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Commodity price monitor December-23

Prepared for ACMA

Strictly private and confidential

December-23





Contents

Com	nmodity trend dashboard	4	
Iron & Steel			
1	Iron Ore	8	
2	Pig Iron	9	
3	Wire Rod	10	
4	Steel Billets	11	
5	Hot-Rolled (HR) Coils	12	
6	Cold-Rolled (CR) Coils	13	
7	Steel Scrap (Heavy Melting)	14	
Ferr	ro-alloys	15	
9	Ferro chrome	16	
10	Ferro silicon	17	
11	EN8 Alloy Steel (Forging)	18	
12	Stainless Steel	19	
13	20MnCr5 Alloy Steel (Forging)	20	
Base	e Metals	21	
14	Aluminium	22	

To navigate this report on-screen (in pdf format)

From any page – click on the section title in the header navigation bar

From this Contents page – click on the title of the section or sub-section

From the contents listing on any section divider – click on the title of the sub-section

Contents

15	Copper	23
16	Zinc	24
17	Lead	25
18	Nickel	26
19	Tin	27
Preciou	s Metals	28
20	Precious Metals	29
Polyme	rs & Rubber	30
21	Low density polyethylene (LDPE)	31
22	Polypropylene (PP)	32
23	Acrylonitrile Butadiene Styrene (ABS)	33
24	High Impact Polystyrene (PS)	34
25	Rubber	35
26	Styrene Butadiene Rubber (SBR)	36
27	Polybutadiene Rubber (PBR)	37
28	Ethylene Propylene Diene Monomer (EPDM)	38
29	Carbon Black	39
Append	ices	40
26	Forex Movement	41
27	Crude Oil	42
28	Commodity Specifications	43

Commodity trend dashboard

Commodity trend dashboard Quarter-on-Quarter changes (1/2)-Rolling view

Calendar Year 2023: Q vs. Q update

Commodity	Region	Q-o-(Q-o-Q Down	
Iron & Steel				
Iron Ore	International	8.00%	_	
	Domestic low grade			
	Domestic high grade			
Pig Iron	International	3.25%	A	
	Domestic			-2.96% V
Stainless steel	Domestic			-5.59%
	Domestic			-5.33% 🔻
Wire rod	International			-4.62% V
	Domestic			-2.84% V
Steel Billets	International	4.49%	_	
	Domestic			-4.17% V
Hot-rolled coils	International	1.22%	_	
	Domestic	0.55%	_	
Cold-rolled coils	International	1.23%	_	
	Domestic	2.40%	_	
Steel Scrap	Domestic			-2.45% V
EN8	Domestic	0.95%	_	
20MnCr5	Domestic	0.93%	_	
Ferro-alloys				
Ferro titanium	International	N/A		
F	International			-1.82% V
Ferro chrome	Domestic		_	-1.10%
Ferro molybdenum	International	N/A		
Ferro vanadium	International	N/A		
Farmaniliana	International	0.16%	_	
Ferro silicon	Domestic			-1.90% ▼

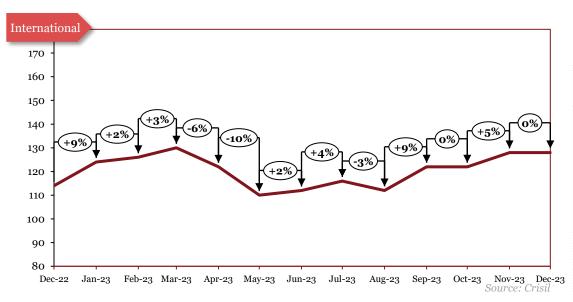
Commodity trend dashboard Quarter-on-Quarter changes (2/2)- Rolling view

Calendar Year 2023: Q vs. Q update

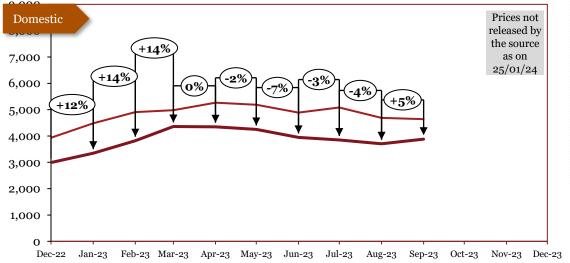
Commodity	Region	Q-o-Q Up	Q-o-Q Down
Base Metals			
Aluminum	International	0.81%	
Aluminum	Domestic	2.13%	
Copper	International		-2.23%
Сорреі	Domestic		-2.45%
Zinc	International	2.88% ▲	
ZIIIC	Domestic	2.51%	
Lood	International		-2.35%
Lead	Domestic	0.41%	
Niekal	International		-15.39%
Nickel	Domestic	N/A	
T:-	International		-8.54%
Tin	Domestic	N/A	
Magnesium	International	N/A	
Precious Metals			
Platinum	International		-1.72%
Palladium	International		-12.55%
Rhodium	International	8.47%	
Polymers			
Laur danaitu maluathulana (LDDE)	International		-2.29%
Low density polyethylene (LDPE)	Domestic		-5.81%
D-1	International	1.63%	
Polypropylene (PP)	Domestic		-2.62%
A	International	0.46%	
Acrylonitrile Butadiene Styrene (ABS)	Domestic	0.73%	
2.1	International	3.16%	
Polystyrene (PS)	Domestic	3.01%	
Rubber	Domestic	1.73%	
Currency Exchange			
Dollar	International	0.24%	
Pound	International		-0.43%
Euro	International		-1.29%
Yen	International		-1.89%

Iron & Steel

Iron Ore



Monthly Average Prices							
	*Int'l	*Dom					
Period	\$/tonne	Rs/to	nne				
		65% & below	65% & above				
Dec-22	114	2996	3936				
Jan-23	124	3346	4484				
Feb-23	126	3821	4906				
Mar-23	130	4361	4980				
Apr-23	122	4350	5264				
May-23	110	4248	5189				
Jun-23	112	3947	4886				
Jul-23	116	3847	5084				
Aug-23	112	3702	4686				
Sep-23	122	3879	4642				
Oct-23	122						
Nov-23	128						
Dec-23	128						



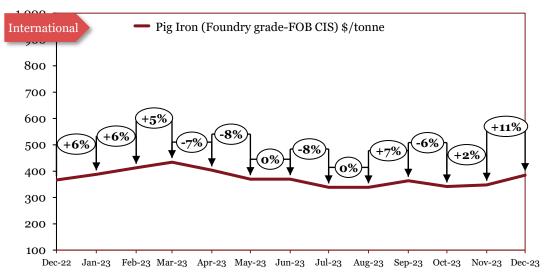
Source: Crisil

*The actual prices may vary depending on city, player, grade etc.

Outlook

In April, international prices fell amid weak demand from Chinese steelmakers and increased inventories at Chinese ports. In May, prices decreased due to increased supply in an already flooded market as several companies ramped up production amid lower raw material costs. In June, international prices increased as the market remained optimistic about the outlook for demand amid growing signs that the world's top steel producer, China, would introduce more economic stimulus. Domestic prices decreased due to lower raw material costs. In July, prices increased due to the improvement of the credit policy in China and the expectation that Chinese authorities will ease mortgage restrictions to restart the economic recovery. In August, prices decreased due to the threat of limited steel production in China, the lack of economic incentives from the Chinese authorities, and excess supply from Brazil and Australia. In September, prices increased due to increasing demand from Chinese steel mills and increasing steel demand from the construction industry. In October, International prices remained relatively stable. In November, prices increased owing to improving sentiments in the Chinese market, reducing Chinese inventory and a lower-than-expected supply from Australia and Brazil. In December, prices remained stable.

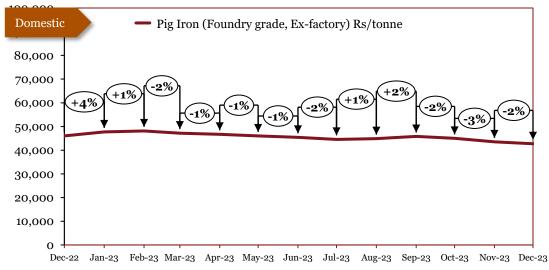
Pig Iron



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Source: Crisil

Source: Crisil

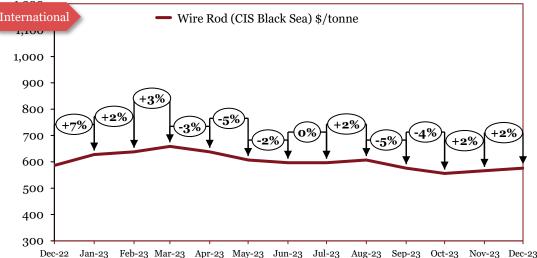


Monthly Average Prices						
Period	*Int'l	*Dom				
	\$/tonne	Rs/tonne				
Dec-22	367	46000				
Jan-23	388	47700				
Feb-23	413	48100				
Mar-23	434	47200				
Apr-23	403	46700				
May-23	370	46000				
Jun-23	370	45400				
Jul-23	339	44550				
Aug-23	339	44900				
Sep-23	363	45800				
Oct-23	342	45000				
Nov-23	348	43500				
Dec-23	385	42750				

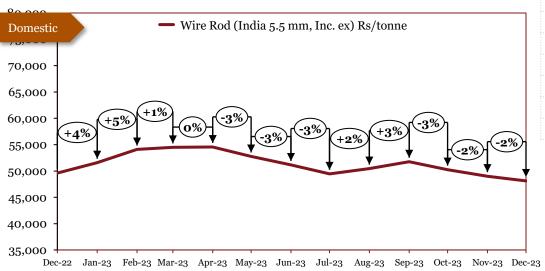
*The actual prices may vary depending on city, player, grade etc.

