

January 3, 2018

## Graphite Electrodes

### Good times to continue...

Both HEG and Graphite India, domestic graphite electrode stocks, have seen a sharp run up on the bourses in the last few months. A sustained positive outlook on the global graphite electrode segment coupled with healthy realisations of both global and domestic manufacturers has driven the strong rally. Key triggers have been: 1) consolidation of graphite electrode market globally, 2) ~20% of the global graphite electrode capacity (ex-China) shutting down in the last three years, 3) increase in steel production through EAF route (outside China) coupled with an increase in global steel prices, 4) closure of steel capacity in China leading to a decline in exports of steel and graphite electrodes from the region.

#### Chinese crackdown on polluting industries has augured well...

In the last few years, China was a major exporter of lower grade graphite electrodes. In China, many small facilities are present, which perform one or two among all six processes required to manufacture graphite electrodes. During CY17, many such facilities were closed on account of environmental reasons thereby breaking the total chain of graphite electrode production. According to industry sources, the environmental crackdown has led to closure of ~30-50% of graphite electrode capacity in the region, auguring well for graphite electrodes prices.

#### Upcoming EAF capacity in China to create incremental demand...

As per industry sources, China has chalked out plans to set up a new EAF capacity of 30-50 million tonnes (MT) in the near future. As ~1.8-2 kg of graphite electrode is needed to produce a tonne of steel, the proposed EAF capacity may create incremental demand for graphite electrodes. Over a longer term horizon, rising production through EAF route (especially in China) bodes well for global graphite electrodes demand.

#### Introduction of electrode surcharge by steel/stainless steelmakers...

The sharp increase in graphite electrode prices has increased the cost dynamics for steel makers through the EAF route. A majority of steel and stainless steel makers have, thus, introduced electrode surcharge to offset the cost impact. The electrode surcharge essentially passes on the cost increase to its customers, thereby limiting the impact on margins. Global players like Outokumpu, AK Steel, Carpenter Technology Corporation have indicated the imposition of surcharge on electrodes.

#### Key risk

- A slowdown in steel production primarily through EAF route
- Volatility in raw material prices exerting pressure on margins
- Any decline in graphite electrode prices

#### New contracts at higher prices to boost performance; maintain BUY...

Traditionally, a large part of the order book of HEG and Graphite India is negotiated in January, February every year. Thus, benefits of increased electrodes prices have been limited in H1FY18 as the contracts were negotiated at old prices. However, going forward, the topline, EBITDA of these domestic players is likely to get a boost with the new contracts likely to be negotiated at higher prices. Thus, we believe there is more leg room in the stock price appreciation. On the back of an improved financial performance, we expect ROCE of both graphite electrodes players to improve substantially to ~44-50% by FY20E. We maintain our positive stance on both Graphite India and HEG. We have a **BUY** recommendation on both stocks.

#### Rating Matrix

Company	Target Price	CMP	Upside	Rating
Graphite India	1,000	840	19%	Buy
HEG	3200	2650	21%	Buy

Target period is 15-18 months

#### Price performance (%)

Return %	1M	3M	6M	12M
HEG	49.7	173.7	589.0	1,590.2
Graphite India	35.5	112.0	380.1	980.3

Source: ICICIdirect.com Research

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Rating matrix	
Rating	: Buy
Target	: ₹ 1000
Target Period	: 15-18 months
Potential Upside	: 19%

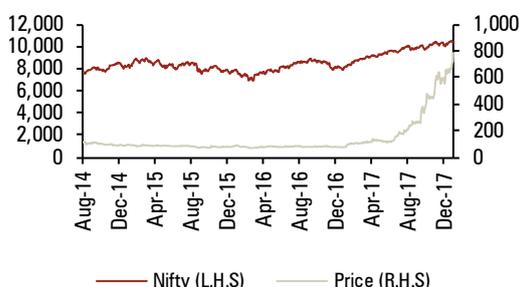
What's Changed?	
Target	Changed from ₹ 725 to ₹ 1000
EPS FY18E	Changed from ₹ 23.4 to ₹ 30.2
EPS FY19E	Changed from ₹ 46.0 to ₹ 52.7
EPS FY20E	Introduced at ₹ 68.7
Rating	Unchanged

