

Mineral Industry Surveys

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FLUORSPAR IN THE FIRST QUARTER 2007

Reported fluorspar consumption in the first quarter was 132,000 metric tons (t), an increase of 44% compared with that of the previous quarter but a 7% decrease compared with the figure for the first quarter of 2006. Consumption of fluorspar for hydrofluoric acid (HF) and aluminum fluoride was 114,000 t, a 52% increase compared with that of the previous quarter but 7% lower than that in the first quarter of 2006. Imports of fluorspar were 111,000 t, a decrease of 9% compared with those of the previous quarter, and nearly 39% less than was imported in the first quarter of 2006.

In recent years, the accuracy of data on fluorspar imports has become less reliable with respect to import values, making calculation of accurate average import values for acid-grade fluorspar impossible. Normally, as part of the entry process, goods must be “classified” (determined where in the U.S. tariff system they fall) and their value must be determined. Pursuant to the Customs Modernization Act, it is the responsibility of the importer of record to use “reasonable care” to “enter,” “classify” and “value” the goods and provide any other information necessary to enable the U.S. Customs Service to properly assess duties, collect accurate statistics, and determine whether all other applicable legal requirements are met.

National Defense Stockpile

In March, the Defense National Stockpile Center (DNSC) announced the award of 7,691 SDT (6,977 t) of metallurgical-grade fluorspar for \$123,380 to Hastie Mining & Trucking Co., Cave-In-Rock, IL. According to the news release, this sale represented the last of the DNSC inventory of fluorspar (Defense Logistics Agency, Defense National Stockpile Center, 2007). At the end of the first quarter 2007, however, the DNSC inventory still listed 1,327 short dry tons (SDT) (1,204 t) of metallurgical-grade fluorspar as excess material meeting specification. Material committed for sale pending shipment totaled 18,194 SDT (16,505 t) of metallurgical grade.

Industry News

Maghreb Minerals Plc has been awarded four exploration permits in the Zaghoun fluorite district located 60 kilometers south of Tunis in Tunisia. The four permit areas—Zriba-Guebli,

Koh ol, Mesella, and Sidi at Taia—cover an area of known fluorite, lead, and zinc mineralization and historic mining operations. The Zriba-Guebli permit covers the Zriba Mine and the Guebli deposit, which is believed to be an extension of the deposit worked in the Zriba Mine. The Zriba Mine operated between 1967 and 1992, when it was closed because of low fluorspar prices. Fluorspar production from the mine was used to supply Tunisia’s aluminum fluoride plant, which since the mine closure has been supplied entirely by imports (Maghreb Minerals Plc, 2006).

In a subsequent announcement, Maghreb Minerals reported that it was beginning a 1,200-meter drilling program in the Zriba-Guebli permit area. The program entailed the use of two drill rigs and was scheduled for completion in July 2007. The Government’s Office National des Mines estimated the remaining resources in the southern part of the Zriba Mine and Guebli deposit to be around 4 million metric tons, which included 850,000 t classified as reserves (Industrial Minerals, 2007).

Fluorochemical News

Arkema Group announced that it was closing its HF and hydrochlorofluorocarbon 22 (HCFC 22) plants in Pierre-Bénite, France. The company’s reasons for the closures were reduced access to fluorspar supplies with the closure of France’s only fluorspar producer, rising costs of imported fluorspar, and decreasing sales of HCFC 22 refrigerant in the European market (Arkema Group, 2007).

Solvay Solexis announced plans to double production capacity for perfluoropolyether (PFPE) polymers at its plant in Spinetta Marengo, Italy. The company’s PFPE product lines are primarily used as oil and grease repellents in products such as grease proof paper packaging. The plans also called for the plant to produce hydrofluoropolyether, which is marketed as a high-performance heat transfer fluid (Solvay Solexis, 2007).

References Cited

Arkema Group, 2007, Arkema continues to reorganize its activities in Rhône-Alpes (France): Colombes, France, Arkema press release, March 22, 3 p.

