

# TEMAH



Grade: semiconductor grade

Properties: Tetrakis(methylethylamino)hafnium is abbreviated as TEMA, the chemical formula is  $\text{Zr}[\text{CH}_3(\text{CH}_3\text{CH}_2)\text{N}]_4$ . It is yellow liquid, soluble in toluene, ethyl acetate and other organic solvents, and reacts violently with water. Highly flammable, need to be stored in a cool, dry, well-ventilated place.

Uses: Precursor to (ALD/CVD) for hafnium-containing thin film deposition; organohafnium metal catalyst synthesis.

## · Identifier

Chemical Formula	$\text{Hf}[\text{CH}_3(\text{CH}_3\text{CH}_2)\text{N}]_4$
CAS No.	352535-01-4
EINECS No.	/

## · Physical and chemical properties

Molecular weight	410.9 g/mol	Flash point	11°C	Reactivity	Reacts violently with water Highly flammable
Appearance	yellow liquid	Melting point	< -50°C	Solubility	Soluble in water Soluble in organic solvents
Density	1.324 g/cm <sup>3</sup>	Boiling point	79°C (0.1Torr)	Storage	Shady and cool, well-ventilated

## · Metal impurities

Impurities	Unit	Specification
Ca	ppb	≤10
Cr	ppb	≤10
Cu	ppb	≤10
Fe	ppb	≤20
Mg	ppb	≤10
Mn	ppb	≤10
Ni	ppb	≤20
V	ppb	≤30
Zn	ppb	≤20

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