Key financials				
(₹ Crore)	FY17	FY18E	FY19E	FY20E
Total Operating Income	1467.8	2792.8	4328.2	5049.8
EBITDA	39.6	804.4	1397.2	1762.2
Net Profit	70.5	590.2	1030.1	1342.1
EPS	3.6	30.2	52.7	68.7

Valuation summary				
	FY17	FY18E	FY19E	FY20E
PE (x)	232.9	27.8	15.9	12.2
Target PE (x)	277.3	33.1	19.0	14.6
EV/EBITDA (x)	404.3	19.4	10.7	8.2
P/BV (x)	8.8	7.6	5.9	4.7
RoNW (%)	3.8	27.3	37.3	38.6
RoCE (%)	-0.3	31.6	48.0	49.9

Stock data	
Particular	Amount
Market Capitalisation (₹ crore)	₹ 15583
Debt (FY17) (₹ crore)	₹ 259
Cash & Cash Equivalent (FY17) (₹ crore)	₹ 683
EV (₹ crore)	₹ 15159
52 week H/L	798 / 73
Equity capital (₹ crore)	₹ 39.1
Face value	₹ 2

### Stock Price Movement



## Graphite India (CAREVE)

₹ 840

### Capacity utilisation levels to remain healthy...

Graphite India (GIL) reported healthy utilisation levels of 95% and 89% for Q1FY18 and Q2FY18, respectively. On the back of healthy demand prospects, we expect GIL's consolidated capacity utilisation levels to improve from ~74% in FY17 to ~84% in FY18E. Going forward, for the consolidated operations, we model capacity utilisation of ~79% for both FY19E & FY20E. For standalone operations, the capacity utilisation is likely to improve from 79% in FY17 to 91% in FY18E. Going forward, for the standalone operations, we model capacity utilisation of 85% for both FY19E and FY20E. We tone down the capacity utilisation levels for FY19-20E factoring in the current scarce availability of needle coke (a key raw material). Any increase in availability of needle coke presents an upside risk in terms of capacity utilisation.

### Higher price contracts to augment operating margins...

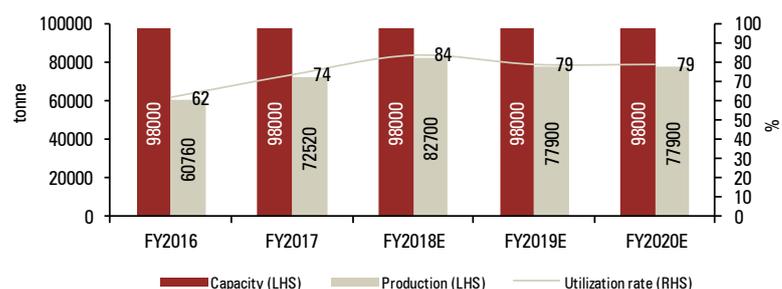
Healthy capacity utilisation coupled with benefits of higher price contracts are expected to fructify from H2FY18E. We expect Graphite India's consolidated EBITDA margins to increase to 28.8% in FY18E, 32.3% in FY19E and further to 34.9% in FY20E (FY17 EBITDA margin of 2.7%).

