

TECHNICAL DATA SHEET

Date of Issue: 2017/01/09

Zinc Chloride, typ. 25 % solution in 2-Methyl-THF

CAS-No.	7646-85-7
EC-No.	231-592-0
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REACH No.	01-2119472431-44
Molecular Formula	ZnCl ₂
Product Number	408521

APPLICATION

The use of a 'ready-made' 2-Methyl-THF solution avoids the handling of the very hygroscopic and dusty ZnCl₂ powder.

The ZnCl₂ / 2-Methyl-THF solution was developed mainly for the application in organic synthesis, e.g.:

- transmetallation of organomagnesium and organolithium compounds to the corresponding zinc reagents for C-C coupling reactions (Negishi protocol).
- formation of zinc enolates by deprotonation of carbonyl compounds using standard bases followed by transmetallation with ZnCl₂.
- catalysis of cycloaddition reactions e.g. Diels-Alder reactions of electron rich dienes with carbonyl compounds.
- preparation of selective reducing agents, e.g. Zn(BH₄)₂ by reaction of NaBH₄ with ZnCl₂.

Reference:

McGarvey, G.J. in Encyclopedia of Reagents for Organic Synthesis, Paquette, L.A., Ed. John Wiley and Sons, New York (1995), Vol. 8, 5544.

FURTHER INGREDIENTS

2-Methyltetrahydrofuran

CAS-No.	96-47-9
EC-No.	202-507-4

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SPECIFICATION

Zinc Chloride	23 - 27 %
Water content	< 0.14 %

METHOD OF ANALYSIS

Determination of assay by argentometric titration of chloride, determination of water by Karl-Fischer titration.

PHYSICAL PROPERTIES

Appearance	clear or light turbid liquid
Color	tan to pink
Crystallization temperature	< -10 °C
Flash point	-10 °C (2-Methyltetrahydrofuran)
Boiling point/boiling range	78 °C (2-Methyltetrahydrofuran)
Density	ca. 1.07 g/cm ³ at 20 °C
Molecular weight	136.28 g/mol
Thermal Stability	Crystallization below -10 °C

HANDLING & STORAGE

Handling	Under exclusion of air and humidity stable over practically unlimited periods. 2-Methyl-THF can form explosive peroxides in contact with air. Storage and handling under inert gas is recommended. Pay attention to official safety regulations (see also 'Transport regulations' and 'Marking').
Storage	As ZnCl ₂ tends to crystallize from the solution material should be stored above 0 °C. Pay attention to official safety regulations (see also: "Transport regulations" and "Marking").

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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 with volumes of 7.4, 27, 127 or 450 l. Steel drums up to 200 l. For safety reasons these are filled to a maximum of 90 %.

OTHER INFORMATION

Further Related Safety Data Sheet
Documents

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