

Table 1 - Reconciliation of Segment Information to Consolidated Financial Information

Millions of dollars	2018					2019			
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Total
Sales and other operating revenues:									
Olefins & Polyolefins - Americas	\$ 2,646	\$ 2,542	\$ 2,770	\$ 2,450	\$ 10,408	\$ 2,111	\$ 2,114	\$ 2,137	\$ 6,362
Olefins & Polyolefins - EAI	2,960	2,900	2,643	2,335	10,838	2,535	2,505	2,309	7,349
Intermediates & Derivatives	2,343	2,584	2,509	2,152	9,588	1,894	2,062	2,046	6,002
Advanced Polymer Solutions	838	833	1,039	1,314	4,024	1,339	1,258	1,186	3,783
Refining	2,257	2,569	2,499	1,832	9,157	1,882	2,180	2,134	6,196
Technology	115	182	171	115	583	141	173	146	460
Other/Eliminations	(1,392)	(1,404)	(1,476)	(1,322)	(5,594)	(1,124)	(1,244)	(1,236)	(3,604)
Continuing operations	<u>\$ 9,767</u>	<u>\$ 10,206</u>	<u>\$ 10,155</u>	<u>\$ 8,876</u>	<u>\$ 39,004</u>	<u>\$ 8,778</u>	<u>\$ 9,048</u>	<u>\$ 8,722</u>	<u>\$ 26,548</u>
Operating income (loss):									
Olefins & Polyolefins - Americas	\$ 629	\$ 543	\$ 572	\$ 507	\$ 2,251	\$ 384	\$ 504	\$ 524	\$ 1,412
Olefins & Polyolefins - EAI	281	245	141	15	682	186	226	202	614
Intermediates & Derivatives	408	569	431	308	1,716	314	372	314	1,000
Advanced Polymer Solutions	114	112	48	55	329	119	91	67	277
Refining	15	58	38	(139)	(28)	(59)	(110)	(52)	(221)
Technology	46	100	88	50	284	73	96	73	242
Other	1	(1)	(1)	(2)	(3)	—	(2)	(4)	(6)
Continuing operations	<u>\$ 1,494</u>	<u>\$ 1,626</u>	<u>\$ 1,317</u>	<u>\$ 794</u>	<u>\$ 5,231</u>	<u>\$ 1,017</u>	<u>\$ 1,177</u>	<u>\$ 1,124</u>	<u>\$ 3,318</u>
Depreciation and amortization:									
Olefins & Polyolefins - Americas	\$ 106	\$ 109	\$ 111	\$ 116	\$ 442	\$ 115	\$ 117	\$ 118	\$ 350
Olefins & Polyolefins - EAI	56	52	50	50	208	53	52	51	156
Intermediates & Derivatives	73	72	71	71	287	72	74	75	221
Advanced Polymer Solutions	8	9	22	30	69	29	30	32	91
Refining	46	46	45	55	192	43	44	41	128
Technology	10	12	10	11	43	10	11	10	31
Continuing operations	<u>\$ 299</u>	<u>\$ 300</u>	<u>\$ 309</u>	<u>\$ 333</u>	<u>\$ 1,241</u>	<u>\$ 322</u>	<u>\$ 328</u>	<u>\$ 327</u>	<u>\$ 977</u>
EBITDA: ^(a)									
Olefins & Polyolefins - Americas	\$ 756	\$ 671	\$ 704	\$ 631	\$ 2,762	\$ 516	\$ 635	\$ 653	\$ 1,804
Olefins & Polyolefins - EAI	419	355	262	127	1,163	296	331	291	918
Intermediates & Derivatives	486	642	504	379	2,011	390	448	390	1,228
Advanced Polymer Solutions	123	121	70	86	400	148	120	102	370
Refining	63	104	84	(84)	167	(15)	(66)	(6)	(87)
Technology	56	113	98	61	328	83	107	83	273
Other	10	4	10	12	36	10	4	—	14
Continuing operations	<u>\$ 1,913</u>	<u>\$ 2,010</u>	<u>\$ 1,732</u>	<u>\$ 1,212</u>	<u>\$ 6,867</u>	<u>\$ 1,428</u>	<u>\$ 1,579</u>	<u>\$ 1,513</u>	<u>\$ 4,520</u>
Capital, turnarounds and IT deferred spending:									
Olefins & Polyolefins - Americas	\$ 242	\$ 311	\$ 247	\$ 279	\$ 1,079	\$ 276	\$ 257	\$ 295	\$ 828
Olefins & Polyolefins - EAI	58	40	58	92	248	64	39	45	148
Intermediates & Derivatives	68	80	100	161	409	179	238	317	734
Advanced Polymer Solutions	15	10	16	21	62	16	11	14	41
Refining	36	45	47	122	250	43	53	41	137
Technology	8	9	12	19	48	17	17	26	60
Other	2	1	2	4	9	4	7	4	15
Continuing operations	<u>\$ 429</u>	<u>\$ 496</u>	<u>\$ 482</u>	<u>\$ 698</u>	<u>\$ 2,105</u>	<u>\$ 599</u>	<u>\$ 622</u>	<u>\$ 742</u>	<u>\$ 1,963</u>

