

MARKETS AND PROFITABILITY

Market Insights: Metallocene LLDPE - 2019

November 2019



This Report was prepared by Nexant, Inc. ("Nexant"). Except where specifically stated otherwise in this Report, the information contained herein is prepared on the basis of information that is publicly available, and contains no confidential third party technical information to the best knowledge of Nexant. Aforesaid information has not been independently verified or otherwise examined to determine its accuracy, completeness or financial feasibility. Neither Nexant, Subscriber nor any person acting on behalf of either assumes any liabilities with respect to the use of or for damages resulting from the use of any information contained in this Report. Nexant does not represent or warrant that any assumed conditions will come to pass.

The Report is submitted on the understanding that the Subscriber will maintain the contents confidential except for the Subscriber's internal use. The Report should not be reproduced, distributed or used without first obtaining prior written consent by Nexant. Each Subscriber agrees to use reasonable effort to protect the confidential nature of the Report.

Copyright © by Nexant Inc. 2019. All rights reserved.



Contents

1	Executive Summary	1
1.1	Overview	1
1.2	Key End-Use Markets for mLLDPE.....	1
1.3	Global Market Overview	2
1.4	Market Drivers	7
1.5	Market Restraints	7
1.6	Competitive Landscape.....	8
1.7	Pricing Analysis and Trends.....	10
1.8	Delivered Cost Competitiveness	11
1.9	Market Summary.....	12
2	Introduction.....	14
2.1	Overview	14
2.2	Key End-Use Markets for Metallocene LLDPE	16
2.2.1	Film.....	16
2.2.2	Blow Moulding	20
2.2.3	Injection Moulding	20
2.2.4	Rotomoulding	21
2.2.5	Extrusion Coating	21
2.2.6	Other Extrusion	21
3	Market Outlook	22
3.1	Global	22
3.1.1	Market Overview	22
3.1.2	Market Drivers	27
3.1.3	Market Restraints	28
3.1.4	Competitive Landscape.....	28
3.1.5	Pricing Analysis and Trends.....	42
3.2	Asia Pacific (Excluding China)	43
3.2.1	Market Overview	43
3.2.2	Market Drivers	45
3.2.3	Market Restraints	47
3.2.4	Competitive Landscape.....	47
3.2.5	Pricing Analysis and Trends.....	49
3.3	China	50
3.3.1	Market Overview	50
3.3.2	Market Drivers	52
3.3.3	Market Restraints	52
3.3.4	Competitive Landscape.....	53
3.3.5	Pricing Analysis and Trends.....	54
3.4	North America	55
3.4.1	Market Overview	55
3.4.2	Market Drivers	56
3.4.3	Market Restraints	58



3.4.4	Competitive Landscape.....	58
3.4.5	Pricing Analysis and Trends.....	60
3.5	South America.....	61
3.5.1	Market Overview	61
3.5.2	Market Drivers	62
3.5.3	Market Restraints	62
3.5.4	Competitive Landscape.....	62
3.6	Western Europe	64
3.6.1	Market Overview	64
3.6.2	Market Drivers	65
3.6.3	Market Restraints	67
3.6.4	Competitive Landscape.....	67
3.6.5	Pricing Analysis and Trends.....	69
3.7	Central Europe	70
3.7.1	Market Overview	70
3.7.2	Market Drivers	71
3.7.3	Market Restraints	71
3.7.4	Competitive Landscape.....	71
3.8	Eastern Europe	72
3.8.1	Market Overview	72
3.8.2	Market Drivers	74
3.8.3	Market Restraints	74
3.8.4	Competitive Landscape.....	74
3.9	Middle East.....	75
3.9.1	Market Overview	75
3.9.2	Market Drivers	76
3.9.3	Market Restraints	76
3.9.4	Competitive Landscape.....	76
3.10	Africa	78
3.10.1	Market Overview	78
3.10.2	Market Drivers	79
3.10.3	Market Restraints	79
3.10.4	Competitive Landscape.....	79
4	Cost Competitiveness	81
4.1	Cost Structure and Assumptions.....	81
4.1.1	Variable Costs	82
4.1.2	Direct Fixed Costs.....	83
4.1.3	Allocated Fixed Costs	84
4.1.4	Other Considerations	84
4.2	Delivered Cost Assumptions	85
4.2.1	Packaging.....	85
4.2.2	Shipping Costs	85
4.2.3	85	
4.2.4	Tariffs	86
4.3	Delivered Cost Competitiveness	86



5	Market Summary	88
---	----------------------	----

Appendices

No table of contents entries found.

