

# Mineral Industry Surveys

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## FLUORSPAR IN THE SECOND QUARTER 2011

Reported fluorspar consumption in the second quarter was 99,900 metric tons (t), a decrease of 19% compared with the revised figure of the previous quarter and 11% less than that consumed in the second quarter of 2010. First quarter stocks decreased slightly compared with those of the previous quarter but were 27% higher than those of the second quarter of 2010. End-of-quarter prices are now shown in table 5, which shows Industrial Minerals magazine prices for the past five quarters.

### Industry News

A World Trade Organization (WTO) dispute settlement panel ruled that aspects of China's export policies on several important industrial raw materials (including fluorspar) are inconsistent with China's WTO obligations. The panel recommended that China bring its policies into conformity with its WTO obligations, although China had until September 3, 2011, to appeal the findings. The WTO panel's findings were the result of complaints filed in 2009 by the European Union, Mexico, and the United States about China's policy of applying export duties, export licenses, export quotas, and minimum export prices on fluorspar and several other mineral commodities. The panel found that China's export duties and export quotas were inconsistent with WTO rules, and that certain aspects of China's export licensing system restrict exports and are therefore inconsistent with WTO rules. Concerning China's argument that its export policies were justified on grounds of natural resource conservation, the panel found that China was unable to prove that it imposed such export restrictions while restricting domestic production or consumption of the raw materials in order to conserve the raw materials (O'Driscoll, 2011).

Canada Fluorspar Inc. (Markham, Ontario, Canada) and French fluorochemicals company Arkema Inc. (Colombes) signed an agreement worth about \$85 million to fund reopening of the St. Lawrence fluorspar mine. The agreement called for the initial purchase of about \$16 million worth of Canada Fluorspar shares. The deal combines the mine, mill, and associated assets into a limited partnership in which Canada Fluorspar and Arkema will each hold 50% stakes. As part of the partnership, Canada Fluorspar and Arkema will

enter into an offtake agreement whereby the partners will each receive a prorated share of the output at a price equal to the cost of production plus an agreed upon fee. In addition, for a period of 10 years, Arkema will have the right to purchase approximately 20% of CFI's share of the output on a pricing basis that includes costs plus a fixed margin. Arkema promised to fund the partnership for about \$70 million (Canada Fluorspar Inc., 2011). The mine last operated in the early 1990s and is near the town of St. Lawrence on the Burin Peninsula of Newfoundland Island in the Province of Newfoundland and Labrador, Canada.

South African fluorspar producer Witkop Fluorspar Mine (Pty.) Ltd. restarted operations in the second quarter. The mine had been on standby since late second quarter 2009 (Nicholas Davidoff, Firebird Management LLC, written commun., August 15, 2011).

### Price Information

Fluorspar prices began rising in the first quarter of 2011 and continued to rise in the second quarter. Prices for Chinese fluorspar, acidspar and metspar, exhibited the largest increases owing to increases in production costs, appreciation of the Chinese yuan to the U.S. dollar, and rising demand. Rising fluorspar prices have caused price increases for fluorspar-derived products such as aluminum fluoride and fluoropolymers. For example, Daikin Industries, Ltd. (Osaka, Japan) raised the prices for all fluorochemical products by 20% to 30%, effective March 1, 2011. The company cited rising raw material costs for fluorspar and hydrofluoric acid as the reasons (Daikin Industries, Ltd., 2011).

### References Cited

- Canada Fluorspar Inc., 2011, Canada Fluorspar announces strategic agreement with Arkema resulting in a CDN\$83.5 million investment to fund the St. Lawrence fluorspar project: Markham, Ontario, Canada, Canada Fluorspar Inc. news release, June 15, 4 p.
- Daikin Industries, Ltd., 2011, Daikin Industries, Ltd. will raise the prices for all fluorochemical products: Osaka, Japan, Daikin Industries, Ltd. news release, February 3, 2 p.
- O'Driscoll, Mike, 2011, WTO finds against Chinese export mineral policies: Industrial Minerals, no. 527, August, p. 10.

TABLE 1  
 SALIENT FLUORSPAR STATISTICS<sup>1</sup>  
 (Metric tons, unless otherwise specified)

	2010			2011		
	Second quarter	Third quarter	Fourth quarter	First quarter	Second quarter	First–second quarter
Imports for consumption	131,000	146,000	131,000	181,000	126,000	307,000
Exports	4,740	3,430	4,420	5,520	6,250	11,800
End of the period stocks, consumer	108,000	97,400	131,000 <sup>r</sup>	140,000 <sup>r</sup>	137,000	137,000
Imports for consumption of hydrofluoric acid	34,300	36,500	35,000	34,400	35,100	69,400
Imports for consumption of cryolite	960	1,650	1,190	1,900	2,090	3,990
Quarterly reported fluorspar consumption	112,000	112,000	106,000 <sup>r</sup>	124,000 <sup>r</sup>	99,900	224,000

<sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 2  
CONSUMPTION OF FLUORSPAR BY END USE AND ASSAY RANGE<sup>1</sup>  
(DOMESTIC AND FOREIGN IN THE UNITED STATES)

(Metric tons)