(a) See Table 7 for the reconciliation of net income to EBITDA.

Table 2 - Selected Segment Operating Information

	2018					2019			
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Total
Olefins and Polyolefins - Americas									
<i>Volumes (kilotons)</i>									
Ethylene produced	1,120	1,126	1,126	1,126	4,498	1,096	1,110	944	3,150
Propylene produced	280	272	339	371	1,262	332	308	367	1,007
Polyethylene sold	664	654	657	630	2,605	637	634	673	1,944
Polypropylene sold	229	231	224	205	889	219	232	247	698
<i>Benchmark Market Prices</i>									
West Texas Intermediate crude oil (USD per barrel)	62.94	67.99	69.71	59.09	64.93	54.90	59.80	56.40	57.03
Light Louisiana Sweet ("LLS") crude oil (USD per barrel)	65.84	73.14	74.27	66.57	69.96	62.38	66.94	60.64	63.31
Houston Ship Channel natural gas (USD per million BTUs)	3.12	2.88	2.97	3.84	3.20	2.86	2.46	2.26	2.53
U.S. weighted average cost of ethylene production (USD per metric ton)	326	341	455	381	376	362	262	209	278
U.S. ethylene (USD per metric ton)	669	582	663	660	644	614	535	584	577
U.S. polyethylene [high density] (USD per metric ton)	1,382	1,389	1,367	1,345	1,371	1,168	1,235	1,146	1,183
U.S. propylene (USD per metric ton)	1,168	1,146	1,323	1,117	1,189	838	823	845	835
U.S. polypropylene [homopolymer] (USD per metric ton)	1,609	1,639	1,830	1,624	1,676	1,323	1,308	1,308	1,313
Olefins and Polyolefins - Europe, Asia, International									
<i>Volumes (kilotons)</i>									
Ethylene produced	461	467	414	301	1,643	408	456	448	1,312
Propylene produced	276	287	247	176	986	239	274	271	784
Polyethylene sold	656	658	594	576	2,484	678	562	619	1,859
Polypropylene sold	763	727	659	647	2,796	752	729	718	2,199
<i>Benchmark Market Prices (€ per metric ton)</i>									
Western Europe weighted average cost of ethylene production	493	637	649	473	563	466	493	433	464
Western Europe ethylene	1,064	1,101	1,135	1,102	1,100	995	1,065	993	1,018
Western Europe polyethylene [high density]	1,239	1,216	1,220	1,189	1,216	1,126	1,191	1,125	1,147
Western Europe propylene	923	970	1,041	1,030	991	933	983	893	937
Western Europe polypropylene [homopolymer]	1,308	1,297	1,314	1,280	1,300	1,222	1,268	1,185	1,225
Intermediates and Derivatives									
<i>Volumes Sold (kilotons)</i>									
Propylene oxide and derivatives	362	385	367	334	1,448	363	343	353	1,059
Intermediate Chemicals:									
Ethylene oxide and derivatives	127	139	146	127	539	120	133	133	386
Styrene monomer	416	449	419	423	1,707	372	392	408	1,172
Acetyls	243	373	391	357	1,364	296	358	308	962
Oxyfuels and Related Products:									
TBA intermediates	187	183	166	140	676	160	177	160	497
MTBE/ETBE	713	826	827	749	3,115	677	819	884	2,380
<i>Benchmark Market Margins (USD per metric ton)</i>									
MTBE - Northwest Europe	205	224	189	161	195	126	295	374	265
Advanced Polymer Solutions									
<i>Volumes Sold (kilotons)</i>									
Compounding & Solutions	289	280	360	476	1,405	503	475	452	1,430
Advanced Polymers	110	123	111	103	447	104	104	107	315
Refining									
<i>Volumes (thousands of barrels per day)</i>									
Heavy crude oil processing rates	252	259	232	184	231	259	261	264	261
<i>Benchmark Market Margins</i>									
Light crude oil - 2-1-1	12.62	15.03	13.15	8.33	12.35	9.92	14.12	14.11	12.73
Light crude oil - Maya differential	8.10	10.91	8.28	2.56	7.50	3.63	4.87	4.02	4.16