Figures

Figure 1	Global Metallocene LLDPE Demand Penetration, 2019-e.....	2
Figure 2	Global Metallocene LLDPE Demand by End Use, 2019-e.....	3
Figure 3	Metallocene LLDPE Demand by Region, 2019-e	4
Figure 4	Metallocene LLDPE Demand Growth 2019-2025	5
Figure 5	Global mLLDPE Consumption per Capita	5
Figure 6	Metallocene LLDPE Penetration of Total Global LLDPE Consumption	6
Figure 7	Global Single Site/Metallocene LLDPE Demand Penetration by Region, 2019-e	6
Figure 8	Global Metallocene-Capable LLDPE Capacity by Region, 2019	8
Figure 9	Global Metallocene LLDPE Capacity Share by Region, 2019	9
Figure 10	Global Metallocene LLDPE Capacity Share by Marketer, 2019	10
Figure 11	Metallocene LLDPE Pricing by Key Region	10
Figure 12	Metallocene LLPDPE Delivered Cost to China	11
Figure 13	Porter 5 Force Analysis of mLLDPE Production	12
Figure 14	Examples of Ziegler-Natta and Metallocene Catalysts	15
Figure 15	Examples of Multilayer Agricultural Films Containing mLLDPE ⁰	16
Figure 16	Global Metallocene LLDPE Demand Penetration, 2019-e.....	22
Figure 17	Global Metallocene LLDPE Demand by End Use, 2019-e.....	22
Figure 18	Metallocene LLDPE Demand by Region, 2019-e	24
Figure 19	Metallocene LLDPE Demand Growth 2019-2025	24
Figure 20	Global mLLDPE Consumption per Capita	25
Figure 21	Metallocene LLDPE Penetration of Total Global LLDPE Consumption	25
Figure 22	Global Single Site/Metallocene LLDPE Demand Penetration by Region, 2019-e	26
Figure 23	Global Single Site/Metallocene LLDPE Demand Penetration by Region, 2025	26
Figure 24	Evolution of Metallocene LLDPE Film Demand	27
Figure 25	Global Metallocene-Capable LLDPE Capacity by Region, 2019	29
Figure 26	Global Metallocene LLDPE Capacity Share by Region, 2019	30
Figure 27	Global Metallocene LLDPE Capacity Share by Marketer, 2019	30
Figure 28	ENABLE™ Properties Comparison	31
Figure 29	Metallocene LLDPE Pricing by Key Region	42
Figure 30	Asia Pacific (Excluding China) Metallocene LLDPE Demand, 2019-e	44
Figure 31	Asia Pacific (Excluding China) LLDPE Demand by Material, 2019-e	44
Figure 32	Metallocene LLDPE Penetration of Total Asia Pacific (Excluding China) LLDPE Consumption	45
Figure 33	Asia Pacific (Excluding China) Metallocene LLDPE Pricing	49
Figure 34	China LLDPE Demand by Material, 2019-e	50
Figure 35	Metallocene LLDPE Penetration of China LLDPE Consumption	51
Figure 36	China Metallocene LLDPE Pricing	54
Figure 37	North America LLDPE Demand by Material, 2019-e	55
Figure 38	Metallocene LLDPE Penetration of North American LLDPE Consumption	56
Figure 39	North America Metallocene LLDPE Pricing.....	60