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Industrial Minerals, 2007, Maghreb develops fluorspar: Industrial Minerals, no. 478, July, p. 9.

Maghreb Minerals Plc, 2006, Maghreb Minerals Plc—Acquisition of permits with extensive fluorite resources: London, United Kingdom, Maghreb Minerals Plc press release, December 7, 3 p.

Solvay Solexis, 2007, Solvay Solexis expands perfluoropolyethers (PFPE) production capacity in Spinetta Marengo (Italy): Brussels, Belgium, Solvay press release, February 22, 2 p.

TABLE 1
SALIENT FLUORSPAR STATISTICS[§]

(Metric tons, unless otherwise specified)

	2006					2007	
	First quarter	Second quarter	Third quarter	Fourth quarter	Total or average	First quarter	
Imports for consumption:	181,000	83,800	165,000	122,000	553,000	111,000	
Average value per ton, c.i.f. U.S. port, acid grade ²	\$221	\$214	\$211	\$219	\$216	NA ³	
Average value per ton, c.i.f. U.S. port, metallurgical	\$104	\$96	\$100	\$111	\$101 ^r	\$110	
Exports	3,850	3,790	3,060	2,300	13,000	3,750	
End of quarter stocks, consumer	109,000	78,200	103,000	79,400	XX	88,900	
Imports for consumption of hydrofluoric acid ⁴	40,500	37,600	37,400	40,400	156,000	41,500	
Imports for consumption of cryolite ⁴	1,360	945	919	733	3,960	1,550	
Quarterly reported fluorspar consumption	143,000	135,000	154,000	91,400	523,000	132,000	

^rRevised. NA Not available. XX Not applicable.

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

²Average values per ton have been adjusted by the USGS using published prices and data from industry sources and may not agree with values calculated strictly from U.S. Census Bureau data.

³Value data for the first quarter appear to be under reported and are too low to make accurate average value per ton calculations for acid-grade imports.

⁴In the past these data showed imports in fluorspar equivalents, but data are now actual imports for consumption of indicated materials.

TABLE 2
 CONSUMPTION OF FLUORSPAR BY END USE AND ASSAY RANGE¹
 (DOMESTIC AND FOREIGN IN THE UNITED STATES)

(Metric tons)

	Hydrofluoric acid and aluminum fluoride	Metallurgical	Other uses or products ²	Total	Stocks, end of period ³
2006:					
First quarter:					
More than 97% calcium fluoride	123,000	4,160	8,080	135,000	93,700
Not more than 97% calcium fluoride	--	8,160	--	8,160	15,600
Total	123,000	12,300	8,080	143,000	109,000
Second quarter:					
More than 97% calcium fluoride	113,000	4,520	8,520	126,000	53,900
Not more than 97% calcium fluoride	--	8,880	--	8,880	24,300
Total	113,000	13,400	8,520	135,000	78,200
Third quarter:					
More than 97% calcium fluoride	133,000	4,520	8,170	146,000	74,500
Not more than 97% calcium fluoride	--	8,250	--	8,250	28,700
Total	133,000	12,800	8,170	154,000	103,000
Fourth quarter:					
More than 97% calcium fluoride	75,000	2,440	6,360	83,800	56,900
Not more than 97% calcium fluoride	--	3,820	3,750	7,570	22,400
Total	75,000	6,260	10,100	91,400	79,400
Grand total	444,000	44,800	34,900	523,000	XX
2007:					
First quarter:					
More than 97% calcium fluoride	114,000	3,630	7,020	124,000	67,900
Not more than 97% calcium fluoride	--	3,920	3,810	7,740	20,900
Total	114,000	7,550	10,800	132,000	88,900

XX Not applicable. -- Zero.

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

²Includes acid grade used in enamel, glass and fiberglass, steel castings, and welding rod coatings.

