

INTRODUCING...

**Rieke®  
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PRODUCTS FOR  
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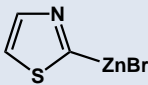
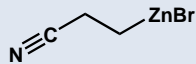

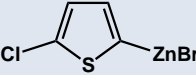
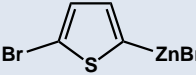
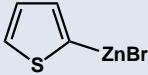
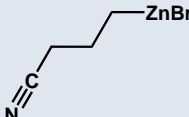
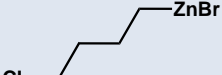
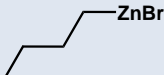
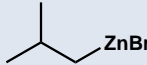
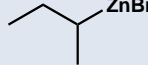
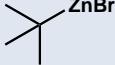
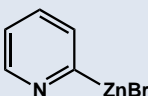
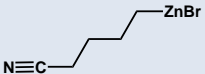
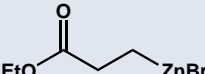
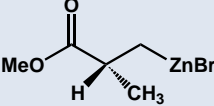
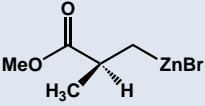
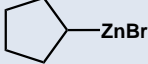
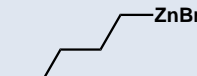
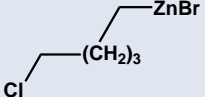
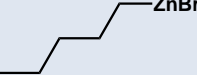

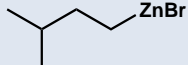
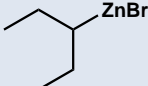
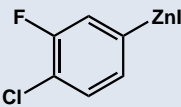
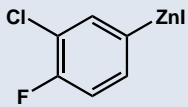
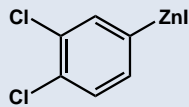
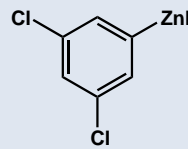
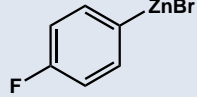
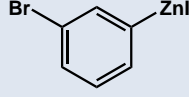
# Rieke® Organozinc Reagents

## Available Exclusively from Aldrich!

Organozinc compounds, first prepared by Frankland in 1848,<sup>1</sup> are used extensively in organic synthesis today. Interestingly, the choice of preparative route to organozinc reagents of the type RZnX (R=alkyl, aryl; X=halide)<sup>2-5</sup> does play an important role in the reactivity and stability of these compounds. Aldrich now offers a comprehensive line of Rieke® Organozinc Reagents that are stable as solutions in tetrahydrofuran. These reagents have different reactivity and selectivity properties than the analogous Grignard Reagents, and are employed in cross-coupling reactions,<sup>6-8</sup> Michael additions, and electrophilic amination reactions.<sup>9</sup> If you do not see the compound you need, please let us know. Your new product suggestions are always welcome!

References: (1) Frankland, E. *Liebigs Ann. Chem.* **1848**, 71, 171. (2) Erdik, E. *Organozinc Reagents in Organic Synthesis*; CRC Press, Inc.: Boca Raton, FL, 1996; Aldrich Catalog Number Z28,012-7. (3) Rieke, R. D.; Hanson, M. V. *Tetrahedron* **1997**, 53, 1925. (4) Hanson, M. V. et al. *Tetrahedron Lett.* **1994**, 35, 7205. (5) Cintas, P. *Activated Metals in Organic Synthesis*; CRC Press, Inc.: Boca Raton, FL, 1993; Aldrich Catalog Number Z24,607-7. (6) Miller, J. A.; Farrell, R. P. *Tetrahedron Lett.* **1998**, 39, 7275. (7) Zhu, L. et al. *J. Org. Chem.* **1991**, 56, 1445. (8) Negishi, E. et al. *ibid.* **1977**, 42, 1821. (9) Velarde-Ortiz, R. et al. *Tetrahedron Lett.* **1998**, 39, 9157.