Source: LYB and third party consultants

Note: Benchmark market prices for U.S. and Western Europe polyethylene and polypropylene reflect discounted prices. Volumes presented represent third party sales of selected key products.

Table 3 - Unaudited Income Statement Information

Millions of dollars	2018					2019			
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Total
Sales and other operating revenues	\$ 9,767	\$ 10,206	\$ 10,155	\$ 8,876	\$ 39,004	\$ 8,778	\$ 9,048	\$ 8,722	\$ 26,548
Cost of sales	8,012	8,290	8,499	7,728	32,529	7,446	7,542	7,269	22,257
Selling, general and administrative expenses ^(a)	233	261	309	326	1,129	287	302	303	892
Research and development expenses	28	29	30	28	115	28	27	26	81
Operating income	1,494	1,626	1,317	794	5,231	1,017	1,177	1,124	3,318
Income from equity investments	96	68	89	36	289	64	64	51	179
Interest expense, net	(80)	(76)	(76)	(83)	(315)	(86)	(76)	(81)	(243)
Other income, net ^(b)	24	16	17	49	106	25	10	11	46
Income from continuing operations before income taxes ^(b)	1,534	1,634	1,347	796	5,311	1,020	1,175	1,105	3,300
Provision for (benefit from) income taxes ^(c)	303	(21)	232	99	613	203	169	136	508
Income from continuing operations ^(d)	1,231	1,655	1,115	697	4,698	817	1,006	969	2,792
Loss from discontinued operations, net of tax	—	(1)	(2)	(5)	(8)	—	(3)	(4)	(7)
Net income ^(d)	1,231	1,654	1,113	692	4,690	817	1,003	965	2,785
Dividends on A. Schulman Special Stock	—	—	—	(2)	(2)	(2)	(1)	(2)	(5)
Net income attributable to Company shareholders ^(d)	\$ 1,231	\$ 1,654	\$ 1,113	\$ 690	\$ 4,688	\$ 815	\$ 1,002	\$ 963	\$ 2,780

(a) The third quarter of 2018 includes pre-tax charges of \$53 million of acquisition-related transaction and integration costs associated with our acquisition of A. Schulman. The fourth quarter of 2018, first quarter of 2019, second quarter of 2019 and third quarter of 2019 include integration costs of \$20 million, \$16 million, \$19 million and \$40 million, respectively.

