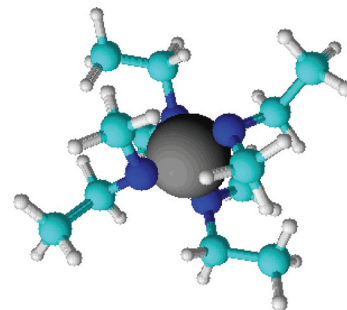


TEMAHf High-K Hafnium precursor. Product data.



Chemical data Tetrakis[EthylMethylAmino]Hafnium.

Application & handling

- TEMAHf is a hafnium amide precursor used in ALD or MOCVD for the deposition of pure HfO₂ thin films. Often it is used in with silicon or aluminium sources to form silicates or aluminates. Oxygen (O₂), ozone (O₃) and moisture (H₂O) are the most common co-reactants.
- TEMAHf is a pale yellow liquid that reacts immediately upon contact with water or moisture with the evolution of ethylmethylamine and the formation of hafnium oxide/hydroxide.
- TEMAHf must be delivered in perfectly dry, oxygen-free piping and components to ensure particle-free processing.

Technical data

Formula	Hf[N(C ₂ H ₅)(CH ₃)] ₄
Molecular weight	410.90
Boiling point	79°C at 0.1 torr
Density	1.324 g/ml
Physical characteristics	Liquid (pale yellow)
Thermal decomposition	272°C
Reactivity	Reacts violently with water

Shipping information

Proper shipping name	Organometallic substance, water reactive, flammable, n.o.s. (Tetrakis(ethylmethylamino)hafnium)
CAS no.	352535-01-4
UN no.	3399
Class/division	4.3
Packaging group	II
Hazard labels required	Class 4.3 (Dangerous when wet), Class 3 (Flammable)

Hazard rating

Health	3
Flammability	3
Reactivity	1
Special notes	No descriptions



Product information

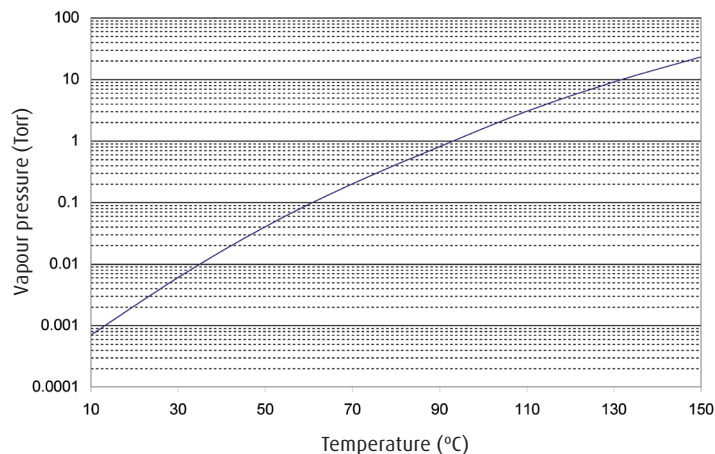
Grade	Up to N6 (99.9999%)
Size	TEMAHf can be packaged in canisters of varying size. Contact Linde Electronics for a size suitable for your application.
Container material	EP 316L stainless steel for all wetted parts

Product specification

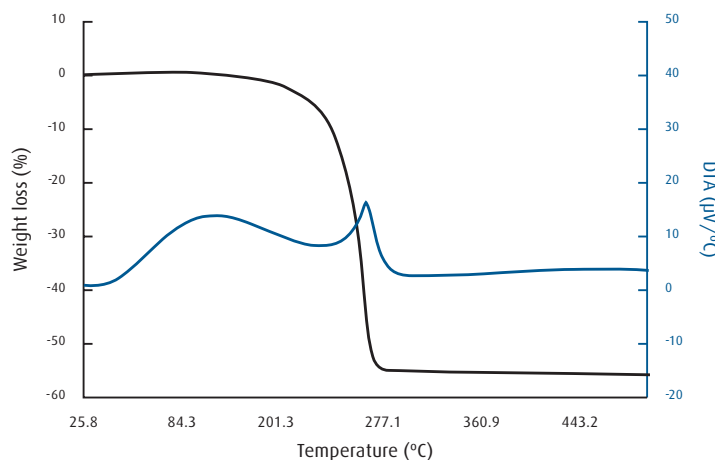
Parameter	Specification
Assay (%)	> 99.0% based on total metallic impurities
Total impurities ppb (excluding Zr)	< 1000 ppb
Particle count (per L)	< 700
Water content (ppm)	N/A

Contact Linde Electronics for a complete specification

Vapour pressure curve



TG/DTA analysis



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