

## 90 in total

Trade name	Empirical formula	Metal	Theoretical metal content	CAS Number	Product number
Umicore Hoveyda-Grubbs Catalyst MZ1c (C633)		Ru	16	1352916-84-7	3000083181
Umicore Hoveyda-Grubbs Catalyst MZ2c (C675)		Ru	15	1451807-77-4	3000083086
Umicore Grubbs Catalyst M80b (C853-bis)	(SiMes) <sub>2</sub> Ru(butenylidene) Cl <sub>2</sub>	Ru	12		3000083085
Umicore Grubbs Catalyst M80a (C875-bis)	(SiMes) <sub>2</sub> Ru(benzylidene)C I <sub>2</sub>	Ru	12	508172-19-8	3000083057
Chiralyst Ru1042	[RuCl( <i>p</i> - -cymene)(S)-Xyl- BINAP)]Cl	Ru	9	1345887-44-6	3000020710
Umicore Grubbs Catalyst M23 (C947)	(S IMes )Ru[PPh <sub>2</sub> (OPh)](Ind)Cl <sub>2</sub>	Ru	11	1817799-58-8	3000082991
Umicore Grubbs Catalyst M1b (C801)	Ru(PCy <sub>3</sub> ) <sub>2</sub> (butenylidene)Cl <sub>2</sub>	Ru	13	194659-03-5	3000083000
Umicore Hoveyda-Grubbs Catalyst M70 (C601)		Ru	17	203714-71-0	3000082894
Umicore Grubbs Catalyst M2a (C848)	(S IMes )Ru(PCy <sub>3</sub> ) (benzylidene)Cl <sub>2</sub>	Ru	12	246047-72-3	3000082847
Umicore Grubbs Catalyst M2b (C827)	(S IMes )Ru(PCy <sub>3</sub> ) (butenylidene)Cl <sub>2</sub>	Ru	12	253688-91-4	3000082849
Umicore Grubbs Catalyst M24 (C885)	(S IMes )Ru[PPh <sub>2</sub> (OMe)](Ind)Cl <sub>2</sub>	Ru	11	2016028-91-2	3000082848
Umicore Hoveyda-Grubbs Catalyst M72 (C627)		Ru	16	301224-40-8	3000082873

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Umicore Hoveyda-Grubbs Catalyst M72 SIPr (C711)		Ru	14	635679-24-2	3000082874
Umicore Grubbs Catalyst M52		Ru	16	1014701-61-1	3000034571
Umicore Hoveyda-Grubbs Catalyst M72 SI(o-Tol) (C571)		Ru	18	927429-61-6	3000082888
Umicore Grubbs Catalyst M1a (C823)	Ru(PCy <sub>3</sub> ) <sub>2</sub> (benzylidene)Cl <sub>2</sub>	Ru	12	172222-30-9	3000082846
Umicore Grubbs Catalyst M33i		Ru	15	1203589-76-7	3000021048
Umicore Grubbs Catalyst M31 SIPr	(SIPr)Ru(py)(Ind)Cl <sub>2</sub>	Ru	12	1304756-39-5	3000036122
Chiralyst Ru918	[RuCl(p-cymene)(S)-SEGPHOS)]Cl	Ru	11	944451-29-0	3000080085
Chiralyst Ru1321	[Ru(SL-M001-1)(C <sub>7</sub> H <sub>11</sub> )(N-AcCN)]BF <sub>4</sub> x 2 HBF <sub>4</sub>	Ru	8		3000036106
Umicore Grubbs Catalyst M32h		Ru	15	1416427-09-2	3000034579
Chiralyst P280	[Ru(cod)Cl <sub>2</sub> ] <sub>n</sub>	Ru	36	50982-12-2	3000036087
	Ru(PPh <sub>3</sub> ) <sub>2</sub> (Ind)Cl	Ru	12	1360949-97-8	3000036089
Umicore Grubbs Catalyst M91		Ru	15	1415725-62-0	3000036076
	[Ru(Cp)(CO) <sub>2</sub> ] <sub>2</sub>	Ru	46	12132-87-5	3000036126
Chiralyst Ru867	[	Ru	12	1016168-44-7	3000034572
	<sup>7</sup> H <sub>11</sub> )(N-AcCN)]BF <sub>4</sub>				
Chiralyst Ru1013		Ru	10	942042-51-5	3000036104
	<sup>7</sup> H <sub>11</sub> )(N-AcCN)]BF <sub>4</sub>				
Chiralyst Ru929	[RuCl( <i>p</i> -cymene)(R)-BINAP]Cl	Ru	11	145926-28-9	3000036083