International prices increased in tandem with iron ore prices. In April, prices decreased due to a negative correction in coal and coke prices. In May, domestic prices plummeted as coking coal prices fell by almost 15%. International prices decreased due to subdued steel demand caused by high inflation and liquidity crunch. In June, prices remained relatively stable. In July, prices fell due to sufficient supply and weak demand coupled with the decline in coke and steel prices. In August, prices remained relatively stable. In September, prices increased due to a sharp increase in prices of raw materials and an increase in the price of coking coal. In October, prices decreased due to sluggish offtakes from steel manufacturers coupled with discounts on payment conditions due to cash crunch, especially in the domestic market. In November, international prices surged due to an increase in the price of iron ore, higher domestic demand in Europe, and a tightening of supply from Brazil. Domestic prices fell in tandem with coking coal. In December, international prices increased due to an increase in the price of coking coal coupled with improved demand and declining output from China. Domestic prices decreased as steel producers didn't purchase raw materials due to healthy inventories.

Wire Rod



Monthly Average Prices							
Period	^*Int'l	*Dom					
	(\$/tonne)	(Rs/tonne)					
Dec-22	587	49594					
Jan-23	628	51594					
Feb-23	638	54094					
Mar-23	659	54494					
Apr-23	638	54554					
May-23	607	52754					
Jun-23	597	51154					
Jul-23	597	49454					
Aug-23	607	50455					
Sep-23	576	51754					
Oct-23	556	50254					
Nov-23	566	49004					
Dec-23	576	48104					



Source: Crisil

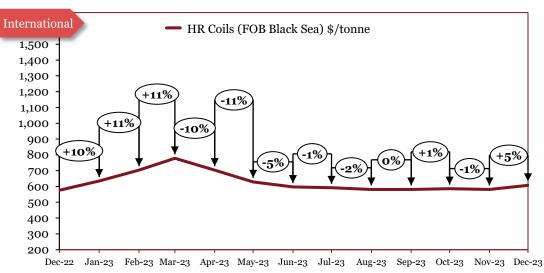
Source: Crisil

*The actual prices may vary depending on city, player, grade etc.

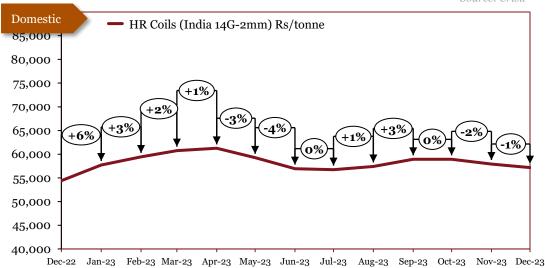
Outlook

In June, prices decreased due to limited demand and sluggish global trends. In July, international prices remained stable. Domestic prices continued to fall due to reduced demand, a drop in prices of raw materials, and decreased blast furnace activity. In August, prices increased due to the increase in price of coking coal. In September, international prices decreased as the inflation rate increased across major European nations leading to decreased demand. Domestic prices increased due to an increase in prices of raw materials. In October, international prices decreased due to the high inflation rate across major European nations leading to decreased demand. Domestic prices decreased due to sluggish demand from steel manufacturers. In November, international prices increased with a surge in iron ore prices. Domestic prices reduced due weak domestic demand coupled with decreasing coking coal prices. In December, international prices increased as manufacturers looked to replenish stocks amidst speculation of interest rate cuts by the US Fed. Domestic prices fell in tandem with the steel prices.

Hot-Rolled (HR) Coils







Monthly Average Prices							
Period	*Int'l	^*Dom					
	(\$/tonne)	(Rs/tonne)					
Dec-22	576	54400					
Jan-23	634	57725					
Feb-23	704	59425					
Mar-23	778	60750					
Apr-23	704	61250					
May-23	629	59250					
Jun-23	597	56950					
Jul-23	592	56750					
Aug-23	581	57400					
Sep-23	581	58925					
Oct-23	586	58925					
Nov-23	581	57925					
Dec-23	608	57175					

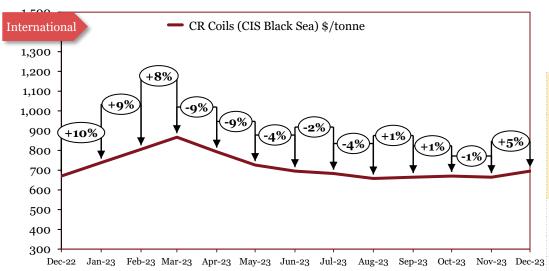
Source: Crisil

*The actual prices may vary depending on city, player, grade etc.

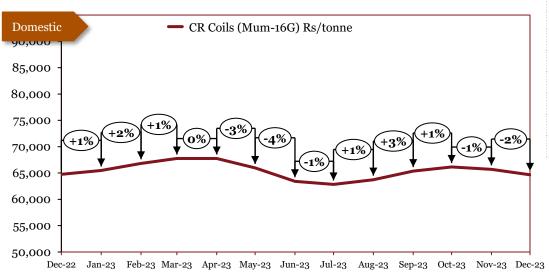
Outlook

In June, prices decreased as demand continued to be subdued as customers across sectors resorted to 'wait-and-watch' or 'need-based buying' along with a decrease in coking coal prices. In July, the prices remained relatively stable. In August, international prices dropped due decrease in prices of raw materials, lack of demand, and overall negative macroeconomic conditions. Domestic prices remained relatively stable. In September, international prices remained stable. Domestic prices increased due to strong demands from the construction and kitchen appliances industries. In October prices remained relatively stable. In November, international prices remained relatively stable. Domestic prices were reduced due to a decreased demand from the construction sector in Northern India as a result of a halt on construction activity due to pollution as part of the govt's graded action plan. In December, prices increased over speculations for interest rate cuts causing increased demand. Domestic prices remained relatively stable.

Cold-Rolled (CR) Coils



Monthly Average Prices							
Period	*Int'l	^*Dom					
	(\$/tonne)	(Rs/tonne)					
Dec-22	670	64750					
Jan-23	738	65475					
Feb-23	806	66825					
Mar-23	867	67750					
Apr-23	793	67750					
May-23	726	65950					
Jun-23	695	63425					
Jul-23	683	62825					
Aug-23	658	63725					
Sep-23	664	65350					
Oct-23	670	66150					
Nov-23	664	65700					
Dec-23	695	64650					



*The actual prices may vary depending on city, player, grade etc.

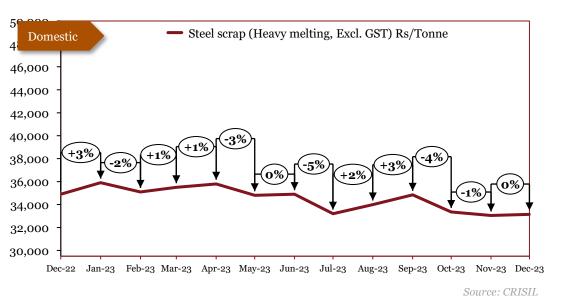
Source: Crisil

Source: Crisil

Outlook

In June, domestic prices fell on account of the monsoon which weakened construction activities, Indian steel mills witnessed a demand slowdown and a fall in coking coal prices. International prices decreased due to a lack of demand, negative market sentiment influenced by the uncertainty of the Chinese market, and negative macroeconomic factors. In July, the prices continued to drop carrying the momentum from previous months due to slowing global demand. Domestic prices dropped due to cheap imports and softer input costs. In August, international prices decreased due drop in prices of raw materials, lack of demand, and overall negative macroeconomic conditions. Domestic prices remained relatively stable. In September, international prices remained stable. Domestic prices increased due to an increase in prices of raw materials like chromium and pig iron. In addition to this, heavy demand from domestic industrial and kitchen appliance manufacturers impacted the price. In October, prices remained relatively stable. In November, prices remained relatively stable. In December, prices increased in tandem with increasing coking coal prices, increase in price of raw materials and improved market sentiments. Domestic prices decreased as a result of weak demand from the construction industry.

Steel Scrap (Heavy Melting)



Monthly Average Prices				
Period *Dom				
	(Rs/Tonne)			
Dec-22	34900			
Jan-23	35900			
Feb-23	35100			
Mar-23	35500			
Apr-23	35800			
May-23	34800			
Jun-23	34900			
Jul-23	33200			
Aug-23	34000			
Sep-23	34850			
Oct-23	33350			
Nov-23	33050			
Dec-23	33150			

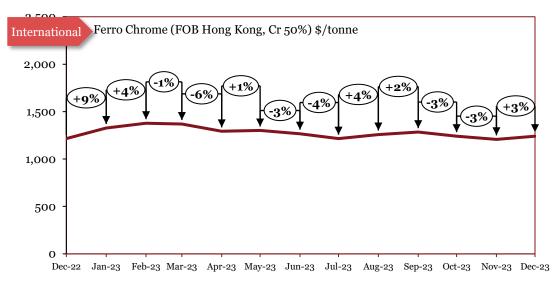
*The actual prices may vary depending on city, player, grade etc.

