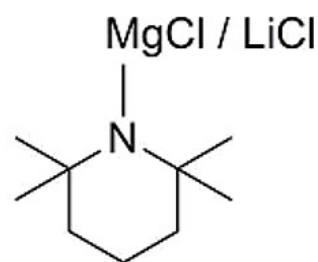


# TECHNICAL DATA SHEET

Date of Issue: 2017/06/09

## Magnesium Chloro 2,2,6,6-Tetramethylpiperidide Lithium Chloride Complex, typ. 20% solution in THF / Toluene (typ. 1.0 M)



Molecular Formula  $C_9H_{18}ClMgN \cdot LiCl$

Product Number 408585

### APPLICATION

Selective deprotonation of arenes and heteroarenes.

Arenes and heteroarenes are typically deprotonated by a directed lithiation using organolithium compounds or organolithiumamides (e.g. LDA). The high reactivity and nucleophilicity of these reagents often result in unwanted side reactions and precludes the presence of sensitive functional groups like esters or ketones. Additionally, such deprotonation reactions often require low temperatures leading to higher production costs on larger scale.

Due to their low kinetic basicity magnesiumamides tolerate a lot of functional groups.

### FURTHER INGREDIENTS

Tetrahydrofuran

CAS-No. 109-99-9

EC-No. 203-726-8

Magnesium chloro tetramethylpiperidide

CAS-No. 215863-85-7

Toluene

CAS-No. 108-88-3

EC-No. 203-625-9

Lithium chloride

CAS-No. 7447-41-8

EC-No. 231-212-3

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## SPECIFICATION

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active base as TMPMgCl	16 - 20%
w/o LiCl	
LiCl	3.2 - 4.7 %
molar ratio LiCl/active base	0.75 - 1.38

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## METHOD OF ANALYSIS

Active base: Titration with benzoic acid (modified Watson-Eastham titration). Detailed description is available on request.

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## PHYSICAL PROPERTIES

Appearance	clear or light turbid liquid
Color	brown to violet
Flash point	-21.2 °C (Tetrahydrofuran)
Boiling point/boiling range	66 °C (Tetrahydrofuran)
Density	0.97 g/cm <sup>3</sup> at 23 °C
Water solubility	(Not applicable)
Molecular weight	242.44 g/mol
Thermal Stability	decomposition above 20°C
Additional Physical Properties	<u>Molecular weight:</u> TMP-MgCl 200.03 g/mol LiCl 42.4 g/mol

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## HANDLING & STORAGE

**Handling** Organomagnesium compounds should only be handled under inert gas (nitrogen or argon). Never add water, acids or oxidizing materials to the product. In case of fire use dry extinguishers on basis of sodium chloride or limestone powder. Never use water or CO<sub>2</sub>-extinguishers. Pay attention to official Safety regulations (see also: 'Transport regulations' and 'Marking').

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**Storage** Product should be used in a closed apparatus under inert gas. Store in well ventilated areas in tightly closed containers. As material decomposes slowly above room temperature recommended storage temperature is below 20 °C.

## TRANSPORT & PACKAGING

UN number 2924

ADR	Class: 3	PG: II	Label: 3 (8)
RID	Class: 3	PG: II	Label: 3 (8)
IMDG	Class: 3	PG: II	Label: 3 (8)
IATA_C	Class: 3	PG: II	Packing instruction (cargo aircraft): 363
IATA_P	Class: 3	PG: II	Packing instruction (passenger aircraft): 352

Hazard pictograms



**Signal Word** Danger

**H&P Phrases** See Safety Data Sheet

**Labelling** The labelling is according to EU-GHS classification ((EG) 1272/2008) and may vary in other countries. Please refer to the respective Safety Data Sheet for your country.

**Packaging**

Glass bottles of 100, 250, 500, and 1,000 ml. Steel bottles and containers with volumes of 7.4 l, 27 l, 127 l or 450 l. For safety reasons these are filled to a maximum of 90 %. Steels drums with 200 l net volume.

## OTHER INFORMATION

**Further Related Documents** Safety Data Sheet

**Our brochure(s)** Lithium & Magnesium Amides

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