

Mineral Industry Surveys

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FLUORSPAR IN THE FOURTH QUARTER 2008

Reported fluorspar consumption in the fourth quarter was 101,000 metric tons (t), a decrease of 21% compared with that of the previous quarter and a decrease of about 24% compared with consumption in the fourth quarter of 2007. Fourth quarter stocks increased by nearly 29% compared with those of the previous quarter, and were up 28% compared with the fourth quarter of 2007.

Owing to the closure of an aluminum fluoride (AlF₃) plant (see Fluorochemical News below), consumption of acid-grade fluorspar (acidspars) for hydrofluoric acid (HF) is now included under the "Other uses or products" heading in table 2. This was done in order to protect company proprietary data.

In recent years, the import values [cost, insurance, and freight (c.i.f.)] for some acidspars imports appear to have been underreported. As a result, average import values for acidspars, as calculated from U.S. import statistics, are judged to be unreliable and are not listed in table 1. According to *Industrial Minerals* magazine, end-of-fourth-quarter-2008 acidspars prices were—China, dry basis, c.i.f. U.S. Gulf of Mexico port, \$530 to \$550 per metric ton; Mexico, free on board (f.o.b.) Tampico, \$250 to \$325 per metric ton and \$400 to \$425 per metric ton (low arsenic); and South Africa, f.o.b. Durban, \$250 per metric ton (*Industrial Minerals*, 2009b).

There has been some indication of recent decreases in acidspars prices. In February 2009, prices for Mexican low-arsenic acidspars reportedly decreased by \$50 to a range of \$350 to \$370 per metric ton (f.o.b. Tampico), and prices for Chinese acidspars decreased by \$20 to a range of \$510 to \$530 per metric ton (c.i.f. U.S. Gulf of Mexico port) (*Industrial Minerals*, 2009a).

The price of Chinese acidspars may decrease further as a result of a possible elimination of the current 15% export tax on fluorspar. The Chinese Government announced that it would reduce export taxes to zero and give more financial support to exporters as it tries to increase its share of global trade in the current economic downturn (Gil, 2009).

Industry News

Kenya Fluorspar Company Ltd. (KFC) announced that Firebird Global Master Fund II, Ltd. made a significant minority

investment in KFC. The proceeds of this investment will be used to enhance the prospects and profile of the Kerio Valley fluorspar mining operation in Kenya. Firebird Global is a member of U.S.-based Firebird Management LLC, which focuses on investments in global emerging markets and particularly in mining and natural resources. According to KFC, the investment will provide the capital and expertise necessary to continue improvements that include extension of the economic life of the mine by funding a drilling program, upgraded community facilities, and improved operational efficiencies (Kenya Fluorspar Company Ltd., 2009).

Glebe Mines Ltd. (United Kingdom) has received provisional approval of the planning application for the extraction of fluorspar from its Tearsall Quarry from the Peak District National Park Authority. There is one last hurdle to cross, as the decision will now be referred to the Secretary of State for Communities and Local Government, who can decide to make a judgment on the planning decision. The plan would extend the existing Tearsall open pit on Bonsall Moor in Derbyshire, England. The proposal called for the extraction of approximately 660,000 t of fluorspar ore during a 6-year period and would include progressive restoration. On completion of mining, the site would be fully restored to agricultural use during the following year (Peak District National Park Authority, 2009).

Hastie Mining Co. (Cave-In-Rock, IL) Klondike II fluorspar project experienced further delays caused by winter ice storms and last minute State permitting requirements. A contractor has been selected to perform part of the construction work on the project in Livingston County, KY (Boyce Moody, III, Moody Minerals Co., oral commun., March 12, 2009).

Fluorochemical News

Alcoa World Alumina LLC (a business unit of Alcoa Inc.) shut down its AlF₃ plant at Point Comfort, TX. The plant, which was built in the early 1960s, had a capacity of 60,000 metric tons per year of AlF₃ and was the third leading consumer of fluorspar in the United States (David Cahill, Alcoa World Alumina LLC, written commun., January 9, 2009).

References Cited

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TABLE 1
SALIENT FLUORSPAR STATISTICS¹

(Metric tons, unless otherwise specified)

	2007		2008			
	Fourth quarter	First quarter	Second quarter	Third quarter	Fourth quarter	Total or average
Imports for consumption:						
Quantity	177,000	122,000	157,000	125,000	167,000	572,000
Average value per ton, c.i.f. U.S. port, metallurgical grade ²	\$110	\$103	\$106	\$109	\$108	\$107
Exports	3,600	4,070	4,620	4,690	5,470	18,800
End of quarter stocks, consumer	90,100	102,000	107,000	89,700	115,000	XX
Imports for consumption of hydrofluoric acid ³	34,300	35,000	36,700	30,300	30,600	133,000
Imports for consumption of cryolite ³	853	2,370	2,160	2,070	1,050	7,650
Quarterly reported fluorspar consumption	132,000	142,000	138,000	127,000	101,000	508,000

XX Not applicable.