³Stocks include distributor stocks (excluding National Defense Stockpile holdings) and consumer stocks for hydrofluoric acid and aluminum fluoride.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF FLUORSPAR, BY COUNTRY AND VALUE^{1,2}

	2006										2007	
	First quarter		Second quarter		Third quarter		Fourth quarter		Total		First quarter	
	Quantity (metric tons)	Value ³ (thousands)	Quantity (metric tons)	Value ³ (thousands)	Quantity (metric tons)	Value ³ (thousands)	Quantity (metric tons)	Value ³ (thousands)	Quantity (metric tons)	Value ³ (thousands)	Quantity (metric tons)	Value ⁴ (thousands)
Containing more than 97% calcium fluoride:												
China	132,000	\$29,900	44,000	\$10,100	104,000	\$22,000	80,000	\$17,900	359,000	\$79,900	46,200	\$9,450
Germany	--	--	--	--	--	--	17	13	17	13	--	--
Japan	--	--	--	--	--	--	61	10	61	10	--	--
Mexico	11,300	2,140	16,700	2,950	9,860	2,100	17,100	3,270	54,900	10,500	58,300	9,040
Mongolia	4,940	988	--	--	27,600	5,600	--	--	32,500	6,590	--	--
South Africa	17,100	3,410	8,040	1,610	--	--	18,200	4,070	43,300	9,090	--	--
United Kingdom	2	16	2	4	--	--	347 ^r	46 ^r	351 ^r	66 ^r	3	6
Total	165,000	36,500	68,800	14,700	141,000	29,700	116,000	25,300	490,000	106,000	105,000	18,500
Containing not more than 97% calcium fluoride:												
Mexico	16,300	1,680	15,000	1,450	24,500	2,430	6,540	728	62,300 ^r	6,290	6,860	751
South Africa	--	--	--	--	--	--	--	--	--	--	18	5
Total	16,200	1,680	15,000	1,450	24,500	2,430	6,540	728	62,300	6,290	6,880	756
Grand total	181,000	38,200	83,800	16,100	165,000	32,100	122,000	26,000	553,000	112,000	111,000	19,300

^rRevised. -- Zero.

¹Imports for consumption include imports of immediate entry, and warehouse withdrawals.

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

³Cost, insurance, and freight at U.S. ports. Values for some countries have been adjusted by the USGS using published prices and data from industry sources.

⁴Value data for first quarter 2007 imports "containing more than 97% calcium fluoride" are believed to be underreported; insufficient information is available to make accurate adjustments.

Source: U.S. Census Bureau.

TABLE 4
IMPORTS FOR CONSUMPTION OF HYDROFLUORIC ACID¹

	2006										2007	
	First quarter		Second quarter		Third quarter		Fourth quarter		Total		First quarter	
	Quantity (metric tons)	Value ³ (thousands)	Quantity (metric tons)	Value ³ (thousands)	Quantity (metric tons)	Value ³ (thousands)	Quantity (metric tons)	Value ³ (thousands)	Quantity (metric tons)	Value ³ (thousands)	Quantity (metric tons)	Value ³ (thousands)
Canada	12,000	\$12,800	11,100	\$13,600	10,500	\$13,300	8,950	\$12,500	42,600	\$52,300	9,610	\$13,900
China	250	215	409	297	803	518	615	438	2,080	1,470	435	398
Germany	82	163	105	238	77	188	31	64	295	653	93	214
Japan	305	686	276	596	407	906	398	819	1,390	3,010	319	696
Mexico	27,700	27,300	25,600	25,300	25,400	25,700	30,200	30,500	109,000	109,000	31,000	32,000
Other ³	149 ^r	384	113	264	271	478	220	367	753 ^r	1,490	77	63
Total	40,600	41,600	37,600	40,300	37,400	41,200	40,400	44,700	156,000	168,000	41,500	47,200

^rRevised.

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

²Cost, insurance, and freight at U.S. ports.

³Includes India, Italy, the Republic of Korea, the Netherlands, Singapore, Switzerland, and Taiwan

Source: U.S. Census Bureau.