TECHNICAL DATA SHEET

Date of Issue: 2017/01/09

Zinc Bromide, typ. 30 % solution in THF

CAS-No.	7699-45-8
EC-No.	231-718-4
REACH No.	01-2119490043-45
Molecular Formula	$ZnBr_2$
Product Number	408621

APPLICATION

The use of a 'ready-made' THF solution avoids the handling of the very hygroscopic and dusty ZnBr2 powder.

The ZnBr2 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 ZnBr2.
- 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 ZnBr2.

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

Tetrahydrofuran

CAS-No.	109-99-9
EC-No.	203-726-8

SPECIFICATION

Zinc Bromide	28 - 32 %

Water content	< 0.13 %

METHOD OF ANALYSIS

Determination of assay by argentometric titration of bromide, 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	-21.2 °C (Tetrahydrofuran)
Boiling point/boiling range	66 °C (Tetrahydrofuran)
Density	1.18 g/cm3 at 20 °C
Molecular weight	225.19 g/mol
Thermal Stability	Crystallization below 10 °C

HANDLING & STORAGE

Handling	Under exclusion of light and humidity stable over practically unlimited periods. 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 ZnBr2 tends to crystallize from the solution material should be stored above 15 °C. 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 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 Documents Safety Data Sheet