

Mineral Industry Surveys

For information, contact:

M. Michael Miller, Fluorspar Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-7716, Fax: (703) 648-7757
E-mail: mmiller1@usgs.gov

Cheryl J. Crawford (Data)
Telephone: (703) 648-7989
Fax: (703) 648-7792
E-mail: cjcrawfo@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

FLUORSPAR IN THE FIRST QUARTER 2010

Reported fluorspar consumption in the first quarter was 116,000 metric tons (t), an increase of 17% compared with the revised figure of the previous quarter and 29% more than that consumed in the first quarter of 2009. First quarter stocks increased by 4% compared with those of the previous quarter and were 23% lower than those of the first quarter of 2009.

End-of-first-quarter-2010 acidspar prices were unchanged from those of the previous quarter at—China, dry basis, c.i.f. U.S. Gulf of Mexico port, \$350 to \$380 per metric ton; Mexico, free on board (f.o.b.) Tampico, \$300 to \$360 per ton for low-arsenic acidspar and \$260 to \$290 per ton for regular acidspar; and South Africa, f.o.b. Durban, \$250 to \$300 per ton (Industrial Minerals, 2010c).

As a result of continuing strong domestic demand in China and severe weather conditions negatively affecting fluorspar production and transport early in the year, there is some evidence that Chinese acidspar prices are rising. As the dominant producer and exporter in recent decades, China has been the benchmark for fluorspar prices. Fluorspar demand outside of China remains depressed, however, and some non-Chinese consumers and suppliers think that speculation is behind talk on rising prices. The perception of rising prices may not benefit all fluorspar producers, because those that are still producing are concerned that significantly higher prices would result in reopening idle fluorspar mines and possibly renewed investor interest in developing new mines. Until demand rises, increased production would simply result in downward pressure on prices (Industrial Minerals, 2010b).

Industry News

Mexico's second leading fluorspar producer, Fluorita de Mexico S.A. de C.V. (Coahuila) announced that it was in the process of developing new fluorspar mining concessions in the area of its main mine. It was hoped that the new mine operation would be in production by the end of 2010. The new operation would increase Fluorita de Mexico's annual acidspar capacity of 140,000 t by 30,000 to 40,000 t. The company was operating at about 90% of capacity during the first quarter of 2010 (Industrial Minerals, 2010a).

Tertiary Minerals plc (Macclesfield, United Kingdom)

announced the completion of an independent scoping study on its Storuman fluorspar project in Sweden. A fluorspar mine producing 100,000 metric tons per year of acid-grade fluorspar with a mine life of 18 years was judged feasible. The deposit is low grade, and the study was based on a model with a deposit of 18 million metric tons grading 12.3% CaF₂ that was mineable by open pit methods. The current study was based on drilling results from a prior exploration project (1970s) and the 10 holes drilled by Tertiary Minerals in 2008. The company planned additional drilling to define further the orebody and to establish a JORC (Joint Ore Reserves Committee—an Australasian code for reporting exploration results) classified mineral resource (Tertiary Minerals plc, 2010a).

In addition to its Storuman project, Tertiary Minerals has acquired fluorspar exploration rights at the former Lassedalen Mine in Norway. The underground mine operated on a small scale during World War II supplying fluorspar for use in aluminum production. Norsk Hydro A/S dewatered the mine in the late 1970s and carried out a surface and subsurface drilling program that established a fluorspar "reserve" described as "well over 1,000,000 tonnes of (contained) fluorspar concentrate." The reserve estimate is not, however, compliant with any current reserve or resource code. Potentially economic fluorspar mineralization occurs in steeply dipping veins that can be followed more or less continuously on the surface for at least 1 kilometer. The largest veins reach a width of 10 to 13 meters and extend 200 to 250 meters along strike. The company indicated that development of such a high-grade vein deposit would allow production of both metallurgical and acid-grade fluorspar. Future plans included an exploration and metallurgical testing program. Tertiary Minerals' exploration rights run through the end of 2016, and the company must post a bond with the Norwegian Directorate of Mining prior to exploration (Tertiary Minerals plc, 2010b).

References Cited

Industrial Minerals, 2010a, Fluorita eyes acidspar expansion: London, United Kingdom, Industrial Minerals, February 12, 1 p. (Accessed February 12, 2010, via <http://www.indmin.com>.)

Industrial Minerals, 2010b, Fluorspar prices under fire: Industrial Minerals, June 24, 2 p. (Accessed June 28, 2010, via <http://www.indmin.com>.)

Industrial Minerals, 2010c, Prices: Industrial Minerals, no. 511, April, p. 70.

