

## Custom Synthesis: Collaboration with Life Science and Material Science Customers

Rieke Metals is well known for their organometallics, polymers and expertise in inert atmosphere reactions, however, Rieke Metals is more than a catalog company. Rieke Metals has the ability to customize products available in the marketplace, improve your molecule and solve your synthesis challenges.

Rieke Metals also collaborates with their Life Science and Material Science customers to develop a route of synthesis, improve a route of synthesis to increase yields and purity, create or assist with product specifications and scale up from grams to kilograms on their projects. Utilizing a well-defined process to manage projects and, constant communication throughout the process, allows the Rieke Metals team to meet timelines and provide quality deliverables to the satisfaction of our customers as demonstrated by the customer comments below:

*"Everything worked out great with the material recently delivered. No doubt we have been impressed with your ability to take challenging couplings and deliver higher than expected yields. We will certainly let you know when we have future projects."*

*"Really appreciate you helping with this [project] and accelerating our timelines."*

*"Thank you very much for the [work on the project] and extra efforts to meet our requests."*

*"In our hands the [molecule] seems to be working just fine. If we need more, or a different kind of [molecule] we will be sure to let you know! Thanks for all your work. We'll definitely keep you guys in mind for any sort of work of this nature going forward."*

## Rieke Metals Quality Update

Rieke Metals implemented a quality management system in the spring of 2016. Our QMS, which is ISO compliant and meets many of the cGMP guidelines, supports customers who have strict quality requirements for their raw materials.

Since the implementation of our QMS, we have successfully completed multiple audits with our pharmaceutical customers. With the completion of these audits, we have enhanced and improved our QMS by adding new Standard Operating Procedures, Validated Test Methods, etc. Our QMS has become the backbone of our operations and exhibits our understanding and commitment to our customer's quality requirements.

## NEW PRODUCT LINE: Going Green with 2-MeTHF

Rieke Metals now offers over 30 Grignard and organozinc reagents in 2-methyltetrahydrofuran or 2-MeTHF. Derived from renewable resources, 2-MeTHF is an aprotic ether solvent; its properties place it between THF and diethyl ether in regard to polarity and Lewis base strength. We offer both research and bulk quantities in 2-MeTHF, allowing the greatest project flexibility for our customers. Looking for your specific reagent provided in 2-MeTHF? Contact us to investigate the opportunity to provide you with a green solution.



## Did you know?

### Rieke® Zinc: Breaking out of the metal box

In today's world, a diverse range of organozinc reagents is common and even expected. That was not the case a few decades ago. The discovery of Rieke® zinc opened the door to vast numbers of new organozinc reagents due to its unique reactivity.

Standing in contrast to the observation that reagents which exhibit high reactivity and low selectivity was Rieke® zinc. Rieke Zinc allows you to have reagents that exhibit both high reactivity and selectivity. Prior to the discovery of Rieke® zinc, it was not possible to react alkyl, aryl and vinyl bromides or chlorides directly with zinc. The one exception was the Reformatsky reaction.

The preparation of organozinc reagents from alkyl, aryl and vinyl bromides or chlorides was formerly only possible by a zinc halide with an organolithium or Grignard reagent. Unfortunately, the organolithium and Grignard reagents have limited utility since they are not compatible with many types of functionality. Organozincs made via this route, also called transmetallation, have trace amounts of the starting materials, which may hinder reaction success.

Rieke® Zinc reacts directly with bromides or chlorides and will tolerate a wide variety of functional groups such as chlorides, nitriles, esters, amides, ethers, sulfides, and ketones. Also of significance is that aryl halides show no scrambling of position when ortho-, meta-, or para- substituted substrates are used. Ultimately this provides for a platform to offer the purest, largest selection of organozinc reagents.

Rieke Metals currently offers approximately 1,000 catalog quantity organozinc reagents and has the

expertise to provide custom reagents as well. Trust the inert atmosphere experts to help you break out of your box and into new discoveries.

### BOOK PUBLICATION:

We are excited to announce the publication of Dr. Rieke's first book on the advantages of active metals in chemistry. This book follows Dr. Rieke's academic publications on the periodic table metals, from widely known zinc and magnesium to more obscure uranium and cobalt.

Look for the Rieke Metals booth at tradeshow where we are exhibiting to have a chance to win one of these newly published books and explore the possibilities.

### Where to find us:

#### InformEx

May 16-18, Philadelphia, PA

#### ACS Fall

August 20-24, Washington D.C.

#### Specialty & Agro Chemicals America

September 6-8, Charleston, SC

#### Pharma Chem Outsourcing

September 18-20, Long Branch, NJ

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