#### Exhibit 1: What's Changed?

(₹ Crore)	FY18E			FY19E			FY20E
	New	Old	% Change	New	Old	% Change	Introduced
Standalone Cap Utilisation	91.0	91.0	0 bps	85.0	80.0	500 bps	85.0
Consol Cap Utilisation	84.0	84.0	0 bps	79.0	75.0	400 bps	79.0
Revenue	2,793	2,524	10.6	4,328	3,812	13.6	5,049.8
EBITDA	804.4	631.4	27.4	1,397	1,249	11.9	1,762.2
PAT	590.2	457.8	28.9	1,030	899	14.6	1,342.1
EPS (₹)	30.2	23.4	29.1	52.7	46.0	14.6	68.7

Source: Company, ICICIdirect.com Research

#### Exhibit 2: Capacity & utilisation rates (consolidated basis)



Source: Company, ICICIdirect.com Research

### Performance to improve notably; maintain BUY...

Graphite India reported a strong H1FY18 performance driven by better capacity utilisation and increase in realisation. Going forward, we expect the company to capitalise on the favourable demand-supply scenario and further report robust earnings led higher realisations. We value the company at 10x FY20E EV/EBITDA thereby arriving at a target price of ₹ 1000. A robust balance sheet, net cash status and healthy cash-flow generation reiterate our positive stance on the company. We maintain our BUY recommendation on the stock.

## Financials (Consolidated)

Profit and loss statement				
	(₹ crore)			
(Year-end March)	FY17	FY18E	FY19E	FY20E
Total Operating Income	1467.8	2792.8	4328.2	5049.8
Growth (%)	-4.2	90.3	55.0	16.7
Raw Material Expenses	585.1	835.2	1,500.2	1,754.1
Employee Expenses	222.5	294.0	387.3	412.0
Other expenses	620.6	859.2	1,043.6	1,121.5
Total Operating Expenditure	1,428.2	1,988.4	2,931.0	3,287.5
EBITDA	39.6	804.4	1397.2	1762.2
Growth (%)	-70.6	1,933.8	73.7	26.1
Depreciation	46.4	54.6	55.8	28.1
Interest	7.9	7.0	3.5	0.5
Other Income	86.5	138.2	199.7	269.5
PBT	71.8	880.9	1,537.5	2,003.2
Exceptional Item	0.0	0.0	0.0	0.0
Total Tax	1.3	290.7	507.4	661.1
PAT	70.5	590.2	1030.1	1342.1
Growth (%)	-14.9	737.7	74.5	30.3
EPS (₹)	3.6	30.2	52.7	68.7

Source: Company, ICICIdirect.com Research

Cash flow statement				
	(₹ crore)			
(Year-end March)	FY17	FY18E	FY19E	FY20E
Profit after Tax	70.5	590.2	1,030.1	1,342.1
Add: Depreciation	46.4	54.6	55.8	28.1
(Inc)/dec in Current Asset	204.0	-84.0	-82.5	-898.5
Inc/(dec) in CL & Provision	11.6	151.0	35.2	679.9
Others	9.3	2.9	0.0	0.0
CF from operating activities	341.7	714.8	1,038.6	1,151.6
(Inc)/dec in Investments	-215.1	-50.0	-400.0	-400.0
(Inc)/dec in Fixed Assets	-89.1	-15.0	-25.0	-25.0
Others	0.0	0.0	0.0	0.0
CF from investing activities	-304.2	-65.0	-425.0	-425.0
Issue/(Buy back) of Equity	0.0	0.0	0.0	0.0
Inc/(dec) in loan funds	-43.1	-54.0	-175.0	-30.2
Dividend paid & div. tax	-47.0	-177.3	-433.2	-628.9
Inc/(dec) in Share Cap	83.0	-106.4	1.7	-1.7
Others	0.0	0.0	0.0	0.0
CF from financing activities	-7.1	-337.7	-606.5	-660.9
Net Cash flow	30.4	312.1	7.1	65.7
Opening Cash	21.0	51.5	363.6	370.8
Closing Cash	51.5	363.6	370.8	436.5