	Hydrofluoric acid and other uses <sup>2</sup>	Metallurgical	Total	Stocks, end of period <sup>3</sup>
2010:				
First quarter:				
More than 97% calcium fluoride	107,000	2,720	110,000	93,400
Not more than 97% calcium fluoride	--	6,010	6,010	13,400
Total	107,000	8,730	116,000	107,000
Second quarter:				
More than 97% calcium fluoride	102,000	2,720	105,000	95,200
Not more than 97% calcium fluoride	--	7,120	7,120	12,400
Total	102,000	9,840	112,000	108,000
Third quarter:				
More than 97% calcium fluoride	102,000	2,720	105,000	85,000
Not more than 97% calcium fluoride	--	7,120	7,120	12,400
Total	102,000	9,840	112,000	97,400
Fourth quarter:				
More than 97% calcium fluoride	96,700 <sup>r</sup>	2,720	99,500 <sup>r</sup>	112,000 <sup>r</sup>
Not more than 97% calcium fluoride	--	6,510 <sup>r</sup>	6,510 <sup>r</sup>	19,000 <sup>r</sup>
Total	96,700 <sup>r</sup>	9,230 <sup>r</sup>	106,000 <sup>r</sup>	131,000 <sup>r</sup>
Grand total	409,000 <sup>r</sup>	37,600 <sup>r</sup>	446,000 <sup>r</sup>	131,000 <sup>r</sup>
2011:				
First quarter:				
More than 97% calcium fluoride	114,000 <sup>r</sup>	2,990	117,000 <sup>r</sup>	123,000 <sup>r</sup>
Not more than 97% calcium fluoride	--	6,960 <sup>r</sup>	6,960 <sup>r</sup>	17,700 <sup>r</sup>
Total	114,000 <sup>r</sup>	9,950 <sup>r</sup>	124,000 <sup>r</sup>	140,000 <sup>r</sup>
Second quarter:				
More than 97% calcium fluoride	89,500	2,990	92,500	121,000
Not more than 97% calcium fluoride	--	7,340	7,340	16,300
Total	89,500	10,300	99,900	137,000
Grand total	203,000	20,300	224,000	137,000

<sup>r</sup>Revised. -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>May include cement, enamel, glass and fiberglass, steel castings, hydrofluoric acid, and welding rod coatings.

<sup>3</sup>Stocks include some distributor stocks and consumer stocks for hydrofluoric acid.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF FLUORSPAR, BY COUNTRY AND VALUE<sup>1,2</sup>

	2010						2011					
	Second quarter		Third quarter		Fourth quarter		First quarter		Second quarter		First–second quarter	
	Quantity (metric tons)	Value (thousands)										
Containing more than 97% calcium fluoride:												
China	28,000	\$8,160	10,400	\$3,230	20,200	\$7,000	25,000	\$9,450	26,300	\$13,400	51,400	\$22,800
Mexico	66,600	11,500	90,100	15,700	79,400	13,900	90,500	15,900	61,600	11,900	152,000	27,700
Mongolia	11,900	3,400	--	--	10,200	2,900	--	--	--	--	--	--
South Africa	9,900	2,510	9,900	2,380	--	--	15,600	4,000	6,670	1,700	22,200	5,710
United Kingdom	1	5	554	66	3	4	1	5	1	5	2	10
Other	--	--	118	15	134	17	1	7	--	--	1	7
Total	116,000	25,600	111,000	21,400	110,000	23,800	131,000	29,300	94,600	27,000	226,000	56,300
Containing not more than 97% calcium fluoride:												
Mexico	14,400	1,480	35,400	3,540	21,100	2,160	50,400	5,060	31,500	3,800	81,800	8,860
Other	--	--	1	3	--	--	--	--	--	--	--	--
Total	14,400	1,480	35,400	3,540	21,100	2,160	50,400	5,060	31,500	3,800	81,800	8,860
Grand total	131,000	27,100	146,000	24,900	131,000	25,900	181,000	34,400	126,000	30,800	307,000	65,200

-- Zero.

<sup>1</sup>Imports for consumption include imports of immediate entry and warehouse withdrawals.

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 4  
IMPORTS FOR CONSUMPTION OF HYDROFLUORIC ACID<sup>1</sup>

	2010						2011					
	Second quarter		Third quarter		Fourth quarter		First quarter		Second quarter		First–second quarter	
	Quantity (metric tons)	Value <sup>2</sup> (thousands)										
Canada	2,630	\$10,100	4,080	\$13,500	2,950	\$10,500	1,850	\$6,040	4,940	\$13,000	6,790	\$19,100
China	1,770	2,100	1,790	2,230	1,690	2,230	1,370	1,920	1,280	2,080	2,660	4,000
Germany	92	308	76	255	61	219	45	162	83	239	128	401
Japan	172	413	228	545	286	663	244	595	358	755	602	1,350
Mexico	29,600	38,000	30,200	38,000	29,800	37,200	30,700	43,700	28,200	40,700	58,900	84,300
Other	109	245	143	331	159	348	175	274	204	407	379	681
Total	34,300	51,100	36,500	54,800	35,000	51,100	34,400	52,700	35,100	57,200	69,400	110,000

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Cost, insurance, and freight at U.S. ports.

Source: U.S. Census Bureau.

TABLE 5  
 QUARTERLY FLUORSPAR PRICES<sup>1</sup>

(Dollars per metric ton)

	2010			2011	
	Second quarter	Third quarter	Fourth quarter	First quarter	Second
Acidspar:					
Chinese, dry basis, cost, insurance, and freight (c.i.f.) Gulf port, filtercake	350-380	350-380	370-400	440-460	
Chinese, f.o.b. China, wet filtercake	275-300	275-300	300-320	400-420	
Mexican, free on board (f.o.b.) Tampico, filtercake	260-285	260-290	260-290	330-360	
Mexican, f.o.b. Tampico, arsenic <5 parts per million	300-360	280-320	290-320	350-370	
South African, f.o.b. Durban, filtercake	250-280	250-280	290-310	330-335	
Metspar, Mexican, f.o.b. Tampico	170-200	170-200	170-200	180-220	

<sup>1</sup>Source: Industrial Minerals magazine (London).