Outlook

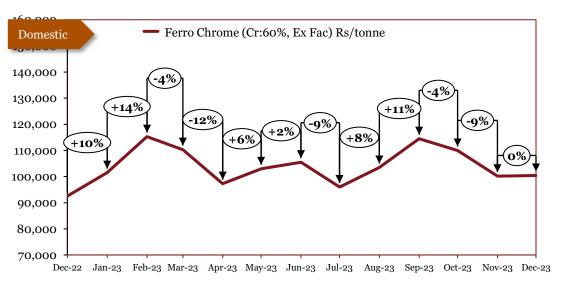
In December and January, prices increased due to low availability during the winter period, as adverse weather conditions slowed down the collection and processing of scrap. In February, prices decreased due to the consequences of the Turkey-Syria earthquake. In March, prices increased due to inclement weather, low inventories, a reported shortage of prime steel scrap substitute DRI, and rising finished steel prices. In April, prices increased slightly due to tight supply caused due to supply chain issues in Turkey. In May, prices decreased due to a decrease in steel prices and declining import offers. In June, prices remained relatively stable. In July, prices fell due to higher VAT and excise duty on fuel in Turkey coupled with reduced demand due to the global economic slowdown. In August, prices increased due to an increase in the price of coking coal. In September, prices increased due to an increase in prices of iron ore and coking coal. In October, prices decreased due to slower offtake in finished steel amid sufficient restocking earlier amid the festive season, a decrease in prices of competing raw materials like sponge and billets affecting market sentiments and the import of cheaper melting scrap from Europe. In November, prices remained relatively stable. In December, prices remained relatively stable.

Ferro-alloys

Ferro chrome







Monthly Average Prices							
Period	*Int'l	*Dom					
	(\$/tonne)	(Rs/tonne)					
Dec-22	1216	92500					
Jan-23	1327	101500					
Feb-23	1378	115300					
Mar-23	1370	110300					
Apr-23	1293	97300					
May-23	1301	103000					
Jun-23	1267	105500					
Jul-23	1216	96000					
Aug-23	1258	103500					
Sep-23	1284	114500					
Oct-23	1241	110000					
Nov-23	1207	100150					
Dec-23	1241	100400					

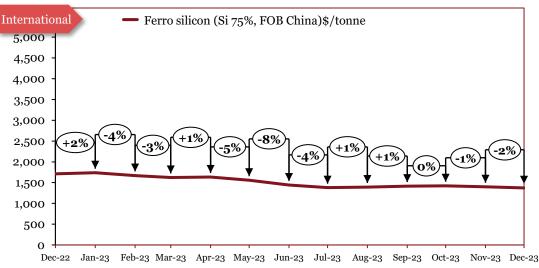
*The actual prices may vary depending on city, player, grade etc.

Source: Crisil

Outlook

In May, prices increased due to scarce availability and high demand. In June, international prices decreased in tandem with coking coal prices. Domestic prices increased due to high electricity costs. In July, prices dropped due to uncertainty over steel production in China, a drop in prices of raw materials, and sluggish demands from the end consumer. In August the prices increased due to the launch of a new round of chrome ore futures transactions and strong demand from south China steel plants. In September, International prices increased due to sharp increase in prices of raw materials, increase in price of coking coal, and strong demand from Chinese steel manufacturers. Domestic prices increased due to market anticipation of an increase in prices due to elevated premiums in OMC's chrome ore auction and FACOR's lumps auction after more than a month-long gap. In October, prices decreased owing to reduced demand both globally and domestically, caused by a fall in stainless steel production. In November, international prices fell in tandem with decreased raw material prices. Domestic prices declined due to restricted demand from the stainless steel sector. In December, international prices increased as a result of reduced supply from China and Mongolia. Domestic prices remained relatively stable.

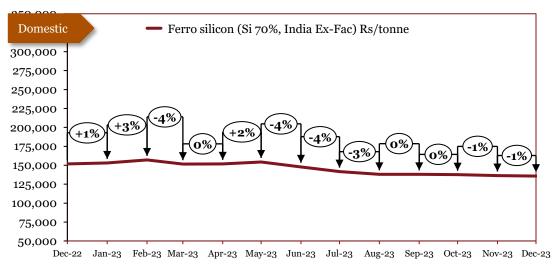
Ferro silicon



	(\$/tonne)	(Rs/tonne)	
Dec-22	1711	151850	
Ian-aa	1790	152050	

Monthly Average Prices

Source: Crisil



Period	*Int'l	*Dom	
	(\$/tonne)	(Rs/tonne)	
Dec-22	1711	151850	
Jan-23	1739	153050	
Feb-23	1670	157050	
Mar-23	1622	151550	
Apr-23	1635	151850	
May-23	1559	154350	
Jun-23	1442	147850	
Jul-23	1380	141650	
Aug-23	1394	138000	
Sep-23	1415	138000	
Oct-23	1421	137650	
Nov-23	1401	136400	
Dec-23	1373	135650	

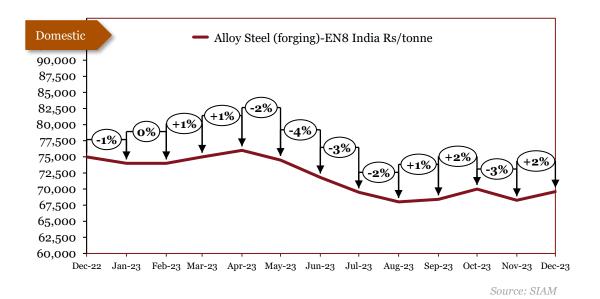
Source: Crisil

*The actual prices may vary depending on city, player, grade etc.

Outlook

In February, domestic prices inched up in anticipation of material shortage due to restrictions on imported material from sellers who did not have a BIS certificate. International prices decreased amidst fears of recession. In March, prices decreased due to sluggish demand and oversupply at the producers. In April, prices rose due to an increased supply crunch in the domestic (labor issue in Bhutan) and global markets (power curtailment in the Ningxia region of China). In May, international prices fell in tandem with iron ore and coking coal prices. Domestic prices increased due to low production caused by power outages in northeast India, a major production center. In June, prices dropped on account of higher supplies, and sluggish steel demand amid intense bargaining in the market and low coking coal prices. In July, prices dropped due to uncertainty over steel production in China, reduced prices of raw materials, and sluggish demands from the end consumers. In August, international prices remained relatively stable. Domestic prices decreased because of low demand, and delay in price announcement from Bhutan which created uncertainty in the market. In September, prices remained relatively stable. In October, prices remained relatively stable. In November, prices remained relatively stable. In December, prices fell as a result of weakening demand from steel manufacturers.

EN8 Alloy Steel (Forging)



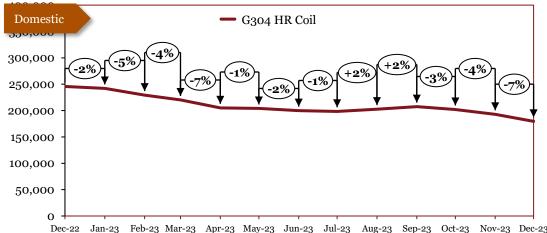
Monthly Average Prices		
*Dom Period (Rs/tonn		
Dec-22	75000	
Jan-23	74000	
Feb-23	74000	
Mar-23	75000	
Apr-23 76000 May-23 74500		
		Jun-23
Jul-23	69500	
Aug-23	68000	
Sep-23	68400	
Oct-23	70000	
Nov-23	68250	
Dec-23	69600	

*The actual prices may vary depending on city, player, grade etc.

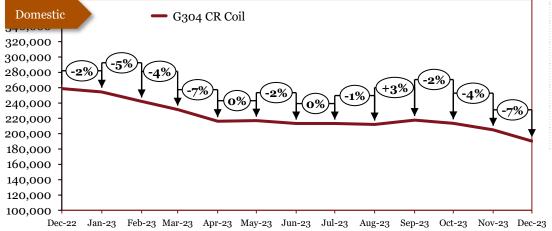
Outlook

In October, prices remained stable. In November, prices fell due to concerns over an impending global recession and geo-political unrest, leading to a decline in demand and a downturn in the metal cycle. In December, prices fell due to the higher availability of stocks caused by a slowdown in export markets and global recessionary pressures. In January, prices decreased in tandem with stainless steel prices. In February, prices remained stable. In March, prices rose in tandem with elevated raw material and energy costs. In April, prices increased slightly due to a positive market outlook. In May, prices decreased in tandem with coking coal prices. In June and July, prices decreased as Chinese steel mills continued dumping alloy steel into Indian markets due to a shortage of customers in China leading to oversupply. In August, prices decreased due to the decrease in the price of raw materials. In September, prices remained relatively stable. In October, prices increased as a result of higher demand for EN8 in the production of automotive axles. In November, prices decreased due to reduced prices of raw materials (silicon). In December, prices rose as a result of an increase in prices of raw materials (silicon) caused by the shortage of supply from silicon plants in Yunnan and Sichuan provinces in China.