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

²Value data appear to be underreported and are too low to make accurate average-value-per-ton calculations for acid-grade imports.

³In 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
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
Second quarter:					
More than 97% calcium fluoride	124,000	3,710	7,120	135,000	94,600
Not more than 97% calcium fluoride	--	8,230	--	8,230	20,700
Total	124,000	11,900	7,120	143,000	115,000
Third quarter:					
More than 97% calcium fluoride	114,000	3,710	6,990	124,000	95,800
Not more than 97% calcium fluoride	--	7,890	--	7,890	18,300
Total	114,000	11,600	6,990	132,000	114,000
Fourth quarter:					
More than 97% calcium fluoride	112,000	3,710	7,230	123,000	78,200
Not more than 97% calcium fluoride	--	4,210	4,450	8,660	11,900
Total	112,000	7,920	11,700	132,000	90,100
Grand total	464,000	39,000	36,600	539,000	XX
2008:					
First quarter:					
More than 97% calcium fluoride	120,000	4,020	7,640	132,000	85,800
Not more than 97% calcium fluoride	--	9,660	--	9,660	16,100
Total	120,000	13,700	7,640	142,000	102,000
Second quarter:					
More than 97% calcium fluoride	118,000	3,630	7,170	129,000	92,000
Not more than 97% calcium fluoride	--	9,280	--	9,280	15,100
Total	118,000	12,900	7,170	138,000	107,000
Third quarter:					
More than 97% calcium fluoride	107,000	3,630	7,170	118,000	70,800
Not more than 97% calcium fluoride	--	9,170	--	9,170	18,900
Total	107,000	12,800	7,170	127,000	89,700
Fourth quarter:					
More than 97% calcium fluoride	NA	3,630	89,800	93,500	94,300
Not more than 97% calcium fluoride	--	7,170	--	7,170	21,200
Total	NA	10,800	89,800	101,000	115,000
Grand total	346,000	50,200	112,000	508,000	XX

NA Not available. XX Not applicable. -- Zero.

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

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

³Stocks include some distributor stocks and consumer stocks for hydrofluoric acid and aluminum fluoride.

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

	2007		2008									
	Fourth quarter		First quarter		Second quarter		Third quarter		Fourth quarter		Year	
	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)
Containing more than 97% calcium fluoride:												
China	88,600	\$20,600	14,700	\$3,540	68,400	\$21,400	41,800	\$17,200	58,600	\$25,000	184,000	\$67,100
Germany	--	--	133	17	--	--	--	--	--	--	133	17
Mexico	63,500	10,100	67,300	12,300	63,000	11,000	54,400	8,670	64,400	10,000	249,000	42,000
Mongolia	--	--	--	--	--	--	--	--	5,500	2,100	5,500	2,100
Russia	--	--	1	7	--	--	--	--	--	--	1	7
South Africa	10,600	2,840	15,000	2,540	14,500	2,920	39	19	27,200	8,600	56,700	14,100
United Kingdom	348	51	7	20	4	11	592	79	40	9	643	119
Total	163,000	33,600	97,100	18,400	146,000	35,400	96,800	25,900	156,000	45,700	496,000	125,000
Containing not more than 97% calcium fluoride:												
Mexico	14,300	1,580	24,500	2,530	11,100	1,190	28,300	3,100	11,200	1,220	75,200	8,040
Namibia	--	--	276	24	243	21	--	--	283	26	802	71
Total	14,300	1,580	24,800	2,560	11,400	1,210	28,300	3,100	11,500	1,250	76,000	8,110
Grand total	177,000	35,100	122,000	21,000	157,000	36,600	125,000	29,000	167,000	46,900	572,000	133,000

-- 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.

³Value data for 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

	2007		2008									
	Fourth quarter		First quarter		Second quarter		Third quarter		Fourth quarter		Year	
	Quantity (metric tons)	Value ² (thousands)	Quantity (metric tons)	Value ² (thousands)	Quantity (metric tons)	Value ² (thousands)	Quantity (metric tons)	Value ² (thousands)	Quantity (metric tons)	Value ² (thousands)	Quantity (metric tons)	Value ² (thousands)
Canada	5,230	\$9,390	5,130	\$10,000	7,300	\$13,000	6,750	\$13,700	4,710	\$11,600	23,900	\$48,400
China	441	457	442	595	279	365	276	454	691	1,020	1,690	2,430
Germany	163	371	162	346	159	440	165	412	75	223	561	1,420
Japan	255	543	391	933	270	439	246	471	329	673	1,240	2,520
Mexico	28,200	29,700	28,800	30,600	28,700	30,700	22,800	27,100	24,700	28,200	105,000	117,000
Other	35	82	16	52	16	58	48	207	104	266	184	583
Total	34,300	40,500	35,000	42,600	36,700	45,000	30,300	42,400	30,600	42,000	133,000	172,000

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

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

Source: U.S. Census Bureau.