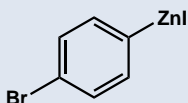
All Rieke® Organozinc Reagents from Aldrich are sold as 0.5M solutions in tetrahydrofuran and packaged in Sure/Seal™ bottles.

|   |  |  |   |  |  |
|---|--|--|---|--|--|
| <p><b>49,940-4</b><br/>C<sub>3</sub>H<sub>2</sub>BrNSZn</p>  <p>50mL</p>   | <p><b>49,790-8</b><br/>C<sub>3</sub>H<sub>4</sub>BrNZn</p>  <p>50mL</p>     | <p><b>49,937-4</b><br/>C<sub>3</sub>H<sub>7</sub>BrZn</p>  <p>50mL</p>                | <p><b>49,784-3</b><br/>C<sub>4</sub>H<sub>2</sub>BrClSZn</p>  <p>50mL</p>             | <p><b>49,766-5</b><br/>C<sub>4</sub>H<sub>2</sub>Br<sub>2</sub>SZn</p>  <p>50mL</p>   | <p><b>49,941-2</b><br/>C<sub>4</sub>H<sub>3</sub>BrSZn</p>  <p>50mL</p>   |
| <p><b>49,796-7</b><br/>C<sub>4</sub>H<sub>6</sub>BrNZn</p>  <p>50mL</p>    | <p><b>49,777-0</b><br/>C<sub>4</sub>H<sub>8</sub>BrClZn</p>  <p>50mL</p>   | <p><b>49,774-6</b><br/>C<sub>4</sub>H<sub>9</sub>BrZn</p>  <p>50mL</p>               | <p><b>49,896-3</b><br/>C<sub>4</sub>H<sub>9</sub>BrZn</p>  <p>50mL</p>               | <p><b>49,773-8</b><br/>C<sub>4</sub>H<sub>9</sub>BrZn</p>  <p>50mL</p>               | <p><b>49,775-4</b><br/>C<sub>4</sub>H<sub>9</sub>BrZn</p>  <p>50mL</p>   |
| <p><b>49,938-2</b><br/>C<sub>5</sub>H<sub>4</sub>BrNZn</p>  <p>50mL</p>  | <p><b>49,789-4</b><br/>C<sub>5</sub>H<sub>8</sub>BrNZn</p>  <p>50mL</p>   | <p><b>49,852-1</b><br/>C<sub>5</sub>H<sub>9</sub>BrO<sub>2</sub>Zn</p>  <p>50mL</p> | <p><b>49,949-8</b><br/>C<sub>5</sub>H<sub>9</sub>BrO<sub>2</sub>Zn</p>  <p>50mL</p> | <p><b>49,881-5</b><br/>C<sub>5</sub>H<sub>9</sub>BrO<sub>2</sub>Zn</p>  <p>50mL</p> | <p><b>49,804-1</b><br/>C<sub>5</sub>H<sub>9</sub>BrZn</p>  <p>50mL</p>  |
| <p><b>49,907-2</b><br/>C<sub>5</sub>H<sub>9</sub>BrZn</p>  <p>50mL</p>    | <p><b>49,781-9</b><br/>C<sub>5</sub>H<sub>10</sub>BrClZn</p>  <p>50mL</p> | <p><b>49,928-5</b><br/>C<sub>5</sub>H<sub>11</sub>BrZn</p>  <p>50mL</p>             | <p><b>49,890-4</b><br/>C<sub>5</sub>H<sub>11</sub>BrZn</p>  <p>50mL</p>             | <p><b>49,889-0</b><br/>C<sub>5</sub>H<sub>11</sub>BrZn</p>  <p>50mL</p>             | <p><b>49,927-7</b><br/>C<sub>5</sub>H<sub>11</sub>BrZn</p>  <p>50mL</p> |
| <p><b>52,450-6</b><br/>C<sub>6</sub>H<sub>3</sub>ClFIZn</p>  <p>50mL</p> | <p><b>49,778-9</b><br/>C<sub>6</sub>H<sub>3</sub>ClFIZn</p>  <p>50mL</p>  | <p><b>49,806-8</b><br/>C<sub>6</sub>H<sub>3</sub>Cl<sub>2</sub>Zn</p>  <p>50mL</p>  | <p><b>49,807-6</b><br/>C<sub>6</sub>H<sub>3</sub>Cl<sub>2</sub>Zn</p>  <p>50mL</p>  | <p><b>49,864-5</b><br/>C<sub>6</sub>H<sub>4</sub>BrFZn</p>  <p>50mL</p>             | <p><b>49,764-9</b><br/>C<sub>6</sub>H<sub>4</sub>BrIZn</p>  <p>50mL</p> |

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[49,765-7](#)

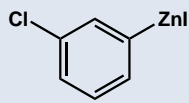
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50mL

[49,782-7](#)

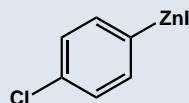
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50mL

[49,783-5](#)

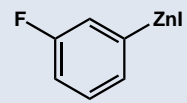
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50mL

[52,048-9](#)

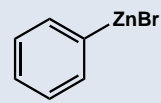
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50mL