Stainless Steel



	Monthly Domestic Average Prices				
		*G304 HR	*G304 CR		
Peri	Period	(Rs/tonne)	(Rs/tonne)		
	Dec-22	245750	258750		
	Jan-23	242000	254500		
-	Feb-23	229375	242000		
3	Mar-23	220200	231400		
	Apr-23	205188	216250		
	May-23	204000	217000		
	Jun-23	200000	213250		
	Jul-23	198500	213250		
	Aug-23	202625	212000		
	Sep-23	207375	217750		
	Oct-23	202000	213500		
	Nov-23	193000	205000		
	Dec-23	179500	190250		



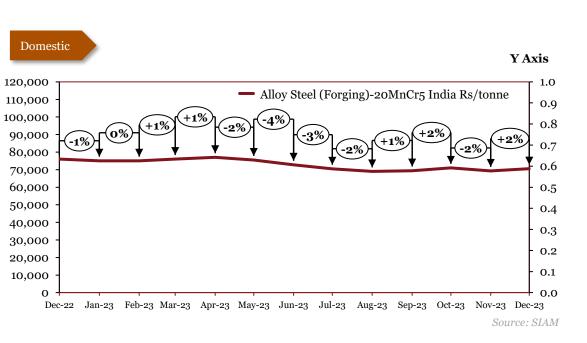
Source: SIAM

*The actual prices may vary depending on city, player, grade etc.

Outlook

In April and May, prices decreased due to a drop in raw material prices, rising stock levels, higher interest rates impeding downstream construction & automotive sector, and fears of recession. In June, prices fell due to sluggish demand in the traders' market amid need-based procurement, low demand from end consumers due to inflation, and high energy prices. In July, prices remained relatively stable. In August, HR coil prices increased due to higher demand, especially from the construction industry. CR coil prices remained relatively stable as demand decreased in Asian markets, so did the supply from European markets. In September, prices increased due to an increase in prices of raw materials and an increased demand from the construction sector. In October, prices decreased owing to a multitude of factors, such as reduced construction in northern India due to pollution, elections in various states impacting the liquidity of the market, and the festive season. In November, prices fell due to reduced demand from the construction and infrastructure sector amidst winter in the northern hemisphere and due to ample supply of raw materials (Nickel) leading to decreased prices. In December, prices reduced as a result decrease in demand from the construction sector coupled with a decrease in prices of raw materials.

20MnCr5 Alloy Steel (Forging)



Monthly Average Prices		
Period	*Dom (Rs/tonne)	
Dec-22	76000	
Jan-23	75000	
Feb-23	75000	
Mar-23	76000	
Apr-23	77000	
May-23	75500	
Jun-23	72800	
Jul-23	70500	
Aug-23	69000	
Sep-23	69400	
Oct-23	71000	
Nov-23	69250	
Dec-23	70600	

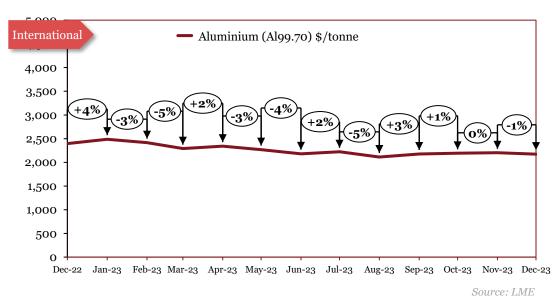
*The actual prices may vary depending on city, player, grade etc.

Outlook

In December, prices declined due to a slowdown in export markets amid global recessionary pressures. In December and January, prices declined due to a slowdown in export markets amid global recessionary pressures. In February, prices remained stable. In March and April, prices rose in tandem with production costs- higher energy and steel scrap prices. In May, prices decreased in tandem with steel scrap and coking coal prices. In June, prices continue to spiral down, primarily driven by the demand weakness in China and falling coking coal prices. In July, prices fell due to consecutive downward corrections driven by high input costs, particularly expensive coal, and iron ore supplied by Odisha Mineral Corporation. In August, prices decreased due to reduced demand from the automotive industry and a decrease in the price of raw materials. In September prices remained relatively stable. In October, prices increased due to an increase in the production of pistons, boxes, spindles, gears, and camshafts for 3-wheelers. In November, prices decreased as the prices of raw materials like ferro chrome and ferro manganese fell. In December, prices rose as a result of an increase in production of gears, especially for 2Whs and 3Whs.

Base Metals

Aluminium



	(\$/tonne)	

Period

Nov-23

Dec-23

(Rs/kg) Dec-22 2394 212 Jan-23 2489 217 Feb-23 2417 216

Monthly Average Prices

*Int'l

*Dom

206

210

205

203

Mar-23 2290 Apr-23 2341 **May-23** 2267

208 Jun-23 2181 202 Jul-23 2224 198 Aug-23 2114 199

Sep-23 2177 204 Oct-23 2192 206

2202

2174

Domestic Aluminium (min 99.7%) Rs/kg 320 300 280 260 240 220 200 180 160 140 120 Aug-23 Sep-23 Oct-23 Nov-23 Dec-23 Dec-22 Jan-23 Feb-23 Mar-23 Apr-23 May-23 Jun-23 Jul-23

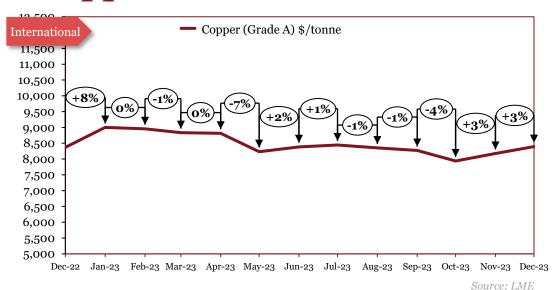
> Source: MCX* *Source updated in July 2019

*The actual prices may vary depending on city, player, grade etc.

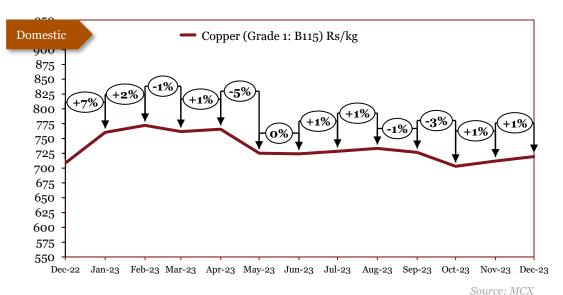
Outlook

In March, prices continued to fall due to slack demand, increasing stock inventories, and recessionary trends. In April, prices increased because of spurred consumption due to a lower US Dollar and power cuts in China affecting Aluminium smelters, In May, domestic prices remained relatively stable. International prices decreased as output increased and inventories rose amid tepid demand for the metal used in the auto, packaging, and construction sectors. In June, prices decreased as demand from some end-user sectors like construction remained tepid amid the ongoing high-inflation environment and poor economic conditions in Europe and Germany entering into a recession. In July, international prices increased due to high demand caused by the stimulus pay in China. Domestic prices continued the downward trend due to reduced demand in the local markets. In August international prices decreased due to decreased demand, increased supply of cheaper Chinese goods and a surplus of Russian metal due to self-sanctions by US and European entities. In September, prices increased as US dollar index eases on the Aluminium market, property supportive policies in China and lack of inventories. In October, prices remained relatively stable. In November, prices remained relatively stable. In December, prices remained relatively stable.

Copper



Monthly Average Prices		
	*Int'l	*Dom
Period	(\$/tonne)	(Rs/kg)
Dec-22	8367	709
Jan-23	8999	760
Feb-23	8954	772
Mar-23	8835	762
Apr-23	8813	766
May-23	8234	725
Jun-23	8386	724
Jul-23	8445	728
Aug-23	8351	733
Sep-23	8270	726
Oct-23	7939	703
Nov-23	8173	712
Dec-23	8394	720

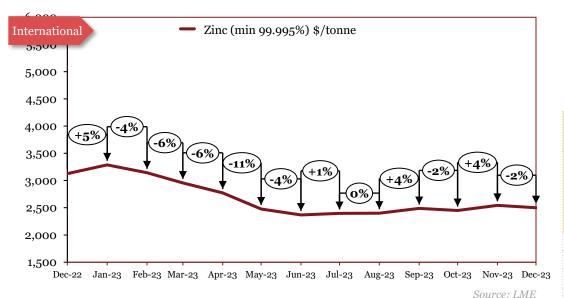


*The actual prices may vary depending on city, player, grade etc.

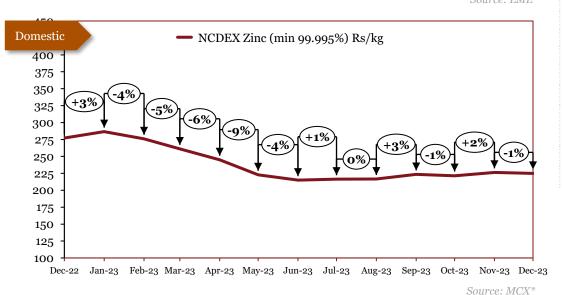
Outlook

In March, international prices decreased due to inflation in the US in a downward trend, with market players betting on the US Fed to slow down interest rate hikes and weak supply. In April, international prices continued a downward trend due to weak global demand caused by rising interest rates, high inventories, and a global slowdown. Domestic prices remained relatively stable. In May, prices continued a downward trend due to contracting manufacturing activity and slumping industrial profits in China. In June, international prices rose supported by a vote of approval from the U.S. House of Representatives to suspend the debt ceiling and improvement in the fundamentals of copper as an EV green energy metal. Domestic prices remained stable. In July, the prices gained upward momentum due to increased demand among Chinese consumers. In August, prices remained relatively stable. In September, prices remained relatively stable. In October prices continued to fall amidst concerns over lower demand and high inventories piling up. In November, prices rose on the back of expectation of interest rates cut moving forward leading to increased economic activity. In December, international prices rose as a result of shortage of supply from China and Peru. Domestic prices remained relatively stable.

