

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 % |
|--------------|-----------|

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| | |
|---------------|----------|
| 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/cm ³ 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 ZnBr ₂ 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"). |

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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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