[52,471-9](#)

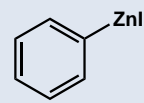
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50mL

[49,933-1](#)

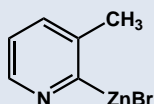
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50mL

[49,897-1](#)

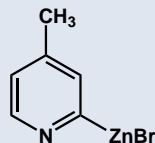
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50mL

[49,899-8](#)

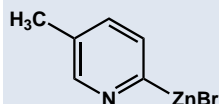
C<sub>6</sub>H<sub>6</sub>BrNZn



50mL

[49,900-5](#)

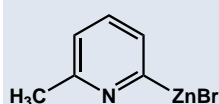
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50mL

[49,901-3](#)

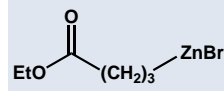
C<sub>6</sub>H<sub>6</sub>BrNZn



50mL

[49,849-1](#)

C<sub>6</sub>H<sub>11</sub>BrO<sub>2</sub>Zn



50mL

[49,803-3](#)

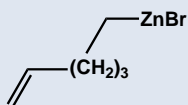
C<sub>6</sub>H<sub>11</sub>BrZn



50mL

[49,873-4](#)

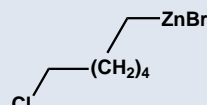
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50mL

[49,779-7](#)

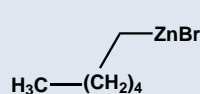
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50mL

[49,876-9](#)

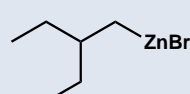
C<sub>6</sub>H<sub>13</sub>BrZn



50mL

[49,854-8](#)

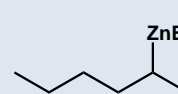
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50mL

[49,874-2](#)

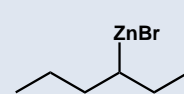
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50mL

[49,875-0](#)

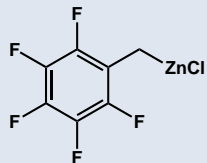
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50mL

[49,906-4](#)

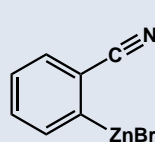
C<sub>7</sub>H<sub>2</sub>ClF<sub>5</sub>Zn



50mL

[52,023-3](#)

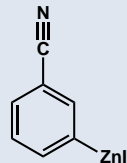
C<sub>7</sub>H<sub>4</sub>BrNZn



50mL

[49,794-0](#)

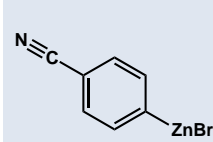
C<sub>7</sub>H<sub>4</sub>INZn



50mL

[52,029-2](#)

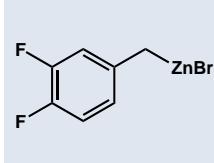
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50mL

[52,169-8](#)

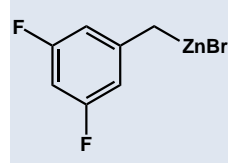
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50mL

[49,947-1](#)

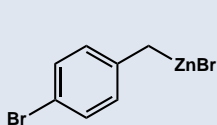
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50mL

[49,946-3](#)

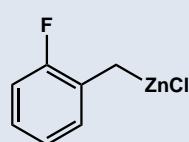
C<sub>7</sub>H<sub>6</sub>Br<sub>2</sub>Zn



50mL

[49,858-0](#)

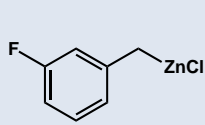
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50mL

[49,859-9](#)

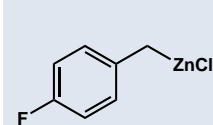
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50mL

[49,860-2](#)

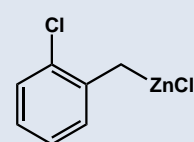
C<sub>7</sub>H<sub>6</sub>ClFZn



50mL

[49,756-8](#)

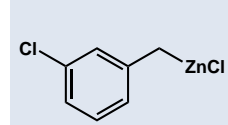
C<sub>7</sub>H<sub>6</sub>Cl<sub>2</sub>Zn



50mL

[49,757-6](#)

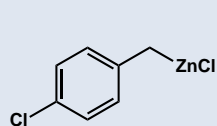
C<sub>7</sub>H<sub>6</sub>Cl<sub>2</sub>Zn



50mL

[49,776-2](#)

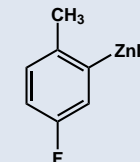
C<sub>7</sub>H<sub>6</sub>Cl<sub>2</sub>Zn