Zinc



Monthly Average Prices		
	*Int'l	*Dom
Period	(\$/tonne)	(Rs/kg)
Dec-22	3128	277
Jan-23	3289	287
Feb-23	3143	276
Mar-23	2956	261
Apr-23	2772	245
May-23	2477	223
Jun-23	2368	215
Jul-23	2396	216
Aug-23	2400	217
Sep-23	2488	223
Oct-23	2449	221
Nov-23	2543	226
Dec-23	2501	225

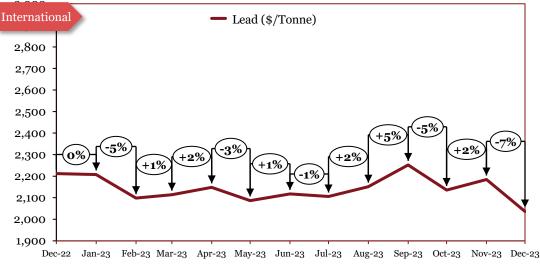


*The actual prices may vary depending on city, player, grade etc.

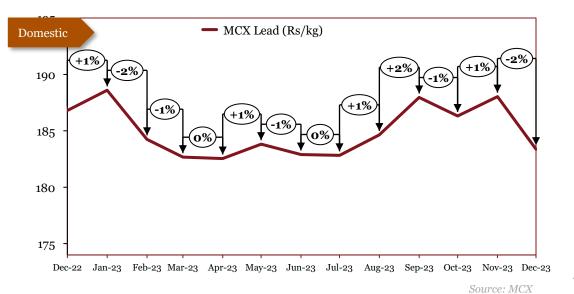
Outlook

In January, prices increased due to higher costs of production as coal prices rose. In February prices tumbled due to the potential for a significant supply recovery and a return to zinc surplus after two years of shortfall. In March, prices fell as a result of continuing concerns about global economic growth, lack of momentum from China, weak manufacturing activity in the USA, and a stronger dollar. In April, prices plummeted due to the flagging global economy, vulnerable US banking sector, and higher inventory levels, and resumed operations in France's smelters. In May, prices fell due to interest rate hikes, dollar strength, an increase in smelter supply, and a weaker-than-expected economic recovery in China -- biggest consumer of zinc. In June, prices declined due to weak demand, coupled with an increase in smelter and sluggishness in the steel sector, which impacted the demand for galvanizing. In July, prices remained relatively stable. In August, prices remained relatively stable. In September, prices increased due to increased demands from construction and infrastructure sector, especially in China, the largest producer of Zinc. In October, prices decreased slightly amidst increasing supply globally. In November, prices rose amidst tightening global supply. In December, prices fell due to a drop in demand from steel industry.

Lead







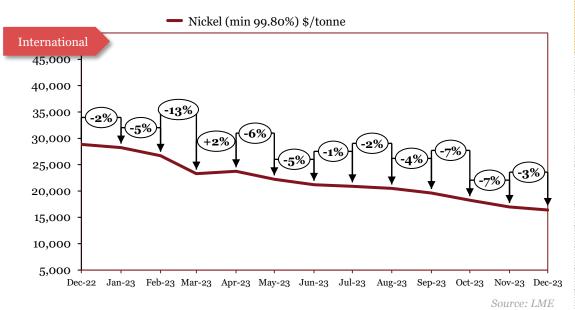
Monthly Average Prices		
Period	*Int'l	*Dom
	(\$/tonne)	(Rs/kg)
Dec-22	2212	187
Jan-23	2208	189
Feb-23	2098	184
Mar-23	2114	183
Apr-23	2148	183
May-23	2087	184
Jun-23	2118	183
Jul-23	2106	183
Aug-23	2151	185
Sep-23	2252	188
Oct-23	2136	186
Nov-23	2185	188
Dec-23	2036	183

*The actual prices may vary depending on city, player, grade etc.

Outlook

Domestic prices remained relatively stable. In May, international prices continued a downward trend due to slower global activity, low growth in China's property sector due to high debt levels, and only services-oriented recovery in China. Domestic prices remained stable. In June, international prices increased as the peak lead acid car battery replacement season of summer commenced coupled with high demand from the EV industry. Domestic prices remained relatively stable. In July, prices remained relatively stable. In August, prices increased due to shortage of supply which is caused by shortage of battery scrap. In September, prices increased due to a global shortage of supply caused by reduced Chinese exports and ongoing mine disruptions, especially the Penasquito strike in Mexico. In October, International prices decreased due to reduced demands from EV battery manufacturers, as a result of a tentative geopolitical outlook. Domestic prices remained relatively stable. In November, prices increased due to increased demand from lead acid battery manufacturers. In December, prices dropped as a result of decrease in demand from battery manufacturers and a surplus supply of lead.

Nickel



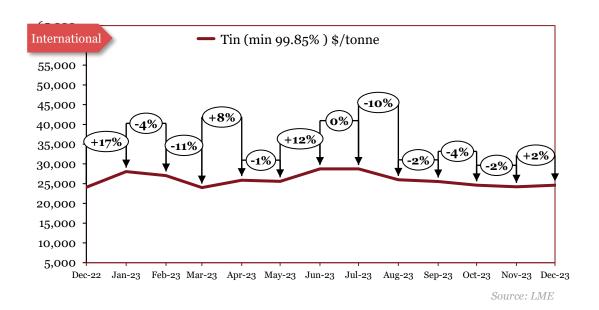
Monthly Average Prices		
Period	*Int'l (\$/tonne)	
Dec-22	28838	
Jan-23	28226	
Feb-23	26679	
Mar-23	23289	
Apr-23	23749	
May-23	22215	
Jun-23	21184	
Jul-23	20890	
Aug-23	20484	
Sep-23	19621	
Oct-23	18249	
Nov-23	16974	
Dec-23	16382	

*The actual prices may vary depending on city, player, grade etc.

Outlook

In February, prices tumbled on expectations of easing supply tightness. In March, international prices fell due to concerns about the impact of Tsingshan's planned production switch. In April, international prices increased as the US dollar index weakened, and low inventory levels of refined nickel. In May, International prices decreased after the release of disappointing trade data from top industrial metals consumer China. In June, international prices continued a downward trend as global production volumes rose while the market remained in surplus. In July, international domestic prices continued a downward trend due to subdued demand in major economies and increased Indonesian supply. In August, prices decreased due to underwhelming stimulus measures from China. In September, prices decreased due to excess supply from Australia and Indonesia. In October, prices fell sharply due to reduced demand from stainless steel manufacturers. In November, prices continued the downward spiral due to increased supply from Indonesia and weakening demand from stainless steel sector. In December, prices decreased due to weakened demand from stainless steel manufacturers.

Tin



Monthly Average Prices		
Period	*Int'l (\$/tonne)	
Dec-22	24075	
Jan-23	28058	
Feb-23	27047	
Mar-23	23997	
Apr-23	25866	
May-23	25586	
Jun-23	28728	
Jul-23	28728	
Aug-23	25975	
Sep-23	25540	
Oct-23	24597	
Nov-23	24204	
Dec-23	24592	

*The actual prices may vary depending on city, player, grade etc.

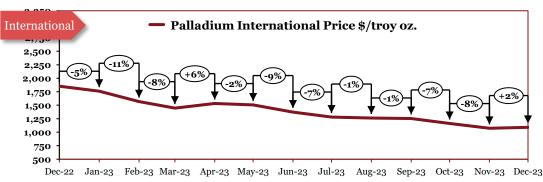
Outlook

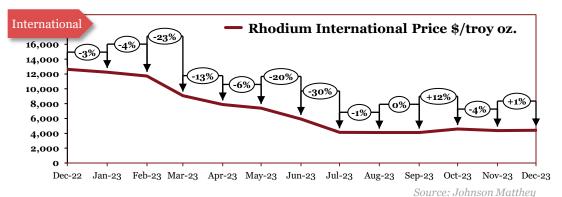
In March, prices fell as the global demand outlook fell substantially on weakening macroeconomic fundamentals, a strengthening US dollar, and still high levels of global inflation. In April, prices increased as tin mining was suspended in Myanmar- the world's third-largest tin producer. In May, prices fell as the global demand outlook fell substantially on weakening macroeconomic fundamentals. In June, prices increased because of a looming supply crunch in the global tin market as Myanmar, the world's third-largest tin producer announced a suspension of tin mining activities, and Indonesia, the world's largest exporter of tin, announced a proposed ban on the exports of tin ingots. In July, the prices remained stable. In August, prices decreased in August primarily due to rising inventories and reduced demand from the electronics industry. In September, prices decreased due to reduced demand from Semiconductor industry amidst tentative geopolitical outlook. In October, prices decreased owing to reduced demand – as the production of steel declined so did the demand for tin in steel coating. In November, prices decreased due to adequate supply and subdued demand. In December, prices increased as a result of rise in demand for manufacturing of EVs.

Precious Metals

Precious Metals







Monthly Average Prices (\$/Oz)				
Period	Pt	Pd	Rh	
Dec-22	1025	1854	12626	
Jan-23	1067	1761	12246	
Feb-23	968	1567	11730	
Mar-23	981	1447	9070	
Apr-23	1062	1532	7881	
May-23	1073	1505	7383	
Jun-23	987	1374	5924	
Jul-23	957	1282	4124	
Aug-23	935	1263	4100	
Sep-23	933	1253	4100	
Oct-23	902	1161	4578	
Nov-23	919	1071	4378	
Dec-23	955	1089	4412	

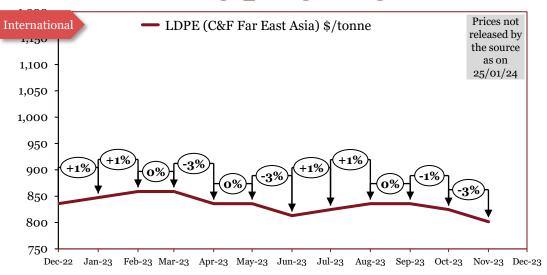
*The actual prices may vary depending on city, player, grade etc.