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Umicore Grubbs Catalyst M35		Ru	12	934538-12-2	3000034564
Umicore Grubbs Catalyst M81		Ru	11	1228169-92-3	3000036143
Umicore Grubbs Catalyst M92		Ru	14	1415725-73-3	3000036077
Umicore Hoveyda-Grubbs Catalyst M71		Ru	14	1025728-56-6	3000034576
Umicore Grubbs Catalyst M93		Ru	15	1415725-68-6	3000036078
Umicore Grubbs Catalyst M31	[(SI <i>Mes</i> )Ru( <i>py</i> )( <i>Ind</i> )Cl <sub>2</sub> ]	Ru	14	1031262-76-6	3000034565
Umicore Grubbs Catalyst M20 SIPr	(SIPr) <sub>2</sub> Ru(PPH <sub>3</sub> )( <i>Ind</i> )Cl <sub>2</sub>	Ru	10	1307233-23-3	3000036123
Umicore Grubbs Catalyst M1	Ru(PCy <sub>3</sub> ) <sub>2</sub> ( <i>Ind</i> )Cl <sub>2</sub>	Ru	11	250220-36-1	3000034559
	RuCl <sub>3</sub> x n H <sub>2</sub> O	Ru	37	14898-67-0	3000034607
Umicore Grubbs Catalyst M32h SIPr		Ru	13	1416427-12-7	3000034577
Chiralyst Ru1254	<i>(S,S)</i> - <i>(-)</i> -7H <sub>11</sub> I	Ru	8	1021494-93-8	3000036107
Umicore Hoveyda-Grubbs Catalyst M71 SIPr		Ru	12	1212008-99-5	3000036112
Chiralyst Ru636	Ru[( <i>R,R</i> )-TsDPEN]( <i>p</i> -cymene)Cl	Ru	16	192139-92-7	3000036096
	[Ru(C <sub>5</sub> Me <sub>5</sub> )Cl <sub>2</sub> ] <sub>n</sub>	Ru	33	96503-27-4	3000036119
Ru HYDRIDO	Ru(PPh <sub>3</sub> ) <sub>3</sub> (CO)(H)Cl	Ru	11	16971-33-8	3000036113
	Ru( <i>nbd</i> )Cl <sub>2</sub>	Ru	38	48107-17-1	3000034555
Chiralyst Ru880	[ <i>(S,S)</i> -7H <sub>11</sub> ( <i>N</i> -AcCN)]BF <sub>4</sub>	Ru	12		3000036108
Umicore Grubbs Catalyst M11	Ru( <i>i</i> -Bu-phobane) <sub>2</sub> ( <i>Ind</i> )Cl <sub>2</sub>	Ru	13	894423-99-5	3000034563

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Chiralyst Ru914	Ru[(R)-Xyl-MeO-BIPHEP](OAc) <sub>2</sub>	Ru	11	916197-27-8	3000036110
Chiralyst Ru637	Ru[(S,S)-TsDPEN]( <i>p</i> -cymene)Cl	Ru	17	192139-90-5	3000036086
	Ru(EtCp) <sub>2</sub>	Ru	35	32992-96-4	3000036121
	Ru(PPh <sub>3</sub> ) <sub>3</sub> Cl <sub>2</sub>	Ru	10	15529-49-4	3000034553
	Ru(C <sub>6</sub> H <sub>8</sub> )(C <sub>6</sub> H <sub>6</sub> )	Ru	39	12215-07-5	3000034575
Chiralyst P406	[Ru(CH <sub>3</sub> CN) <sub>3</sub> (C <sub>7</sub> H <sub>11</sub> )]BF <sub>4</sub>	Ru	25	145271-55-2	3000034566
Chiralyst P379	[Ru(C <sub>7</sub> H <sub>11</sub> )(C <sub>7</sub> H <sub>14</sub> )]BF <sub>4</sub>	Ru	27	122260-79-1	3000036090
	Ru(C <sub>7</sub> H <sub>11</sub> ) <sub>2</sub>	Ru	35	85908-78-7	3000034569
Chiralyst P320	Ru(cod)(methylallyl) <sub>2</sub>	Ru	32	12289-94-0	3000034557
		Ru	34	857678-47-8	3000024334
	2)Me) <sub>2</sub> ]				
Chiralyst Ru762	Ru[(R)-2-Furyl-MeO-BIPHEP](OAc) <sub>2</sub>	Ru	13	952040-51-6	3000036103
Chiralyst Ru1267	[Ru(SL-W008-1)(C <sub>7</sub> H <sub>11</sub> )(N-AcCN)]BF <sub>4</sub>	Ru	8	1021494-98-3	3000036105
Chiralyst Ru1255	[Ru(SL-W001-1)(C <sub>7</sub> H <sub>11</sub> )(N-AcCN)]BF <sub>4</sub>	Ru	8	1021494-95-0	3000036099
Chiralyst Ru1251	Ru[(R)-3,5- <i>t</i> -Bu-MeO-BIPHEP](OAc) <sub>2</sub>	Ru	8	194497-14-8	3000036111
Chiralyst Ru843	Ru[(S)-BINAP](OAc) <sub>2</sub>	Ru	12	261948-85-0	3000036102
Chiralyst Ru842	Ru[(R)-BINAP](OAc) <sub>2</sub>	Ru	12	325146-81-4	3000036101
Chiralyst Ru803	Ru[(S)-MeO-BIPHEP](OAc) <sub>2</sub>	Ru	13	134527-17-6	3000036098
Chiralyst Ru802	Ru[(R)-MeO-BIPHEP](OAc) <sub>2</sub>	Ru	13	133519-04-7	3000036097
Chiralyst Ru1011		Ru	10	942042-52-6	3000036095
	<sub>7</sub> H <sub>11</sub> )]				

