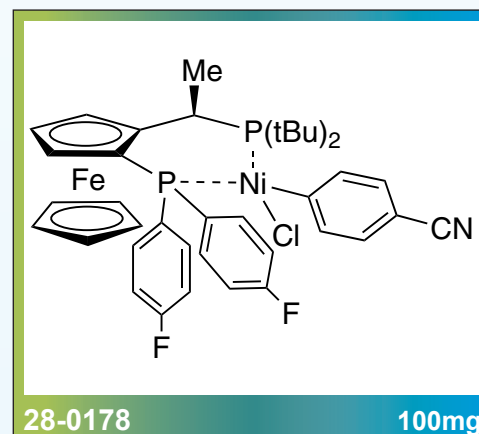
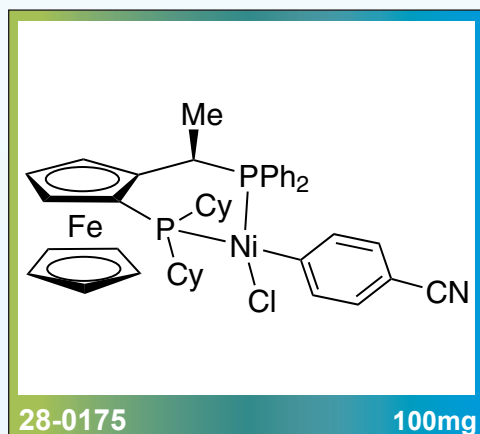
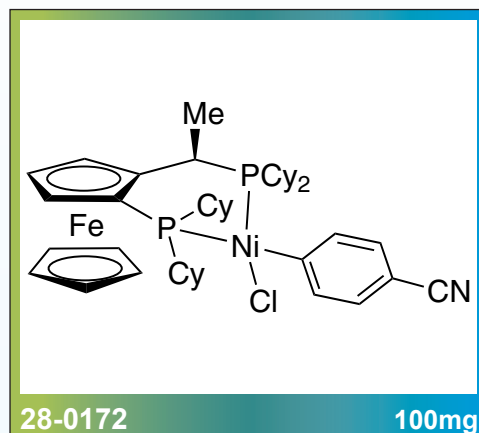
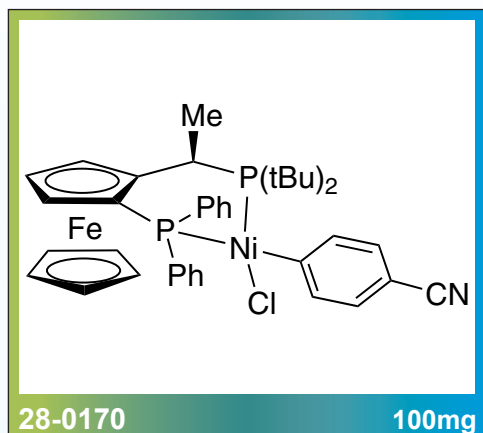


Sold in collaboration with Solvias for research purposes only.

## 96-3660 Solvias Josiphos Nickel Catalyst Kit

Components are also available for individual sale.

Each kit contains the following:



**28-0178 Chloro(4-cyanophenyl){(R)-1-[(S)-2-(bis(4-fluorophenyl)phosphinoferrocenyl)ethyl(di-*t*-butylphosphine)]nickel(II) (2049086-37-3)** 100mg  
 $C_{39}H_{42}ClF_2FeNiP_2$ ; FW: 774.69; red-violet solid 500mg

### Technical Notes:

1. Versatile, air-stable, low cost nickel catalyst alternative to palladium for carbon-carbon and carbonheteroatom 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.

Visit [www.strem.com](http://www.strem.com) for new product information and a searchable catalog.

**Strem Chemicals, Inc.**  
 7 Mulliken Way  
 Newburyport, MA 01950  
 U.S.A  
 Tel: 978.499.1600  
 Fax: 978.465.3104  
 Email: [info@strem.com](mailto:info@strem.com)

**Strem Chemicals, Inc.**  
 15, rue de l'Atome  
 Zone Industrielle  
 67800 BISCHHEIM France  
 Tel: (33) 03 88 62 52 60  
 Fax: (33) 03 88 62 26 81  
 Email: [info.europe@strem.com](mailto:info.europe@strem.com)

**Strem Chemicals, Inc.**  
 Postfach 1215  
 77672 KEHL  
 Germany  
 Tel: 0 78 51/ 7 58 79  
 Email: [info.europe@strem.com](mailto:info.europe@strem.com)

**Strem Chemicals UK Ltd.**  
 An Independent Distributor of Strem Chemicals Products  
 Newton Hall, Town Street  
 Newton, Cambridge  
 England CB22 7ZE  
 Tel: 0845 643 7263  
 Fax: 0845 643 7362  
 Email: [enquiries@strem.co.uk](mailto:enquiries@strem.co.uk)

---

<b>28-0172</b>	<b>Chloro(4-cyanophenyl){(R)-1-[(S)-2-(dicyclohexylphosphino)ferrocenyl]ethyl (dicyclohexylphosphine)} nickel(II) (2049086-35-1)</b>	100mg 500mg
	C <sub>43</sub> H <sub>60</sub> ClFeNNiP <sub>2</sub> ; FW: 802.88; orange solid	

---

Technical Note:

1. See 28-0170.

---

<b>28-0175</b>	<b>Chloro(4-cyanophenyl){(R)-1-[(S)-2-(dicyclohexylphosphino)ferrocenyl]ethyl (diphenylphosphine)} nickel(II) (2049086-36-2)</b>	100mg 500mg
	C <sub>43</sub> H <sub>48</sub> ClFeNNiP <sub>2</sub> ; FW: 790.79; orange solid	

---

Technical Note:

1. See 28-0170.

---

<b>28-0170</b>	<b>Chloro(4-cyanophenyl){(R)-1-[(S)-2-(diphenylphosphino)ferrocenyl]ethyl(di-t-butyl)phosphine} nickel(II) (1807948-77-1)</b>	100mg 500mg
	C <sub>39</sub> H <sub>44</sub> ClFeNNiP <sub>2</sub> ; FW: 738.71; red-violet solid	

---

Technical Note:

1. See 28-0170.

---

Visit [www.strem.com](http://www.strem.com) for new product information and a searchable catalog.

**Strem Chemicals, Inc.**  
7 Mulliken Way  
Newburyport, MA 01950  
U.S.A  
Tel: 978.499.1600  
Fax: 978.465.3104  
Email: [info@strem.com](mailto:info@strem.com)

**Strem Chemicals, Inc.**  
15, rue de l'Atome  
Zone Industrielle  
67800 BISCHEIM France  
Tel: (33) 03 88 62 52 60  
Fax: (33) 03 88 62 26 81  
Email: [info.europe@strem.com](mailto:info.europe@strem.com)

**Strem Chemicals, Inc.**  
Postfach 1215  
77672 KEHL  
Germany  
Tel: 0 78 51/ 7 58 79  
Email: [info.europe@strem.com](mailto:info.europe@strem.com)

**Strem Chemicals UK Ltd.**  
An Independent Distributor of Strem Chemicals Products  
Newton Hall, Town Street  
Newton, Cambridge  
England CB22 7ZE  
Tel: 0845 643 7263  
Fax: 0845 643 7362  
Email: [enquiries@strem.co.uk](mailto:enquiries@strem.co.uk)