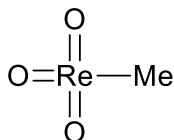


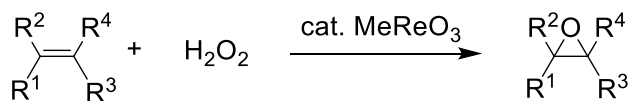
Catalog # M100685 Methyltrioxorhenium (VII), 98%



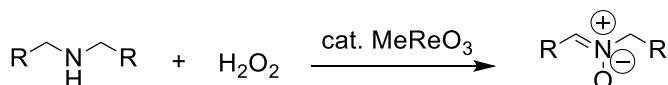
Catalysis Applications

Technical Notes:

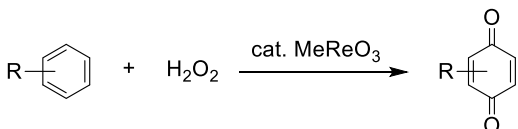
1. Catalyst used with H_2O_2 for oxidation of a variety of substrates.
2. (a) Alkenes
3. (b) Secondary amines
4. (c) Arenes
5. (d) Silyl enol ethers/Silyl ketene acetals
6. (e) Sulfides
7. (f) Bayer-Villager-Type oxidation
8. (g) Amine oxidation
9. (h) Phenol oxidation



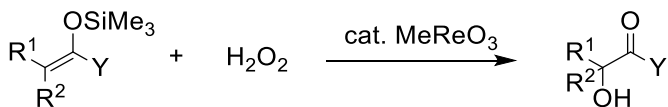
Tech Note (1a)
Ref. (1-3)



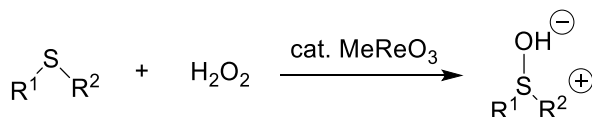
Tech Note (1b)
Ref. (4-6)



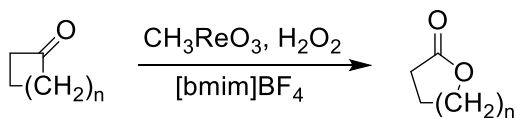
Tech Note (1c)
Ref. (7)



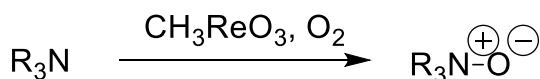
Tech Note (1d)
Ref. (8,9)



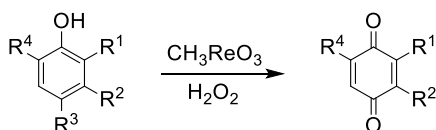
Tech Note (1e)
Ref. (10)



Tech Note (1f)
Ref. (11)



Tech Note (1g)
Ref. (12)



Tech Note (1h)
Ref. (13)

References:

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2. [Tetrahedron Lett., 1999, 40, 3991.](#)
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14. [J. Organometallic Chem., 2004, 689, 4149.](#) (review)

CVD/ALD Applications

Thermal Behavior:

- Melting point: 110 °C [1]
- TGA data available in [2] and [3]
- Thermal decomposition (under CVD conditions) above 300 °C [2]

Technical Notes:

1. Mixed alkyl-oxide precursor for the deposition of **rhenum containing** thin films by CVD and ALD with high volatility and high thermal stability.

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
ReO _x (1<x<2)	CVD	70 °C	0.8 mTorr	MTO only	350-450 °C	[2]
Re	PECVD	70 °C	0.2 Torr	H ₂ plasma	300-450 °C	[2]
ReAl _x O _y	ALD	70 °C		TMA	100-180 °C	[3]
ReAl ₂ O ₃ CH ₃	ALD	63 °C	0.9 Torr	TMA	75-300 °C	[4]

References:

1. [Inorg. Chem. 1979, 18, 8, 2318](#)
2. [J. Organomet. Chem., 1998, 553, 443.](#)
3. [ACS Appl. Mater. Interfaces, 2017, 9, 35067.](#)

4. [*Chem. Mater.*, **2019**, *31*, 7821.](#)