50mL

[49,862-9](#)

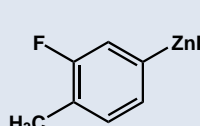
C<sub>7</sub>H<sub>6</sub>FIzN



50mL

[49,861-0](#)

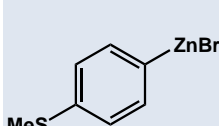
C<sub>7</sub>H<sub>6</sub>FIzN



50mL

[52,022-5](#)

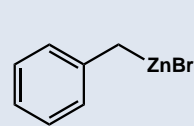
C<sub>7</sub>H<sub>7</sub>BrSZn



50mL

[49,751-7](#)

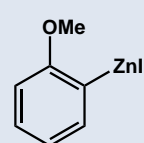
C<sub>7</sub>H<sub>7</sub>BrZn



50mL

[49,882-3](#)

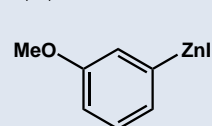
C<sub>7</sub>H<sub>7</sub>IOZn



50mL

[49,883-1](#)

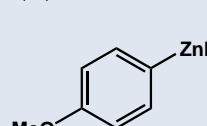
C<sub>7</sub>H<sub>7</sub>IOZn



50mL

[49,885-8](#)

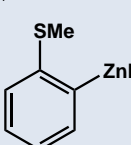
C<sub>7</sub>H<sub>7</sub>IOZn



50mL

[49,942-0](#)

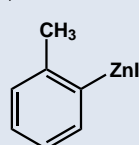
C<sub>7</sub>H<sub>7</sub>ISZn



50mL

[49,893-9](#)

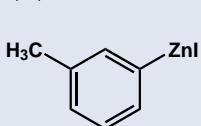
C<sub>7</sub>H<sub>7</sub>IzN



50mL

[49,894-7](#)

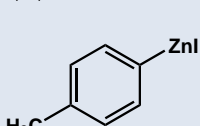
C<sub>7</sub>H<sub>7</sub>IzN



50mL

[49,895-5](#)

C<sub>7</sub>H<sub>7</sub>IzN

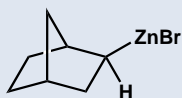


50mL

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or visit our web site at [www.sigma-aldrich.com/combichem](http://www.sigma-aldrich.com/combichem)**

[49,905-6](#)

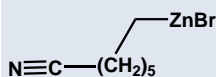
C<sub>7</sub>H<sub>11</sub>BrZn



50mL

[49,792-4](#)

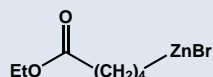
C<sub>7</sub>H<sub>12</sub>BrNZn



50mL

[49,851-3](#)

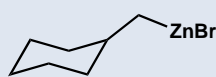
C<sub>7</sub>H<sub>13</sub>BrO<sub>2</sub>Zn



50mL

[49,802-5](#)

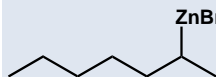
C<sub>7</sub>H<sub>13</sub>BrZn



50mL

[49,869-6](#)

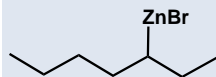
C<sub>7</sub>H<sub>15</sub>BrZn



50mL

[49,871-8](#)

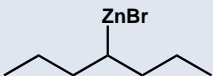
C<sub>7</sub>H<sub>15</sub>BrZn



50mL

[49,872-6](#)

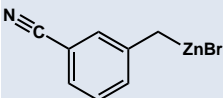
C<sub>7</sub>H<sub>15</sub>BrZn



50mL

[51,737-2](#)

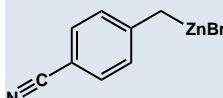
C<sub>8</sub>H<sub>6</sub>BrNZn



50mL

[51,738-0](#)

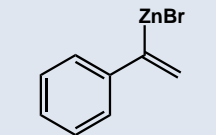
C<sub>8</sub>H<sub>6</sub>BrNZn



50mL

[49,939-0](#)

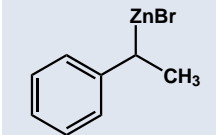
C<sub>8</sub>H<sub>7</sub>BrZn



50mL

[49,877-7](#)

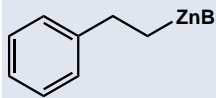
C<sub>8</sub>H<sub>9</sub>BrZn



50mL

[49,930-7](#)

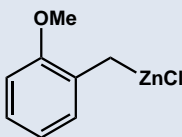
C<sub>8</sub>H<sub>9</sub>BrZn



50mL

[49,878-5](#)

