides with gaseous amines in the form of their hydrochloride salts<sup>3</sup>

#### References:

1. *Org. Process Res. Dev.*, **2015**, *19*, 1936.
2. *Angew. Chem, Int. Ed.*, **2015**, *54*, 3773.
3. *Angew. Chem, Int. Ed.*, **2015**, *54*, 3768.