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Chiralyst Ru1012	$\eta^7\text{H}_{11}\text{I}$	Ru	10	942042-53-7	3000036093
Chiralyst Ru928	$[\text{RuCl}(\text{benzene})(\text{S})\text{-BINAP}]\text{Cl}$	Ru	12	126251-92-1	3000036092
Chiralyst Ru930	$[\text{RuCl}(\rho\text{-cymene})(\text{S})\text{-BINAP}]\text{Cl}$	Ru	11	130004-33-0	3000036085
	$\text{Ru}(\text{cod})(\text{C}_5\text{Me}_5)\text{Cl}$	Ru	27	92390-26-6	3000036118
	$\text{Ru}_3(\text{CO})_{12}$	Ru	47	15243-33-1	3000036080
Chiralyst P327	$\text{Ru}(\text{cod})(\text{OAc})_2$	Ru	31	133519-03-6	3000036082
Chiralyst P889	$[\text{Ru}(\text{cod})(\text{CF}_3\text{CO}_2)_2]_2 \times n \text{H}_2\text{O}$	Ru	23	93582-31-1	3000034556
	$[\text{Ru}(\text{C}_6\text{Me}_6)\text{Cl}_2]_2$	Ru	30	67421-02-7	3000036114
Chiralyst P500	$[\text{Ru}(\text{C}_6\text{H}_6)\text{Cl}_2]_2$	Ru	40	37366-09-9	3000034568
Chiralyst P612	$[\text{Ru}(\rho\text{-cymene})\text{Cl}_2]_2$	Ru	33	52462-29-0	3000034558
Chiralyst P978	$[\text{Ru}(\rho\text{-cymene})\text{I}_2]_2$	Ru	21	90614-07-6	3000034560
	$[\text{Ru}(\text{acac})_3]$	Ru	25	14284-93-6	3000034554
	$\text{Ru}(\text{OAc})_3$ solution	Ru	5	55466-76-7	3000036129
Umicore Grubbs Catalyst M51		Ru	15	1031262-71-1	3000034567
Umicore Grubbs Catalyst M22	$[(\text{SI}(\text{Mes})\text{Ru}(\text{P}(\text{O}^i\text{Pr})_3)(\text{Ind})\text{Cl}_2)]$	Ru	12	1255536-61-8	3000036115
Umicore Grubbs Catalyst M20	$[(\text{SI}(\text{Mes})\text{Ru}(\text{PPh}_3)(\text{Ind})\text{Cl}_2)]$	Ru	11	340810-50-6	3000036116
Umicore Grubbs Catalyst M2	$(\text{SI}(\text{Mes})\text{Ru}(\text{PCy}_3)(\text{Ind})\text{Cl}_2)$	Ru	11	536724-67-1	3000034561
Umicore Hoveyda-Grubbs Catalyst M73 SIPr		Ru	12	1212009-05-6	3000034573
Umicore Hoveyda-Grubbs Catalyst M73		Ru	13	1025728-57-7	3000034574

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	$\frac{1}{2}$	Ru	35	52462-31-4	3000036124
	Ru(NO)(NO <sub>3</sub> ) <sub>3</sub> solution	Ru	10-11	34513-98-9	3000036270
	Ru(NO)(NO <sub>3</sub> ) <sub>3</sub>	Ru	31	34513-98-9	3000034608
	RuO <sub>2</sub> x n H <sub>2</sub> O	Ru	60	32740-79-7	3000036267
	RuO <sub>2</sub>	Ru	76	12036-10-1	3000036266
Ru Black	Ru	Ru	96	7440-18-8	3000036262

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