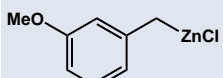
C<sub>8</sub>H<sub>9</sub>ClOZn



50mL

[49,879-3](#)

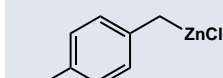
C<sub>8</sub>H<sub>9</sub>ClOZn



50mL

[49,880-7](#)

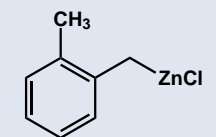
C<sub>8</sub>H<sub>9</sub>ClOZn



50mL

[49,886-6](#)

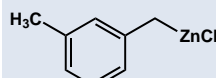
C<sub>8</sub>H<sub>9</sub>ClZn



50mL

[49,887-4](#)

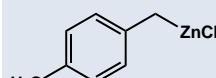
C<sub>8</sub>H<sub>9</sub>ClZn



50mL

[49,888-2](#)

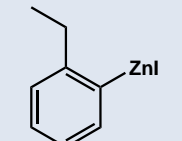
C<sub>8</sub>H<sub>9</sub>ClZn



50mL

[49,856-4](#)

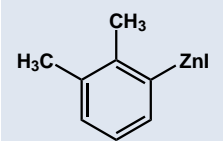
C<sub>8</sub>H<sub>9</sub>IZn



50mL

[49,837-8](#)

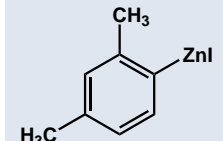
C<sub>8</sub>H<sub>9</sub>IZn



50mL

[49,838-6](#)

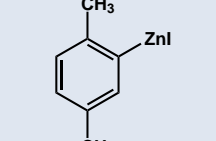
C<sub>8</sub>H<sub>9</sub>IZn



50mL

[49,839-4](#)

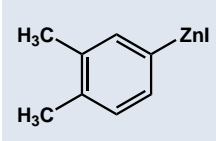
C<sub>8</sub>H<sub>9</sub>IZn



50mL

[49,841-6](#)

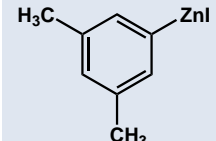
C<sub>8</sub>H<sub>9</sub>IZn



50mL

[49,842-4](#)

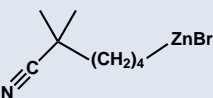
C<sub>8</sub>H<sub>9</sub>IZn



50mL

[49,892-0](#)

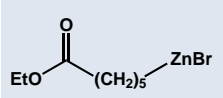
C<sub>8</sub>H<sub>14</sub>BrNZn



50mL

[49,850-5](#)

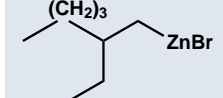
C<sub>8</sub>H<sub>15</sub>BrO<sub>2</sub>Zn



50mL

[49,855-6](#)

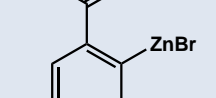
C<sub>8</sub>H<sub>17</sub>BrZn



50mL

[52,047-0](#)

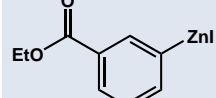
C<sub>9</sub>H<sub>9</sub>BrO<sub>2</sub>Zn



50mL

[49,846-7](#)

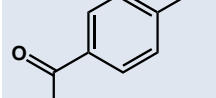
C<sub>9</sub>H<sub>9</sub>O<sub>2</sub>Zn



50mL

[49,847-5](#)

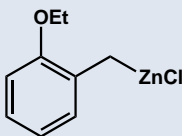
C<sub>9</sub>H<sub>9</sub>O<sub>2</sub>Zn



50mL

[49,944-7](#)

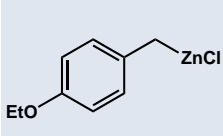
C<sub>9</sub>H<sub>11</sub>ClOZn



50mL

[49,945-5](#)

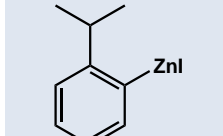
C<sub>9</sub>H<sub>11</sub>ClOZn



50mL

[49,935-8](#)

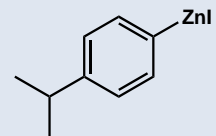
C<sub>9</sub>H<sub>11</sub>IZn



50mL

[49,936-6](#)

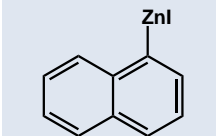
C<sub>9</sub>H<sub>11</sub>IZn



50mL

[49,904-8](#)