(b) Includes a pre-tax gain of \$36 million in the fourth quarter of 2018 on the sale of our carbon black subsidiary in France.

(c) The second quarter of 2018 includes a \$346 million benefit related to \$288 million of previously unrecognized tax benefits and the release of \$58 million of associated accrued interest.

(d) The third quarter of 2018, fourth quarter of 2018, first quarter of 2019, second quarter of 2019 and third quarter of 2019 include after-tax charges of \$42 million, \$15 million, \$12 million, \$15 million and \$33 million, respectively, for acquisition-related transaction and integration costs associated with our acquisition of A. Schulman.

Table 4 - Charges (Benefits) Included in Net Income

<u>Millions of dollars (except share data)</u>	2018					2019			
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Total
Pretax charges (benefits):									
Tax benefit from release of previously unrecognized tax benefits and associated accrued interest	\$ —	\$ (346)	\$ —	\$ —	\$ (346)	\$ —	\$ —	\$ (85)	\$ (85)
Acquisition-related costs - A. Schulman	—	—	53	20	73	16	19	43	78
Total pretax charges (benefits)	—	(346)	53	20	(273)	16	19	(42)	(7)
Benefit from income taxes related to these items	—	—	(11)	(5)	(16)	(4)	(4)	(10)	(18)
After-tax effect of net charges (benefits)	\$ —	\$ (346)	\$ 42	\$ 15	\$ (289)	\$ 12	\$ 15	\$ (52)	\$ (25)
Effect on diluted earnings per share	\$ —	\$ 0.88	\$ (0.11)	\$ (0.04)	\$ 0.74	\$ (0.03)	\$ (0.04)	\$ 0.15	\$ (0.07)

Table 5 - Unaudited Cash Flow Information

<u>Millions of dollars</u>	2018					2019			
	<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Q4</u>	<u>Total</u>	<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Total</u>
Net cash provided by operating activities	\$ 1,006	\$ 1,727	\$ 1,441	\$ 1,297	\$ 5,471	\$ 657	\$ 1,186	\$ 1,876	\$ 3,719
Net cash used in investing activities ^(a)	(189)	(400)	(2,312)	(658)	(3,559)	(178)	(278)	(754)	(1,210)
Net cash used in financing activities	(520)	(745)	(977)	(766)	(3,008)	(521)	39	(1,900)	(2,382)

(a) The third quarter of 2018 includes a cash outflow of \$1,776 million for the acquisition of A. Schulman, net of cash acquired and a liability deemed as a component of the purchase price.