Source: Company, ICICIdirect.com Research

Balance sheet				
	(₹ crore)			
(Year-end March)	FY17	FY18E	FY19E	FY20E
<b>Liabilities</b>				
Equity Capital	39.1	39.1	39.1	39.1
Reserve and Surplus	1,818.5	2,125.1	2,723.7	3,435.2
Total Shareholders funds	1,857.6	2,164.1	2,762.8	3,474.3
Total Debt	259.2	205.2	30.2	0.0
Deferred Tax Liability	85.0	85.0	85.0	85.0
Minority Interest / Others	0.0	0.0	0.0	0.0
Total Liabilities	2,201.8	2,454.4	2,878.0	3,559.3
<b>Assets</b>				
Gross Block	1,539.1	1,583.1	1,608.1	1,633.1
Less: Acc Depreciation	871.7	926.3	982.2	1,010.3
Net Block	667.4	656.8	625.9	622.8
Capital WIP	32.1	3.1	3.1	3.1
Total Fixed Assets	699.5	659.8	629.0	625.8
Investments	631.0	681.0	1,081.0	1,481.0
Inventory	602.1	613.7	598.0	1,037.6
Debtors	441.5	454.6	622.9	1,106.8
Loans and Advances	11.7	95.8	50.8	50.8
Other Current Assets	103.5	78.5	53.5	28.5
Cash	51.5	363.6	370.8	436.5
Total Current Assets	1,210.1	1,606.2	1,695.9	2,660.2
Current Liabilities	316.0	409.1	398.7	691.7
Provisions	25.7	83.5	129.2	516.0
Current Liabilities & Prov	341.7	492.7	527.9	1,207.7
Net Current Assets	868.4	1,113.5	1,168.1	1,452.5
Others Assets	2.9	0.0	0.0	0.0
Application of Funds	2,201.8	2,454.4	2,878.0	3,559.3

Source: Company, ICICIdirect.com Research

Key ratios				
(Year-end March)	FY17	FY18E	FY19E	FY20E
<b>Per share data (₹)</b>				
EPS	3.6	30.2	52.7	68.7
Cash EPS	6.0	33.0	55.6	70.1
BV	95.1	110.8	141.4	177.8
DPS	2.0	7.6	18.5	26.8
Cash Per Share	2.6	18.6	19.0	22.3
<b>Operating Ratios (%)</b>				
EBITDA Margin	2.7	28.8	32.3	34.9
PBT / Total Operating income	4.9	31.5	35.5	39.7
PAT Margin	4.8	21.1	23.8	26.6
Inventory days	149.7	135.0	120.0	75.0
Debtor days	109.8	100.0	125.0	80.0
Creditor days	78.6	90.0	80.0	50.0
<b>Return Ratios (%)</b>				
RoE	3.8	27.3	37.3	38.6
RoCE	-0.3	31.6	48.0	49.9
RoIC	-0.3	37.4	55.4	57.1
<b>Valuation Ratios (x)</b>				
P/E	232.9	27.8	15.9	12.2
EV / EBITDA	404.3	19.4	10.7	8.2
EV / Net Sales	10.9	5.6	3.5	2.9
Market Cap / Sales	11.2	5.9	3.8	3.3
Price to Book Value	8.8	7.6	5.9	4.7
<b>Solvency Ratios</b>				
Debt/EBITDA	6.6	0.3	0.0	0.0
Debt / Equity	0.1	0.1	0.0	0.0
Current Ratio	3.5	3.3	3.2	2.2
Quick Ratio	1.8	2.0	2.1	1.3

Source: Company, ICICIdirect.com Research

### Rating matrix

Rating	: Buy
Target	: ₹ 3200
Target Period	: 15- 18 months
Potential Upside	: 21%

### What's changed?

Target	: Changed from ₹ 2250 to ₹ 3200
EPS FY18E	: Changed from ₹ 76.9 to ₹ 116.0
EPS FY19E	: Changed from ₹ 152.4 to ₹ 196.1
EPS FY20E	: Introduced at ₹ 206.4
Rating	: Unchanged

### Key financials

	FY17	FY18E	FY19E	FY20E
Net Sales	860.0	2,027.4	3,468.0	4,051.7
EBITDA	80.6	779.4	1,265.4	1,382.8
Adjusted PAT	(50.1)	463.7	783.5	824.8
Adjusted EPS (₹)	(12.5)	116.0	196.1	206.4

