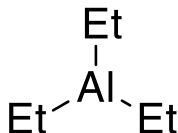


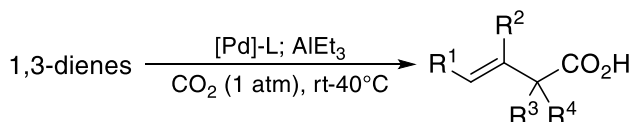
Catalog # 13-1850 Triethylaluminum, min. 93%



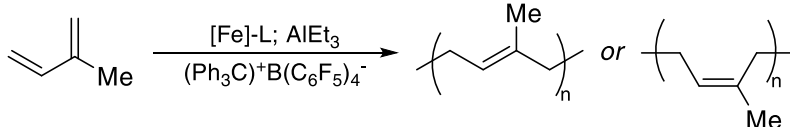
Catalysis Applications

Technical Notes:

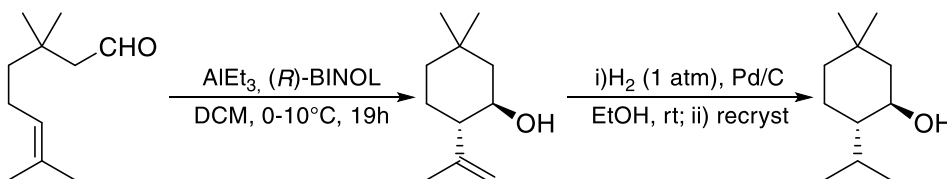
1. Used in coupling reaction of atmospheric pressure carbon dioxide with 1,3-dienes via Pd-catalyzed hydrocarboxylation.
2. Alkylating reagent used in Fe-catalyzed polymerization of isoprene and other 1,3-dienes.
3. Catalyst for a highly selective asymmetric ring-closing ene reaction with subsequent preparation of optically active menthol analogs.
4. Used in the Cu-catalyzed asymmetric conjugate addition to α -alkylidene cycloalkanones.
5. Catalyst used for the hydroboration of alkynes.
6. Cocatalyst used for Ni/NHC-catalyzed enantioselective cyclization of pyridones and pyrimidones with tethered alkenes.
7. Ethylation reagent Ni-catalyzed defluorinative alkylation of $C(sp^2)$ -F bonds.
8. Ziegler-Natta catalyst component used to produce polyethylene and polypropylene.



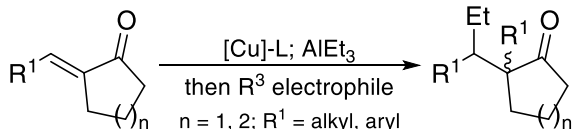
Tech Note (1)
Ref. (1)



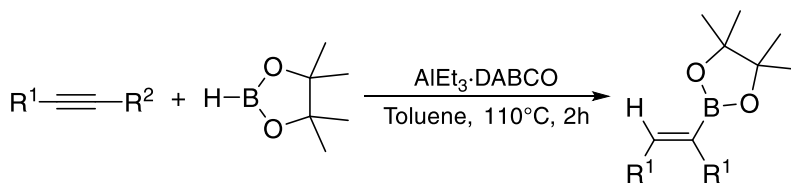
Tech Note (2)
Ref. (2)



Tech Note (3)
Ref. (3)



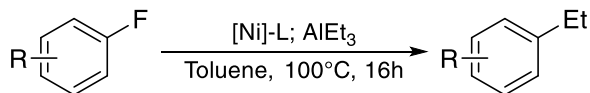
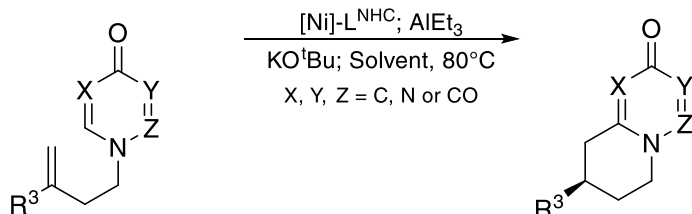
Tech Note (4)
Ref. (4)



Tech Note (5)
Ref. (5)



Tech Note (6)
Ref. (6)



Tech Note (7)
Ref. (7)

References:

1. [Org. Lett. 2011, 13, 1698.](#)
2. [Angew. Chem. Int. Ed. 2012, 51, 11805.](#)
3. [Org. Biomol. Chem. 2015, 13, 5817.](#)
4. [Synlett 2015, 26, 901.](#)
5. [Angew. Chem. Int. Ed. 2016, 55, 15356.](#)
6. [Adv. Synth. Catal. 2020, 362, 1125.](#)
7. [Org. Chem. Front. 2021, 8, 4533.](#)

CVD/ALD Applications

Thermal Behavior:

- Melting point: -46°C
- Boiling point: 187°C, 128-130°C at 50 Torr
- Vapor pressure: 4 Torr/20°C

Technical Notes:

1. ALD/CVD precursor and dopant for aluminum containing thin film deposition.

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
Al ₂ O ₃	PE-CVD	90°C	AP	-	150°C, 200°C	1
TiAlC	ALD	50°C	-	TiCl ₄	250-375°C	2-3

Al _x N _y	CV Synth.	60°C	7.5 Torr, 15 Torr 75 Torr, 375 Torr	NH ₃	1000°C; 250°C; 1400°C; 1550°C	4
Al:ZnO	AA-CVD	DCM/Toluol Solution	-	Zn-L Complex	400°C	5

References:

1. [Plasma Process. Polym. 2006, 3, 597.](#)
2. [ECS J. Solid State Sci. Tech. 2016, 5, P299.](#)
3. [ECS J. Solid State Sci. Tech. 2017, 6, P38.](#)
4. [Powder Tech. 2018, 326, 488.](#)
5. [Polyhedron 2018, 140, 35.](#)