Table 6 - Unaudited Balance Sheet Information

<u>Millions of dollars</u>	<u>March 31, 2018</u>	<u>June 30, 2018</u>	<u>September 30, 2018</u>	<u>December 31, 2018</u>	<u>March 31, 2019</u>	<u>June 30, 2019</u>	<u>September 30, 2019</u>
Cash and cash equivalents	\$ 1,840	\$ 2,384	\$ 521	\$ 332	\$ 339	\$ 1,279	\$ 476
Restricted cash	—	2	11	69	19	29	36
Short-term investments	1,042	933	944	892	423	52	53
Accounts receivable, net	3,859	3,889	4,087	3,503	3,680	3,758	3,469
Inventories	4,257	4,096	4,596	4,515	4,496	4,685	4,446
Prepaid expenses and other current assets	1,070	1,045	1,224	1,255	1,329	1,285	1,150
Total current assets	<u>12,068</u>	<u>12,349</u>	<u>11,383</u>	<u>10,566</u>	<u>10,286</u>	<u>11,088</u>	<u>9,630</u>
Operating lease assets ^(a)	—	—	—	—	1,534	1,560	1,510
Property, plant and equipment, net	11,249	11,310	12,022	12,477	12,797	13,285	13,669
Investments and long-term receivables:							
Investment in PO joint ventures	424	429	440	469	464	489	486
Equity investments	1,767	1,599	1,688	1,611	1,650	1,599	1,609
Other investments and long-term receivables	22	22	20	23	23	24	24
Goodwill	578	562	1,819	1,814	1,803	1,848	1,848
Intangible assets, net	567	528	982	965	945	892	841
Other assets	221	224	342	353	387	386	497
Total assets	<u>\$ 26,896</u>	<u>\$ 27,023</u>	<u>\$ 28,696</u>	<u>\$ 28,278</u>	<u>\$ 29,889</u>	<u>\$ 31,171</u>	<u>\$ 30,114</u>
Current maturities of long-term debt	\$ 5	\$ 974	\$ 984	\$ 5	\$ 5	\$ 4	\$ 4
Short-term debt	77	76	214	885	2,377	2,812	2,438
Accounts payable	3,010	3,095	3,555	3,087	3,187	3,115	3,201
Accrued liabilities ^(a)	1,506	1,306	1,489	1,536	1,443	1,607	1,745
Total current liabilities	<u>4,598</u>	<u>5,451</u>	<u>6,242</u>	<u>5,513</u>	<u>7,012</u>	<u>7,538</u>	<u>7,388</u>
Long-term debt	8,531	7,490	7,471	8,497	7,522	7,586	9,628
Operating lease liabilities ^(a)	—	—	—	—	1,282	1,304	1,257
Other liabilities ^(a)	2,350	1,805	2,017	1,897	1,830	1,876	1,801
Deferred income taxes	1,688	1,674	1,774	1,975	1,967	2,008	2,018
Commitments and contingencies							
Redeemable non-controlling interests	—	—	123	116	116	116	116
Stockholders' equity	9,728	10,602	11,044	10,257	10,138	10,721	7,888
Non-controlling interests	1	1	25	23	22	22	18
Total liabilities, redeemable non-controlling interests and equity	<u>\$ 26,896</u>	<u>\$ 27,023</u>	<u>\$ 28,696</u>	<u>\$ 28,278</u>	<u>\$ 29,889</u>	<u>\$ 31,171</u>	<u>\$ 30,114</u>

(a) In the first quarter of 2019, we adopted ASC 842, *Leases* and related amendments using the modified retrospective method and recognized Operating lease assets of \$1,533 million and Operating lease liabilities of \$1,553 million. We also reduced Accrued liabilities by \$2 million and Other liabilities by \$18 million. Comparative financial information has not been restated and continues to be reported under the accounting standards in effect for those periods.

Non-GAAP Reconciliations

Table 7 - Reconciliation of Net Income to EBITDA

Millions of dollars	Three Months Ended				Year Ended 2018	Three Months Ended			Nine Months Ended		Last Twelve Months
	March 31, 2018	June 30, 2018	September 30, 2018	December 31, 2018		March 31, 2019	June 30, 2019	September 30, 2019	September 30, 2018	September 30, 2019	September 30, 2019
Net income ^{(a)(b)}	\$ 1,231	\$ 1,654	\$ 1,113	\$ 692	\$ 4,690	\$ 817	\$ 1,003	\$ 965	\$ 3,998	\$ 2,785	\$ 3,477
Loss from discontinued operations, net of tax	—	1	2	5	8	—	3	4	3	7	12
Income from continuing operations ^{(a)(b)}	1,231	1,655	1,115	697	4,698	817	1,006	969	4,001	2,792	3,489
Provision for (benefit from) income taxes ^(b)	303	(21)	232	99	613	203	169	136	514	508	607
Depreciation and amortization	299	300	309	333	1,241	322	328	327	908	977	1,310
Interest expense, net	80	76	76	83	315	86	76	81	232	243	326
EBITDA ^(c)	<u>\$ 1,913</u>	<u>\$ 2,010</u>	<u>\$ 1,732</u>	<u>\$ 1,212</u>	<u>\$ 6,867</u>	<u>\$ 1,428</u>	<u>\$ 1,579</u>	<u>\$ 1,513</u>	<u>\$ 5,655</u>	<u>\$ 4,520</u>	<u>\$ 5,732</u>

Note: Last twelve months September 30, 2019 is calculated as year ended December 31, 2018 plus nine months ended September 30, 2019 and minus nine months ended September 30, 2018.