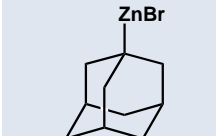
C<sub>10</sub>H<sub>7</sub>IZn



50mL

[49,760-6](#)

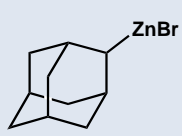
C<sub>10</sub>H<sub>15</sub>BrZn



50mL

[49,761-4](#)

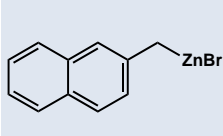
C<sub>10</sub>H<sub>15</sub>BrZn



50mL

[49,902-1](#)

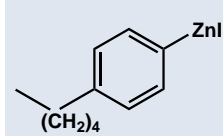
C<sub>11</sub>H<sub>9</sub>BrZn



50mL

[49,908-0](#)

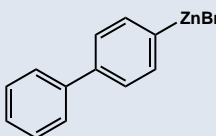
C<sub>11</sub>H<sub>15</sub>IZn



50mL

[52,472-7](#)

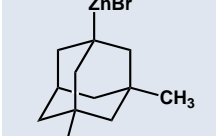
C<sub>12</sub>H<sub>9</sub>BrZn



50mL

[49,843-2](#)

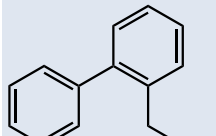
C<sub>12</sub>H<sub>19</sub>BrZn



50mL

[49,762-2](#)

C<sub>13</sub>H<sub>11</sub>BrZn



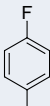
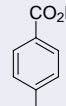

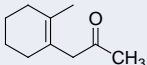

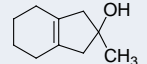

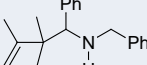
50mL


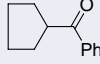


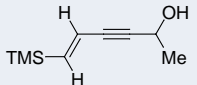
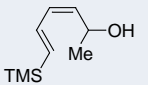
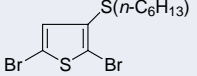
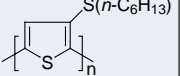
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Metal-enhanced organic synthesis via organometallic intermediates is a widely used preparative route for thousands of organic compounds. However, in some cases, ordinary bulk metal forms fail to react with organic substrates. Rieke® Highly Reactive Magnesium (Mg\*) and Rieke® Highly Reactive Zinc (Zn\*) react efficiently with a variety of organic substrates, some of which are listed in the following tables.

| Uses of Mg*   |   |      |
|---|---|------|
| Reactant  | Product   | Ref. |
|  |  | 5    |
|  |  | 2    |
|  |  | 2    |
|  |  | 6    |

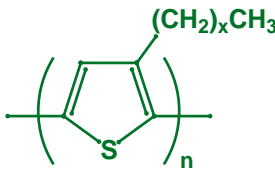
| Uses of Zn*   |  |      |
|---|--|------|
| Reactant  | Product  | Ref. |
|  |  | 5    |
|  |   | 1    |
|  |  | 4    |
|  |  | 3    |

References: (1) Rieke, R.D. et al. *J. Org. Chem.* **1997**, 62, 6921. (2) Rieke, R.D. et al. *J. Am. Chem. Soc.* **1995**, 117, 5429. (3) Wu, X. et al. *Macromolecules* **1995**, 28, 2101. (4) Chou, W.-N. et al. *Tetrahedron Lett.* **1991**, 32, 299. (5) Rieke, R.D.; Hanson, M. V. *Tetrahedron* **1997**, 53, 1925; and references cited therein. (6) Sell, M.S. et al. *J. Org. Chem.* **1995**, 60, 1077.

**49,957-9** Magnesium, highly reactive Rieke® metal  
(2.5g Mg\* in 100mL tetrahydrofuran)

**49,955-2** Zinc, highly reactive Rieke® metal  
(5g Zn\* in 100mL tetrahydrofuran)

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 X=5 **44,570-3** Poly(3-hexylthiophene-2,5-diyl)  
 X=7 **44,571-1** Poly(3-octylthiophene-2,5-diyl)  
 X=9 **49,534-4** Poly(3-decylthiophene-2,5-diyl)  
 X=11 **45,065-0** Poly(3-dodecylthiophene-2,5-diyl)

### Regiorandom Polymers

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 X=11 **51,086-6** Poly(3-dodecylthiophene-2,5-diyl)

All Rieke® products are available from Aldrich in research quantities only. For bulk inquiries, please contact Rieke Metals, Inc. at 402-434-2775.

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