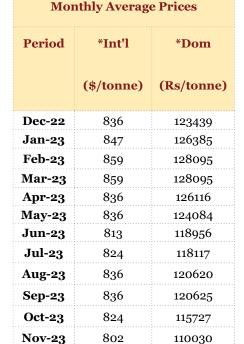
Outlook

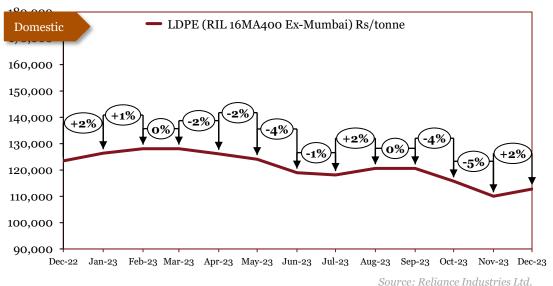
In August Platinum prices dropped due to reduced demands from the automotive industry. Palladium and Rhodium prices remained relatively stable. In September, prices remained relatively stable. In October, Platinum and Palladium prices fell due to inhibited demand from jewellery manufacturers. Rhodium prices increased due to increased demand from the automobile sector as a result of stricter environmental regulations and advancements in the automobile industry. In November, Platinum prices increased due to increased demand from jewellery industry. Palladium prices decreased due to reduced demand from transport equipment (railway coaches, shipbuilding equipments, etc) sector. Rhodium prices decreased due to decreased demand in manufacturing of catalyst converters. In December, platinum prices increased due to an increased demand from jewellery manufacturers. Palladium prices increased due to an increased in demand from transport equipment manufacturers. Rhodium prices remained relatively stable.

Polymers & Rubber

Low density polyethylene (LDPE)







Dec-23

Source: Crisil

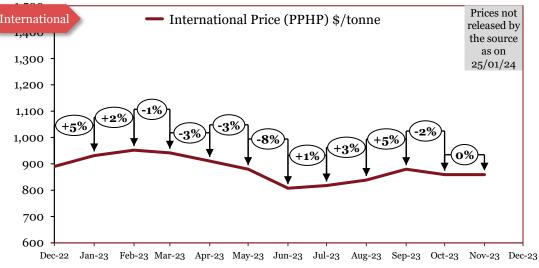
*The actual prices may vary depending on city, player, grade etc.

Outlook

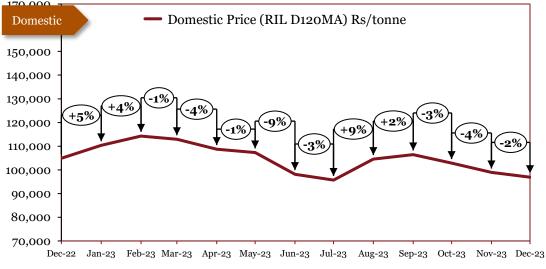
In March, prices remained stable. In April, prices fell as the purchase pulse has been continually tepid amid ample product avails. In May, international, prices remained stable. Domestic prices fell in tandem with crude oil prices. In June, international prices continued to drop with the momentum of sluggish market demands of previous weeks which was aggravated by the European fuel crisis. Domestic prices continued to fall on the back of sluggish market sentiment and surplus product avails in the region, and lower import offers from overseas suppliers. In July, prices remained relatively stable. In August, domestic prices increased due to increased demands from plastic container manufacturing industries. International prices remained relatively stable. In September, prices remained relatively stable. In October, domestic prices decreased due to lower imports caused by sluggish market demand. In November, prices decreased due to increased supply coupled with falling crude oil prices. In December, domestic prices rose as a result of increased market demand.

112743

Polypropylene (PP)







Monthly Average Prices							
Period	*Int'l	*Dom					
	(\$/tonne)	(Rs/tonne)					
Dec-22	890	104896					
Jan-23	932	110342					
Feb-23	952	114285					
Mar-23	942	112908					
Apr-23	911	108733					
May-23	880	107330					
Jun-23	807	98166					
Jul-23	818	95706					
Aug-23	838	104516					
Sep-23	880	106467					
Oct-23	859	102850					
Nov-23	859	98912					
Dec-23		96906					

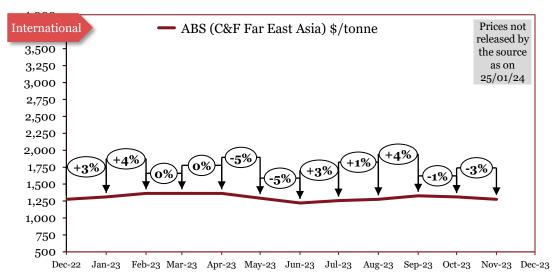
Source: Reliance Industries Ltd.

*The actual prices may vary depending on city, player, grade etc.

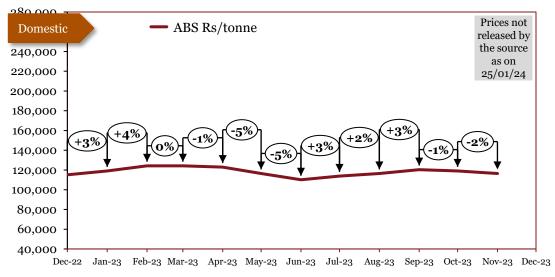
Outlook

In January, prices increased due to a significant increase in Prices for feedstock Polymer-Grade Propylene (PGP) in North America. In February, prices increased as propylene and crude oil prices increased. In March, prices fell in tandem with crude oil prices. In April, prices fell amid falling feedstock costs. In May, prices fell in tandem with crude oil prices. In June, prices declined due to persistently subdued demand sentiment coupled with surplus product avails in the region and a weak macroeconomic environment. In July, prices continued to drop as the market failed to generate demand for the surplus supply condition and a drop in feedstock prices. In August and September, prices increased due to rising demand for lightweight vehicle materials in the automotive sector. In October, prices decreased as a result of lower demand from the construction industry. In November, international prices remained stable. Domestic prices continued to drop with the falling crude oil prices. In December, domestic prices fell in tandem with the price of crude oil.

Acrylonitrile Butadiene Styrene (ABS)







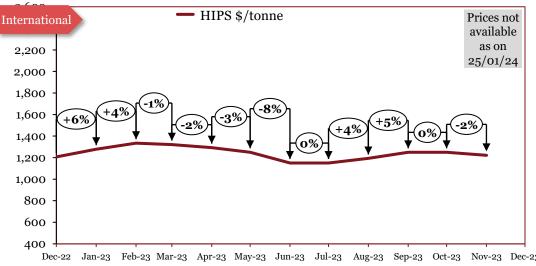
Monthly Average Prices					
	*Int'l	*Dom			
Period	(\$/tonne)	(Rs/tonne)			
Dec-22	1274	115200			
Jan-23	1310	119040			
Feb-23	1363	124160			
Mar-23	1363	124160			
Apr-23	1363	122880			
May-23	1292	116480			
Jun-23	1221	110080			
Jul-23	1257	113920			
Aug-23	1274	116480			
Sep-23	1328	120320			
Oct-23	1310	119040			
Nov-23	1274	116480			
Dec-23					

Source: Crisil

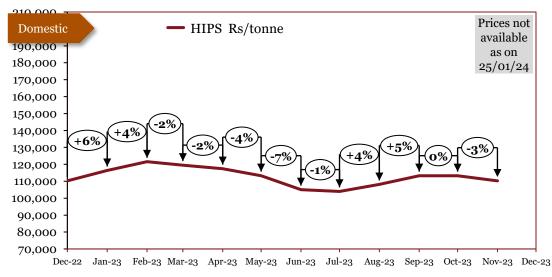
Outlook

In September, prices declined owing to a sustained fall in Styrene prices - a key raw material in the production of ABS. In October, domestic prices rose in tandem with crude oil and coal prices. In October and November, international prices fell due to price drops in the three feedstocks, i.e., Acrylonitrile, Butadiene, and Styrene. In December, prices fell sharply in tandem with crude oil prices. In January and February, prices increased due to stability in production activities, a rise in crude oil prices combined with an increase in feedstock costs (Acrylonitrile and Butadiene), and a recovery in downstream offers. In March and April, prices remained relatively stable. In June, prices declined due to subdued demand, ample supply, and heavily hit consumption as Europe remains hawkish with rate hikes. In July, prices increased due to increased raw material costs (butadiene) and supply cuts from Europe. In August and September, both international and deomestic prices increased due to higher demand from medical and electrical equipment manufacturers. In October, prices remained relatively stable. In November, prices dropped as a result of drop in prices of butadiene and styrene.

