TECHNICAL DATA SHEET

Date of Issue: 2025/02/25

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

CAS-No.	7646-85-7
EC-No.	231-592-0
REACH No.	01-2119472431-44
Molecular formula	$ZnCl_2$
Product number	10000302, 10000508, 10001069, 10001771, 10001772, 10001773, 10001774, 10001775, 10004806

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-Methy-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.

SPECIFICATION

Zinc Chloride	23,0 - 27,0 %
Water content	max 0.14 %

METHOD OF ANALYSIS

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

PHYSICAL PROPERTIES

Appearance	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/cm3 at 20 °C
Molecular weight	136.29 g/mol
Thermal Stability	Crystallization below -10 °C

HANDLING & STORAGE

Handling	Storage and handling under inert gas is recommended. Avoid contact with eyes, skin and clothes as well as inhalation. Vapors may form explosive mixtures with air. Vapors are heavier than air and may spread along floors. Flash-back possible over considerable distance. Use only explosion-proof equipment. Take precautionary measures against electrostatic. Protect from frost, heat and sunlight. Pay attention to official safety regulations (see also 'Transport regulations' and 'Marking').
Storage	As ZnCl2 tends to crystallize from the solution material should be stored above 0°C. When stored according to SDS the material is fairly stable. We still recommend to retest the material 6 months after date of analysis if included on CoA. If not included, use the date of manufacturing for the calculation. Pay attention to official safety regulations (see also: ”Transport regulations” and “Marking“).

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 500, and 1,000 mL. Steel bottles with volumes of 7.4, 27, 125, 127 or 450 l. For safety reasons these are filled to a maximum of 90 %. Steel drums 30 and 200 L.

OTHER INFORMATION

Further Related Documents Safety Data Sheet