Figure 40	South America LLDPE Demand by Material, 2019-e	61
Figure 41	Metallocene LLDPE Penetration of South American LLDPE Consumption.....	62
Figure 42	Western Europe LLDPE Demand by Material, 2019-e	64
Figure 43	Metallocene LLDPE Penetration of West Europe LLDPE Consumption	65
Figure 44	Western Europe Metallocene LLDPE Pricing.....	69
Figure 45	Central Europe LLDPE Demand by Material, 2019-e	70
Figure 46	Metallocene LLDPE Penetration of Central Europe LLDPE Consumption	71
Figure 47	Eastern Europe LLDPE Demand by Material, 2019-e	72
Figure 48	Metallocene LLDPE Penetration of Eastern Europe LLDPE Consumption	73
Figure 49	Middle East LLDPE Demand by Material, 2019-e.....	75
Figure 50	Metallocene LLDPE Penetration of Middle East LLDPE Consumption	76
Figure 51	Africa LLDPE Demand by Material, 2019-e	78
Figure 52	Metallocene LLDPE Penetration of African LLDPE Consumption	79
Figure 53	Components of Delivered Cost to Market	81
Figure 54	Metallocene LLPDPE Delivered Cost to China	87
Figure 55	Porter 5 Force Analysis of mLLDPE Production	88



Tables

Table 1	Global Metallocene LLDPE Consumption by Region.....	4
Table 2	Example of Food Packaging 9 Layer Film Composition	17
Table 3	Exceed™ In Food and Other Packaging Applications	18
Table 4	Global Metallocene LLDPE Consumption by Region.....	23
Table 5	ExxonMobil Metallocene LLDPE Product Offering.....	32
Table 6	Dow Chemical Metallocene LLDPE Product Offering	34
Table 7	NOVA Chemicals Metallocene LLDPE Product Offering	35
Table 8	Chevron Phillips Chemical Metallocene LLDPE Product Offering	36
Table 9	INEOS Metallocene LLDPE Product Offering	37
Table 10	Mitsui Chemicals Metallocene LLDPE Product Offering	39
Table 11	Asia Pacific (Excluding China) Metallocene LLDPE Consumption by End Use	43
Table 12	Asia Pacific (Excluding China) Metallocene LLDPE Consumption by Country.....	43
Table 13	Asia Pacific Metallocene LLDPE Consumption.....	44
Table 14	Asia Pacific (Excluding China) Single Site/Metallocene LLDPE Capable Capacity.....	48
Table 15	China Metallocene LLDPE Consumption by End Use	50
Table 16	China Single Site/Metallocene LLDPE Capable Capacity	53
Table 17	North America Metallocene LLDPE Consumption by End Use.....	55
Table 18	North America Metallocene LLDPE Consumption by Country	55
Table 19	North America Single Site/Metallocene LLDPE Capable Capacity.....	59
Table 20	South America Metallocene LLDPE Consumption by End Use	61
Table 21	South America Metallocene LLDPE Consumption by Country	61
Table 22	South America Single Site/Metallocene LLDPE Capable Capacity	63
Table 23	Western Europe Metallocene LLDPE Consumption by End Use.....	64
Table 24	Stretch Film Segments	65
Table 25	Western Europe Single Site/Metallocene LLDPE Capable Capacity.....	68
Table 26	Central Europe Metallocene LLDPE Consumption by End Use	70
Table 27	Eastern Europe Metallocene LLDPE Consumption by End Use.....	72
Table 28	Eastern Europe Metallocene LLDPE Consumption by Country.....	72
Table 29	Eastern Europe Single Site/Metallocene LLDPE Capable Capacity.....	74
Table 30	Middle East Metallocene LLDPE Consumption by End Use	75
Table 31	Middle East Metallocene LLDPE Demand by Material, 2019-e	75
Table 32	Middle East Single Site/Metallocene LLDPE Capable Capacity	77
Table 33	Africa Metallocene LLDPE Consumption by End Use	78
Table 34	Africa Metallocene LLDPE Consumption by Country.....	78
Table 35	Africa Single Site/Metallocene LLDPE Capable Capacity	80
Table 36	Feedstock Price Assumptions	82
Table 37	Utility Rates	83
Table 38	Wage Assumptions.....	83
Table 39	Capital Cost Location Factors	84
Table 40	Packaging and Freight Costs, Delivered to China	85
Table 41	Tariffs Due on Imports into China.....	86