(a) The third quarter of 2018, fourth quarter of 2018, first quarter of 2019, second quarter of 2019 and third quarter of 2019 include after-tax charges of \$42 million, \$15 million, \$12 million, \$15 million and \$33 million respectively, for acquisition-related transaction and integration costs associated with our acquisition of A. Schulman.

(b) The second quarter of 2018 includes a \$346 million non-cash benefit from the release of unrecognized tax benefits and associated accrued interest.

(c) EBITDA for the third quarter of 2018, fourth quarter of 2018, first quarter of 2019, second quarter of 2019 and third quarter of 2019 include pre-tax charges of \$53 million, \$20 million, \$16 million, \$19 million and \$43 million respectively, for acquisition-related transaction and integration costs associated with our acquisition of A. Schulman.

Table 8 - EBITDA by Segment

<u>Millions of dollars</u>	Three Months Ended				
	September 30, 2018	December 31, 2018	March 31, 2019	June 30, 2019	September 30, 2019
EBITDA:					
Olefins & Polyolefins - Americas	\$ 704	\$ 631	\$ 516	\$ 635	\$ 653
Olefins & Polyolefins - EAI	262	127	296	331	291
Intermediates & Derivatives	504	379	390	448	390
Advanced Polymer Solutions	70	86	148	120	102
Refining	84	(84)	(15)	(66)	(6)
Technology	98	61	83	107	83
Other	10	12	10	4	—
Continuing Operations	<u>\$ 1,732</u>	<u>\$ 1,212</u>	<u>\$ 1,428</u>	<u>\$ 1,579</u>	<u>\$ 1,513</u>

Table 9 - Components of Cash and Liquid Investments

<u>Millions of dollars</u>	<u>June 30, 2019</u>	<u>September 30, 2019</u>
Cash and cash equivalents and restricted cash	\$ 1,308	\$ 512
Short-term investments	52	53
Repurchase agreements	541	518
Cash and liquid investments	<u>1,901</u>	<u>1,083</u>

Table 10 - Reconciliation of Free Operating Cash Flow to Net Cash Provided by Operating Activities

<u>Millions of dollars</u>	<u>Years Ended December 31,</u>				<u>Nine Months Ended</u>		<u>Last Twelve</u>
	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>September 30,</u> <u>2018</u>	<u>September 30,</u> <u>2019</u>	<u>Months</u> <u>September 30,</u> <u>2019</u>
Free operating cash flow	\$ 5,027	\$ 4,497	\$ 4,187	\$ 4,419	\$ 3,466	\$ 2,992	\$ 3,945
Add:							
Sustaining (maintenance and HSE) capital expenditures	815	1,109	1,019	1,052	708	727	1,071
Net cash provided by operating activities	<u>\$ 5,842</u>	<u>\$ 5,606</u>	<u>\$ 5,206</u>	<u>\$ 5,471</u>	<u>\$ 4,174</u>	<u>\$ 3,719</u>	<u>\$ 5,016</u>

Table 11 - Calculation of Free Cash Flow Yield

<u>Millions of Dollars (except share data)</u>	<u>Last Twelve Months September 30, 2019</u>
Net cash provided by operating activities	\$ 5,016
Less:	
Sustaining (maintenance and HSE) capital expenditures	<u>1,071</u>
Free operating cash flow	\$ 3,945
Market Capital:	
Common stock outstanding	333,407,876
Closing Share Price, end of period	<u>\$ 89.47</u>
Market Capital	\$ 29,830
Free Cash Flow Yield	<u><u>13.2%</u></u>