High Impact Polystyrene (HIPS)







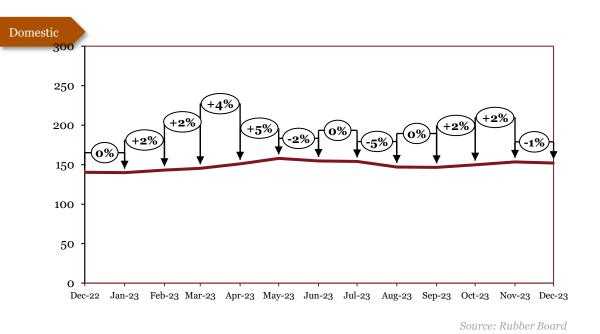
Monthly Average Prices						
Period	*Int'l	*Dom (Rs/tonne)				
101100	(\$/tonne)					
Dec-22	1207	110210				
Jan-23	1278	116390				
Feb-23	1335	121540				
Mar-23	1321	119480				
Apr-23	1292	117420				
May-23	1250	113300				
Jun-23	1150	105060				
Jul-23	1150	104030				
Aug-23	1193	108150				
Sep-23	1250	113300				
Oct-23	1250	113300				
Nov-23	1221	110210				
Dec-23						

Source: Crisil

Outlook

In October, international prices fell due to low end-consumer demand caused by rising concerns over an economic slowdown and a slowdown in the construction sector. Domestic prices rose on account of the high input cost of coal and crude oil. In November, International prices fell in tandem with crude oil prices. Domestic prices remained stable. In December, prices fell sharply in tandem with the price of crude oil. In January and February, prices increased as crude oil prices stabilized. In March, prices fell in tandem with crude oil prices. In April prices surged in tandem with crude oil prices. In May, prices slumped in tandem with crude oil prices. In June, weak demand led to a surplus supply situation causing a significant price drop. In July, prices remained relatively stable. In August, prices increased due to increase in prices of crude oil. In September, prices increased due to higher demand from the food and beverage packaging industry. In October, prices remained stable. In November, prices decreased as a result of a drop in prices of raw materials (styrene).

Natural Rubber



Monthly Average Prices				
Period	*Dom			
	(Rs/kg)			
Dec-22	140			
Jan-23	140			
Feb-23	143			
Mar-23	145			
Apr-23	151			
May-23	158			
Jun-23	155			
Jul-23	154			
Aug-23	147			
Sep-23	147			
Oct-23	150			
Nov-23	154			
Dec-23	152			

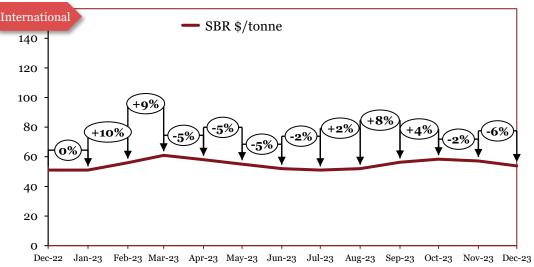
Domestic Price (RSS 4) Rs/Kg

*The actual prices may vary depending on city, player, grade etc.

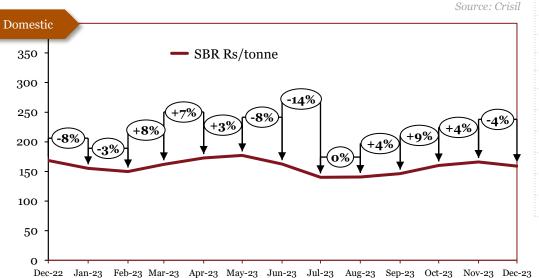
Outlook

In November, prices declined due to lower demand from tire-makers and other domestic bulk buyers, particularly in Kerala's key markets. In December, prices declined on the back of poor demand from the tyre market, along with the onset of the peak tapping season. In January and February, prices remained relatively stable. In March and April, prices increased due to reduced production from the other major producers of rubber -Thailand, Malaysia, and Indonesia. In May, prices increased slightly in tandem with demand. In June, prices fell amid lingering concerns about faltering demand from top consumer China. In July, prices remained stable. In July prices remained relatively stable. In August, prices decreased to supply of cheaper imported rubber from South-east Asia. In September, prices remained relatively stable. In October, prices rose due to increased demand from the tire industry, especially in China. In November, prices increased due to a shortage of supply caused by heavy rains in south and south-east Asia. In December, prices remained relatively stable.

Styrene Butadiene Rubber (SBR)



Monthly Average Prices						
	*Int'l	*Dom				
Period	(\$/tonne)	(Rs/tonne)				
Dec-22	51	169				
Jan-23	51	155				
Feb-23	56	150				
Mar-23	61	162				
Apr-23	58	173				
May-23	55	177				
Jun-23	52	162				
Jul-23	51	140				
Aug-23	52	141				
Sep-23	56	146				
Oct-23	58	160				
Nov-23	57	166				
Dec-23	54	150				



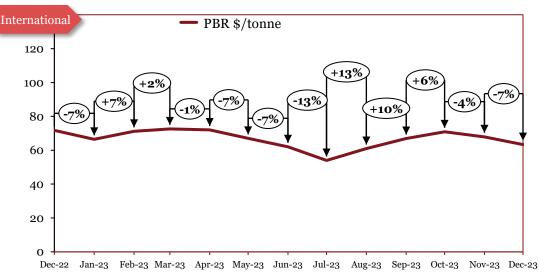
*The actual prices may vary depending on city, player, grade etc.

Outlook

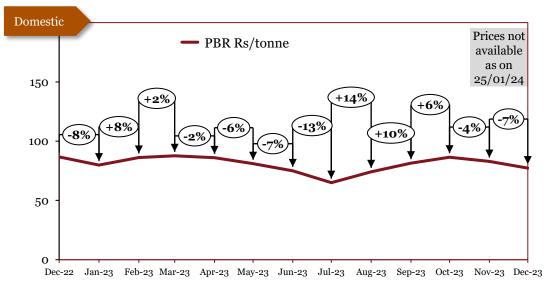
In July, prices declined due to decreased prices of its major feedstock (butadiene). In August, international prices increased due to increase in raw material costs (butadiene). Domestic prices remained relatively stable. In September, prices increased due to an increase in price of crude oil. In September, prices increased due to increase in price on Butadiene. In addition to this, price of crude oil and an increased demand from rubber and polymer industry led to an increase in prices. In October, prices increased due supply shortage caused by the maintenance shutdown of styrene and butadiene plants in China. In November, international prices decreased due to weak demand caused by negative macroeconomic conditions. Domestic prices continued to increase amidst higher demand for 2w and 3w tire production. In December, prices fell due to a sharp decline in crude oil prices.

Source: SIAM

Polybutadiene Rubber (PBR)



Source: Crisil



Monthly Average Prices					
	*Int'l	*Dom			
Period	(\$/tonne)	(Rs/tonne			
Dec-22	72	87			
Jan-23	66	80			
Feb-23	71	86			
Mar-23	73	88			
Apr-23	72	86			
May-23	67	81			
Jun-23	62	75			
Jul-23	54	65			
Aug-23	61	74			
Sep-23	67	81			
Oct-23	71	87			
Nov-23	68	83			
Dec-23	63	77			

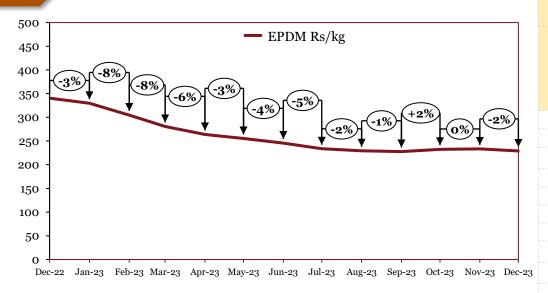
Source: Crisil

Outlook

In March, prices increased as the automotive industry recovered from the semiconductor crisis. In April prices remained relatively stable. In May, prices plummeted in tandem with crude oil prices. In June, the prices dropped due to the underperformance of the tire industry, the stable manufacturing sector, reduced feedstock costs, and surplus inventories. In August, prices increased due to an increase in the price of raw materials (butadiene) and an increased demand from the tire industry. In September and October, prices increased due to the increase in prices of Butadiene. In addition to this, the price of crude oil and an increased demand from the rubber and polymer industry led to an increase in prices. In November, prices fell in tandem with the falling crude oil prices. In December, prices dropped as a result of reduced crude oil prices.

Ethylene Propylene Diene Monomer (EPDM)





Monthly Average Prices			
	*Dom		
Period	(Rs/kg)		
Dec-22	340		
Jan-23	329		
Feb-23	305		
Mar-23	281		
Apr-23	264		
May-23	255		
Jun-23	246		
Jul-23	234		
Aug-23	229		
Sep-23	228		
Oct-23	233		
Nov-23	233		
Dec-23	229		

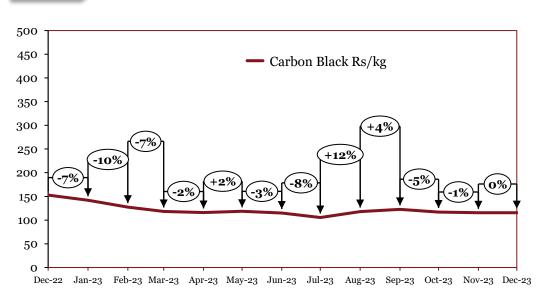
Source: SIAM

Outlook

Prices have been on a decline after the auto industry was hit first by the semiconductor chip shortage followed by the general economic downturn. The price war initiated by Tesla in China to destock inventories and reduce production also has taken its toll on EPDM consumption. In May, prices decreased in tandem with crude oil prices. In June, prices continued to fall despite easing supply chain constraints, lower shipping container costs, and fewer berth delays. In July, the price drop was attributed to a consistent fall in the prices of feedstock ethylene and propylene for several weeks, as a result, the manufacturing cost of EPDM rubber was substantially reduced, leading to lower market prices. In August, prices decreased due to falling ethylene and propylene feedstock prices, which in turn reduced manufacturing costs. In September, prices remained relatively stable. In October, prices rose due to an increase in prices of ethylene and propylene. In November, prices remained stable. In December, prices fell in tandem with a decrease in price of ethylene.

