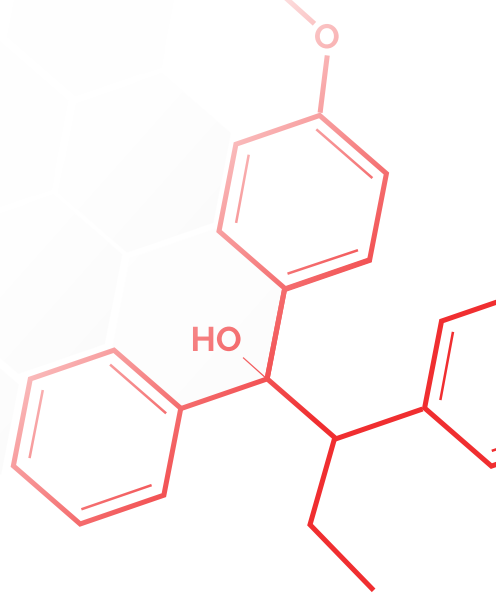


# GRIGNARD REAGENTS

COMMERCIALY AVAILABLE GRIGNARD SOLUTIONS

Based on the Flow Chemistry concepts and advanced simulation techniques, CHEMIUM has developed a novel, safe, reliable and highly flexible continuous flow technology **Mg<sup>Flow</sup>**® to produce ready-to-use Grignard solutions.



## WHY CHOOSING CHEMIUM AS PREFERRED GRIGNARD REAGENTS PROVIDER ?

### QUALITY BY DESIGN

In opposition to the batch process, our continuous process is not subject to variations and the quality is monitored at any time

### FLEXIBILITY

No matters the quantity and concentration required, our production process can accommodate your needs

### CUSTOMISATION

CHEMIUM also provides exclusive Grignard solutions based on customer-specified or proprietary compounds in unique mixture of solvents

### PACKAGING

Upon your needs, CHEMIUM could provide with large (450l, 1100l, 2500l portable tanks) or smaller volumes (200l drums)

CHEMIUM's value proposition also includes the ability to produce directly, at customer site, their captive Grignard solutions using our **mobile skid equipment**, that can be connected to batch or continuous reaction environment.

## COMMERCIALY AVAILABLE REAGENTS

Product	ID	CAS	Wt%*	[RMgX] <sup>*</sup>	Solvent <sup>**</sup>
<i>iso</i> -Propylmagnesium chloride	IPMC	1068-55-9-55	20%	2.0 M	THF
Ethylmagnesium bromide	EMB	925-90-6	40%	3.4 M	2MeTHF
Phenylmagnesium bromide	PMB	100-58-3	15%	1.0 M	THF
Phenylmagnesium chloride	PMC	100-59-4	25%	1.9 M	THF
4-Tolylmagnesium chloride	TMC	696-61-7	15%	1.0 M	THF
4-( <i>N,N</i> -Dimethylaniline)magnesium bromide	4DMAMB	7353-91-5	12%	0.5 M	THF
Cyclopropylmagnesium bromide	CPRMB	23719-80-4	7%	0.5 M	THF
<i>n</i> -Butylmagnesium chloride	NBMC	693-04-9	24%	2.0 M	THF
Cyclohexylmagnesium chloride	CHMC	931-51-1	20%	1.3 M	THF/Toluene
4-Methoxyphenylmagnesium bromide	4MPMB	13139-86-1	11%	0.5 M	THF
<i>tert</i> -Butylmagnesium chloride	TBMC	677-22-5	20%	1.7 M	THF
<i>sec</i> -Butylmagnesium chloride	SBMC	15366-08-2	25%	2.1 M	THF
Cyclopentylmagnesium bromide	CPMB	33240-34-5	18%	0.5 M	THF
<i>n</i> -Propylmagnesium bromide	NPMB	927-77-5	27%	2.0 M	THF
3-Methoxyphenylmagnesium bromide	3MPMB	189032-84-6	21%	1.0 M	THF /Toluene
4-Fluorophenylmagnesium bromide	4FPMB	352-13-6	19%	1.0 M	THF
<i>n</i> -Amylmagnesium bromide	NAMB	693-25-4	37%	2.0 M	DEE
<i>n</i> -Amylmagnesium chloride	NAMC	6393-56-2	27%	2.0 M	THF
Methyl Magnesium Bromide	MMB	75-16-1	35%	3.4 M	2-MeTHF
Methyl Magnesium Chloride	MMC	676-58-4	22%	3.0 M	THF

\*/\*\*: concentration & solvent can be adjusted on request

### YOUR OWN GRIGNARD REAGENT PRODUCED BY CHEMIUM ?

At CHEMIUM, we help you throughout the development and to the industrial production of your own custom Grignard Reagent.

Thanks to the seamless scalability of our **MgFlow**<sup>®</sup> process and our thorough knowledge of the Grignard chemistry, we can support you from grams scale to kilos to multi-metric tons, with no scale-up burden or uncertainty.