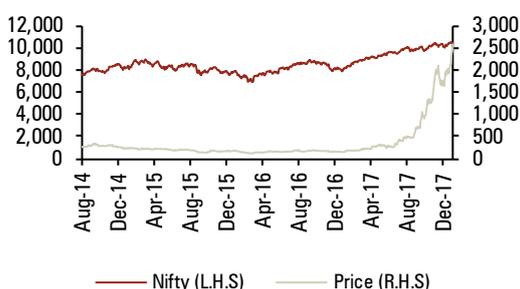
### Valuation summary

	FY17	FY18E	FY19E	FY20E
PE (x)	NA	22.8	13.5	12.8
Target PE (x)	NA	27.6	16.3	15.5
EV/EBITDA (x)	139.7	14.2	8.6	7.5
P/BV (x)	12.1	7.9	5.0	3.6
RoE (%)	(5.7)	34.7	37.0	28.0
RoCE (%)	0.9	37.9	48.7	43.8

### Stock data

Particulars	Amount
Market Capitalisation	₹ 10589 crore
Debt (FY17)	₹ 684 crore
Cash (FY17)	₹ 8 crore
EV	₹ 11265 crore
52 Week H / L (₹)	2554 / 147
Equity Capital	40.0
Face Value	₹ 10

### Stock Price Performance



## HEG Ltd (HEG)

₹ 2650

### Operating margins to increase with better utilisation levels...

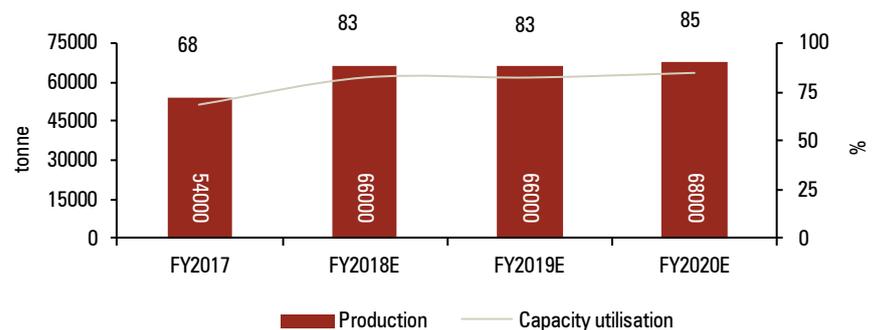
For H1FY18E, HEG reported a strong EBITDA margin of 34.7%. The management has guided for capacity utilisation of ~80-85% for FY18E. In line with management guidance, we model capacity utilisation of ~83% for FY18E and FY19E. For FY20E, we model capacity utilisation of 85%. Going forward, increased volumes coupled with higher priced contracts are likely to boost the company's earnings. A higher operating leverage is expected to accentuate operating margins sharply from current levels. We expect HEG to clock EBITDA margins of ~34-38% in FY18-20E (9.4% in FY17).

### Exhibit 3: What's Changed?

(₹ Crore)	FY18E				FY19E				FY20E
	FY17	New	Old	% Change	New	Old	% Change	New	
Revenue	860.0	2,027.4	1,691.3	19.9	3,468.0	2,914.6	19.0	4,051.7	
EBITDA	80.6	779.4	555.9	40.2	1,265.4	1,004.7	25.9	1,382.8	
EBITDA Margin (%)	9.4	38.4	32.9	558 bps	36.5	34.5	202 bps	34.1	
PAT	-50.1	463.7	307.2	50.9	783.5	608.8	28.7	824.8	
EPS (₹)	-12.5	116.0	76.9	309.1	196.1	152.4	28.7	206.4	

Source: Company, ICICIdirect.com Research

### Exhibit 4: Graphite electrode production and capacity utilisation rates



Source: Company, ICICIdirect.com Research

### Expansion plan in the wings...

The HEG management indicated that the company can expand the current capacity of 80,000 tonnes to 100,000 tonnes. As and when undertaken, the expansion would happen in ~20-24 months entailing an investment of ~₹ 200+ crore. However, the management iterated that the current priority of the company is to increase capacity utilisation to the level of 90-95% before talking up any expansion. Furthermore, adequate availability of needle coke remains crucial for capacity expansion.

