

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-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.

SPECIFICATION

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

The information presented herein is believed to be accurate and reliable, but is presented without guarantee or responsibility on the part of Albemarle Corporation and its subsidiaries and affiliates. It is the responsibility of the user to comply with all applicable laws and regulations and to provide for a safe workplace. The user should consider any health or safety hazards or information contained herein only as a guide, and should take those precautions which are necessary or prudent to instruct employees and to develop work practice procedures in order to promote a safe work environment. Further, nothing contained herein shall be taken as an inducement or recommendation to manufacture or use any of the herein materials or processes in violation of existing or future patent.

Technical data sheets may change frequently. You can download the latest version from our website www.albemarle.com.

Please contact us at www.albemarle.com/contact with questions.



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/cm ³ at 20 °C
Molecular weight	136.29 g/mol
Thermal Stability	Crystallization below -10 °C

HANDLING & STORAGE

Handling	<p>Storage and handling under inert gas is recommended. Avoid contact with eyes, skin and clothes as well as inhalation.</p> <p>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').</p>
Storage	<p>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.</p> <p>Pay attention to official safety regulations (see also: "Transport regulations" and "Marking").</p>

The information presented herein is believed to be accurate and reliable, but is presented without guarantee or responsibility on the part of Albemarle Corporation and its subsidiaries and affiliates. It is the responsibility of the user to comply with all applicable laws and regulations and to provide for a safe workplace. The user should consider any health or safety hazards or information contained herein only as a guide, and should take those precautions which are necessary or prudent to instruct employees and to develop work practice procedures in order to promote a safe work environment. Further, nothing contained herein shall be taken as an inducement or recommendation to manufacture or use any of the herein materials or processes in violation of existing or future patent.

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 Safety Data Sheet
Documents

The information presented herein is believed to be accurate and reliable, but is presented without guarantee or responsibility on the part of Albemarle Corporation and its subsidiaries and affiliates. It is the responsibility of the user to comply with all applicable laws and regulations and to provide for a safe workplace. The user should consider any health or safety hazards or information contained herein only as a guide, and should take those precautions which are necessary or prudent to instruct employees and to develop work practice procedures in order to promote a safe work environment. Further, nothing contained herein shall be taken as an inducement or recommendation to manufacture or use any of the herein materials or processes in violation of existing or future patent.