Carbon Black

Domestic



Source: SIAM

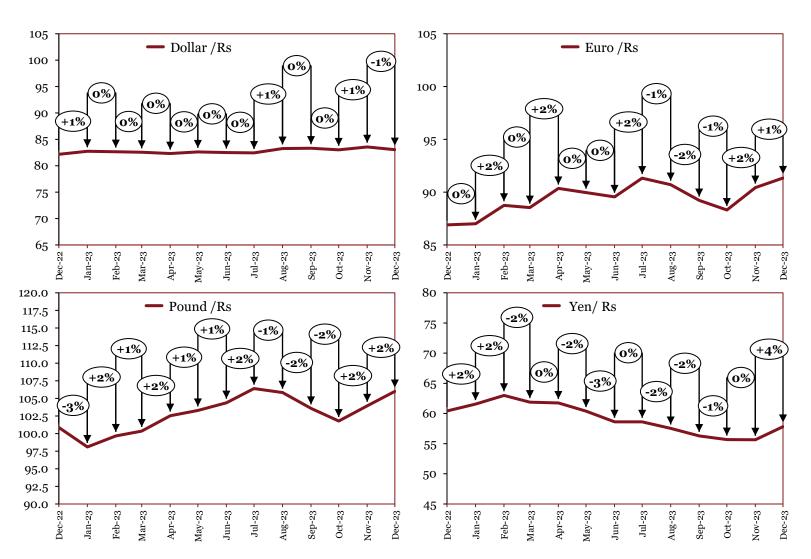
Monthly Av	Monthly Average Prices				
Period	*Dom (Rs/kg)				
Dec-22	153				
Jan-23	142				
Feb-23	127				
Mar-23	118				
Apr-23	116				
May-23	119				
Jun-23	115				
Jul-23	106				
Aug-23	118				
Sep-23	123				
Oct-23	117				
Nov-23	116				
Dec-23	116				

Outlook

Multiple sanctions on Russia, a key carbon black exporter, have added pressure on supplies. Rising wage costs and the government's tab on rising pollution have restrained supply in China as well, further affecting supply. In May, prices remained relatively stable. In June, prices decreased on account of low demand from the end-consumer. In July, the prices continued to plummet with greater momentum as demand from end-consumer remained constant, increased cost of production, surplus inventories and economic slowdown in China. In August, prices increased due to stricter Chinese environmental regulations led to reduced Chinese exports, causing price surges. In addition to this, increased production in the tire and rubber industry also led to increased demand. In September, prices increased due to increased demand from tire industry and reduced imports. In October, prices decreased due a decrease in the price of oil, combined with sluggish local demand. In November, prices remained stable. In December prices remained stable.

Appendices

Forex Movement

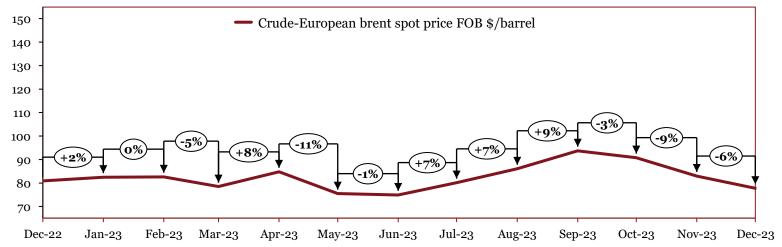


Source: SIAM

	Monthly Average Prices (Rs)												
	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
\$	82	83	83	83	82	83	83	82	83	83	83	84	83
£	101	98	100	100	103	103	104	106	106	104	102	104	106
€	87	87	89	89	90	90	90	91	91	89	88	90	91
¥	60	62	63	62	62	60	59	59	58	56	56	56	58

Crude Oil

Source: SIAM



Monthly Average Prices (\$/barrel)												
Dec-22 Jan-23 Feb-23 Mar- 23 Apr-23 Jun-23 Jul-23 Aug-23 Sep-23 Oct-23 Nov-23 Dec-23												
81	82	83	78	85	75	75	80	86	94	91	83	78

Commodity	International	Domestic
Iron Ore	IOECI635 Index (CIF China) - (Fe63.5%) CIF China	Crisil - Grade 1: 58% to below 60% Fe Fines - Grade 2: 60% to below 62% Fe Fines - Grade 3: 62% to below 65% Fe Fines - Grade 4: 65% and above Fe Fines
Pig Iron	Crisil -Foundry grade FOB CIS	Crisil -Foundry grade ex-factory, India
Stainless steel	NA	PwC Research -G 304 CR Coil -G 304 HR Coil
Wire rod	Crisil -CIS Black Sea (US \$/Tonne)	Crisil - Wire rods: 5.5 mm (Prices are inclusive of excise duty by exclusive of VAT/Sales tax)
Steel Billets	Crisil -FOB CIS Black Sea Previously: Bloomberg Black Sea Steel Billet Spot FOB	Crisil - 100^100 mm (Avg. prices collated from 2-3 locations)
Hot-rolled coils	Crisil -FOB Black Sea	Crisil - 14G 2mm (Avg. prices collated from 2-3 locations)
Cold-rolled coils	Crisil -(CIS) FOB Black Sea	Crisil - Mumbai 16G (Avg. prices collated from 2-3 locations)
Steel Scrap	NA	Crisil - Heavy melting (excl. GST)
EN 8	NA	PwC Research -EN8 Alloy forging
20MnCr5	NA	PwC Research -Alloy forging
Ferro chrome	Crisil : FOB Hong Kong Cr 50%	Crisil: Ex-factory Cr 60%
Ferro silicon	Crisil - FOB China Si 75%	Crisil - Ex-factory Si 70%

Commodity	International	Domestic
Aluminium	LME -Primary aluminium with impurities no greater than the chemical composition of one of the registered designations: •P1020A in the North American and International Registration Record entitled "International Designations and Chemical Composition Limits for Unalloyed Aluminium" (revised March 2007) •Al99.70 in the GB/T 1196-2008 Standard entitled "Unalloyed aluminium ingots for remelting"	NCDEX, MCX (July'19 onwards) -Primary aluminium 99.7% purity (minimum) form: ingots, T-bars,
Copper	LME -Grade A copper must conform to the chemical composition of one of the following standards: •BS EN 1978:1998 - Cu-CATH-1 •GB/T 467-2010 - Cu-CATH-1 •ASTM B115-10 - cathode Grade 1	MCX - Grade 1 electrolytic copper as per B115 specification
Zine	LME -Special high-grade zinc of 99.995% purity (minimum) must conform to the chemical composition of one of the following standards: •BS EN 1179:2003 - 99.995% grade •ISO 752:2004 - ZN-1 grade •ASTM B6-12 - LME grade •GB/T 470-2008 - Zn99.995 grade	NCDEX, MCX (July'19 onwards) - Zinc of 99.995% minimum purity. Zinc must conform with the 99.995% graded chemical composition of BS EN 1179:1996 Standard entitled "Zinc and Zinc alloys primary Zinc" Form: ingots
Lead	LME - Lead of 99.97% purity (minimum) conforming to BS EN 12659:1999 - GB/T 469/2005	MCX - Lead ingots with minimum purity of 99.97%

Commodity	International	Domestic
Nickel	LME - Nickel of 99.80% purity (minimum) conforming to B39-79 (2013) - GB/T 6516-2010	NCDEX, MCX (July'19 onwards) - 4"*4" approved pure cut Nickel of 99.80% purity (minimum)
Tin	LME - Tin of 99.85% purity (minimum) conforming to BS EN 610:1996	Bloomberg - Tin (min 99.85%) \$/tonne
Platinum	Metal in sponge form with minimum purities of 99.95% for platinum and palladium, and 99.9% for rhodium	
Palladium		
Rhodium		
Low density polyethylene (LDPE)	International price (C&F FEA) \$/tonne	RIL-16MA400 grade
Polypropylene (PP)	International Price (PPHP) \$/tonne	RIL-D120MA grade
Acrylonitrile Butadiene Styrene (ABS)	International price (C&F FEA) \$/tonne	Landed Cost Rs/tonne
High Impact Polystyrene (HIPS)	International price \$/tonne	Landed Cost Rs/tonne
Rubber Prices	NA	NCDEX/Rubber board - RSS 4 (Ribbed Smoked Sheet 4) ex- warehouse Kochi exclusive of all taxes
Styrene Butadiene Rubber (SBR)	International Price Index (Base Price: \$ 2,825-2,875 per tonne)	Landed Cost Rs/kg
Polybutadiene Rubber (PBR)	International price Index (Base Price: \$ 2,730-2,780 per tonne)	Landed cost Index (Base cost: Rs 207,000 - 211,000 per tonne)

Commodity	International	Domestic
Ethylene Propylene Diene Monomer (EPDM)	NA	Landed Cost Rs/kg
Carbon Black	NA	Landed Cost Rs/kg
Forex Movement	RBI reference rates	
Crude	European Brent spot price FOB \$/barrel – Energy Information Administration (EIA)	



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