### Higher price contracts to boost performance; maintain BUY...

We expect higher price contracts to fructify from H2FY18E leading to robust earnings growth from the company in FY18-20E. We value the core business at 9x FY20E EV/EBITDA, assign a 50% discount to HEG's stake in BEL and arrive at a target price of ₹ 3200. We maintain our **BUY** recommendation on the stock.

## Financials

Profit and loss statement (₹ crore)				
(Year-end March)	FY17	FY18E	FY19E	FY20E
Total Operating Income	860.0	2,027.4	3,468.0	4,051.7
Growth (%)	3.9	135.7	71.1	16.8
Raw Material Expenses	443.9	537.1	1,340.6	1,695.7
Employee Expenses	58.9	115.7	138.7	141.8
Other expenses	276.6	595.1	723.2	831.3
Total Operating Expenditure	779.4	1,248.0	2,202.6	2,668.8
EBITDA	80.6	779.4	1,265.4	1,382.8
Growth (%)	(35.2)	866.6	62.4	9.3
Depreciation	73.9	73.9	77.3	78.6
Interest	54.7	47.7	31.4	13.3
Other Income	7.1	9.6	12.7	-
PBT	(40.9)	667.4	1,169.4	1,290.9
Exceptional Item	-	-	-	-
Total Tax	9.2	203.8	385.9	466.1
Reported PAT	(50.1)	463.7	783.5	824.8
Adjusted PAT	(50.1)	463.7	783.5	824.8
Growth (%)	230.7	LP	69.0	5.3
EPS (₹)	(12.5)	116.0	196.1	206.4

Source: Company, ICICIdirect.com Research

Balance sheet (₹ crore)				
(Year-end March)	FY17	FY18E	FY19E	FY20E
<b>Liabilities</b>				
Equity Capital	40.0	40.0	40.0	40.0
Reserve and Surplus	831.8	1,295.5	2,079.0	2,903.8
Total Shareholders funds	871.8	1,335.5	2,119.0	2,943.7
Total Debt	684.0	549.0	349.0	31.8
Deferred Tax Liability	60.9	65.9	63.4	60.9
Non Current Liabilities	4.7	5.2	5.7	6.2
Total Liabilities	1,621.3	1,955.5	2,537.0	3,042.6
<b>Assets</b>				
Gross Block	1,672.5	1,702.5	1,732.5	1,762.5
Less: Acc Depreciation	787.5	861.4	938.7	1,017.3
Net Block	885.0	841.1	793.8	745.2
Capital WIP	1.2	1.3	51.3	201.4
Total Fixed Assets	886.2	842.3	845.1	946.5
Investments	149.8	149.8	149.8	149.8
Inventory	257.8	376.1	663.8	804.3
Debtors	360.8	694.3	1,187.7	1,387.6
Loans and Advances	31.9	11.9	5.4	3.9
Other Current Assets	76.9	21.9	14.9	7.9
Cash	8.3	70.5	109.9	299.9
Total Current Assets	735.7	1,174.8	1,981.7	2,503.6
Creditors	86.5	132.4	330.6	418.1
Other Current Liabilities (incl P)	63.9	79.0	109.1	139.2
Current Liabilities & Prov	150.4	211.4	439.6	557.3
Net Current Assets	585.3	963.3	1,542.1	1,946.3
Others	-	-	-	-
Application of Funds	1,621.3	1,955.5	2,537.0	3,042.6

Source: Company, ICICIdirect.com Research

Cash flow statement (₹ crore)				
(Year-end March)	FY17	FY18E	FY19E	FY20E
Profit/(Loss) after taxation	(50.1)	463.7	783.5	824.8
Add: Depreciation & Amortization	73.9	73.9	77.3	78.6
Net Increase in Current Assets	38.0	(376.8)	(767.5)	(331.9)
Net Increase in Current Liabilities	(75.8)	61.0	228.2	117.7
CF from operating activities	(14.0)	221.8	321.5	689.2
(Inc)/dec in Investments	(0.3)	-	-	-
(Inc)/dec in Fixed Assets	2.0	(30.1)	(80.1)	(180.1)
Others	-	-	-	-
CF from investing activities	1.7	(30.1)	(80.1)	(180.1)
Inc / (Dec) in Equity Capital	-	-	-	-
Inc / (Dec) in Loan	53.7	(135.0)	(200.0)	(317.2)
Dividend & Dividend Tax	-	(135.6)	(229.2)	(241.2)
Others	(38.2)	141.1	227.2	239.2
CF from financing activities	15.4	(129.5)	(202.0)	(319.2)
Net Cash flow	3.2	62.2	39.4	189.9
Opening Cash	5.1	8.3	70.5	109.9
Closing Cash	8.3	70.5	109.9	299.9

Source: Company, ICICIdirect.com Research

Key ratios				
(Year-end March)	FY17	FY18E	FY19E	FY20E
<b>Per share data (₹)</b>				
EPS	-12.5	116.0	196.1	206.4
Cash EPS	-3.5	55.5	80.5	172.5
BV	218.2	334.2	530.3	736.7
DPS	0.0	29.0	49.0	51.6
Cash Per Share	2.1	17.6	27.5	75.0
<b>Operating Ratios (%)</b>				
EBITDA margins	9.4	38.4	36.5	34.1
PBT margins	-4.8	32.9	33.7	31.9
Net Profit margins	-5.8	22.9	22.6	20.4
Inventory days	121	110	110	110
Debtor days	153	125	125	125
Creditor days	71	90	90	90
<b>Return Ratios (%)</b>				
RoE	-5.7	34.7	37.0	28.0
RoCE	0.9	37.9	48.7	43.8
RoIC	0.4	38.9	50.4	48.7
<b>Valuation Ratios (x)</b>				
P/E	NA	22.8	13.5	12.8
EV / EBITDA	139.7	14.2	8.6	7.5
EV / Revenues	13.1	5.5	3.1	2.5
Market Cap / Revenues	12.3	5.2	3.1	2.6
Price to Book Value	12.1	7.9	5.0	3.6
<b>Solvency Ratios</b>				
Debt / Equity	0.8	0.4	0.2	0.0
Debt/EBITDA	8.5	0.7	0.3	0.0
Current Ratio	4.9	5.6	4.5	4.5
Quick Ratio	3.2	3.8	3.0	3.0

Source: Company, ICICIdirect.com Research

### ICICIdirect.com coverage universe (Graphite steel electrodes)

Company	CMP			M Cap (₹ Cr)	EPS (₹)				P/E (x)				EV/EBITDA (x)				ROCE(%)			ROE(%)				
	(₹)	TP (₹)	Rating		FY17	FY18E	FY19E	FY20E	FY17	FY18E	FY19E	FY20E	FY17	FY18E	FY19E	FY20E	FY17	FY18E	FY19E	FY20E	FY17	FY18E	FY19E	FY20E
Graphite India	840	1,000	Buy	16,414	3.6	30.2	54.0	69.4	232.9	27.8	15.6	12.1	404.3	19.4	10.4	8.1	-0.3	31.6	45.7	43.8	3.8	27.3	36.3	36.0
HEG	2657	3200	Buy	10,628	-12.5	116.0	196.1	206.4	NA	22.1	13.1	12.4	135.2	13.7	8.3	7.2	0.9	37.9	48.7	43.8	-5.7	34.7	37.0	28.0

Source: Company, ICICIdirect.com Research

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Buy: > 10%/15% for large caps/midcaps, respectively;

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Sell: -10% or more;



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