Tertiary Minerals plc, 2010a, Positive scoping study for Tertiary's European fluorspar project: Macclesfield, United Kingdom, Tertiary Minerals plc, news release, July 6, 6 p. (Accessed July 6, 2010, at [http://www.tertiaryminerals.com/uploads/Tertiary RNS Storuman Scoping Study 6 July 2010.pdf](http://www.tertiaryminerals.com/uploads/Tertiary_RNS_Storuman_Scoping_Study_6_July_2010.pdf).)

Tertiary Minerals plc, 2010b, Tertiary Minerals acquires rights to second important fluorspar deposit in Europe: Macclesfield, United Kingdom, Tertiary Minerals plc, news release, July 8, 2 p. (Accessed July 8, 2010, at [http://www.tertiaryminerals.com/uploads/Tertiary RNS Lassedalen Fluorite 8 July 2010.pdf](http://www.tertiaryminerals.com/uploads/Tertiary_RNS_Lassedalen_Fluorite_8_July_2010.pdf).)

TABLE 1
SALIENT FLUORSPAR STATISTICS¹

(Metric tons, unless otherwise specified)

	2009				Total or average	2010
	First quarter	Second quarter	Third quarter	Fourth quarter		First quarter
Imports for consumption:						
Quantity	134,000	90,200	96,000	154,000	475,000	131,000
Average value per ton, c.i.f. U.S. port, metallurgical grade	\$191	\$109	\$98	\$97	\$109	\$98
Exports	2,110	2,440	4,850	4,720	14,100	5,290
End of quarter stocks, consumer	138,000	96,100	99,500	103,000	XX	107,000
Imports for consumption of hydrofluoric acid	29,600	23,300	32,200	28,900	114,000	29,100
Imports for consumption of cryolite	462	319	797	1,250	2,830	1,520
Quarterly reported fluorspar consumption	89,800	97,700	114,000	98,500	400,000	116,000

XX Not applicable.

¹Data 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 RANGE¹
 (DOMESTIC AND FOREIGN IN THE UNITED STATES)

(Metric tons)

	Hydrofluoric acid and other uses ²	Metallurgical	Total	Stocks, end of period ³
2009:				
First quarter:				
More than 97% calcium fluoride	84,100	2,220	86,300	120,000
Not more than 97% calcium fluoride	--	3,440	3,440	18,100
Total	84,100	5,660	89,800	138,000
Second quarter:				
More than 97% calcium fluoride	91,500	2,220	93,700	81,100
Not more than 97% calcium fluoride	--	4,050	4,050	15,000
Total	91,500	6,270	97,700	96,100
Third quarter:				
More than 97% calcium fluoride	106,000	2,220	108,000	85,600
Not more than 97% calcium fluoride	--	6,530	6,530	13,800
Total	106,000	8,750	114,000	99,500
Fourth quarter:				
More than 97% calcium fluoride ^r	89,900	2,720	92,700	87,200
Not more than 97% calcium fluoride	2,030	3,850 ^r	5,870 ^r	15,600 ^r
Total ^r	92,000	6,570	98,500	103,000
Grand total	373,000	27,200 ^r	400,000	XX
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

^rRevised. 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.

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

	2009										2010	
	First quarter		Second quarter		Third quarter		Fourth quarter		Year		First quarter	
	Quantity (metric tons)	Value (thousands)										
Containing more than 97% calcium fluoride:												
China	41,700	\$17,400	325	\$41	11,700	\$3,690	13,600	\$3,190	67,300	\$24,300	40,100	10,100
Mexico	55,800	11,900	58,500	10,300	51,100	8,520	94,300	15,400	260,000	46,200	51,200	8,850
Mongolia	--	--	--	--	9,510	3,380	19,100	5,210	28,600	8,590	--	--
South Africa	32,100	9,470	11,200	4,140	9,900	3,520	7,660	2,000	60,800	19,100	13,500	3,410
United Kingdom	2	4	88	4	484	57	2	5	576	70	1	5
Total	130,000	38,800	70,100	14,500	82,700	19,200	135,000	25,800	417,000	98,300	105,000	22,400
Containing not more than 97% calcium fluoride:												
Mexico	4,790	913	20,100	2,190	13,100	1,280	19,300	1,880	57,300	6,260	25,700	2,520
Namibia	--	--	--	--	203	24	--	--	203	24	--	--
Other	--	--	--	--	1	5	--	--	1	5	--	--
Total	4,790	913	20,100	2,190	13,300	1,310	19,300	1,880	57,500	6,290	25,700	2,520
Grand total	134,000	39,700	90,200	16,700	96,000	20,500	154,000	27,700	475,000	105,000	131,000	24,900

-- 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.

Source: U.S. Census Bureau.

TABLE 4
IMPORTS FOR CONSUMPTION OF HYDROFLUORIC ACID¹

	2009										2010	
	First quarter		Second quarter		Third quarter		Fourth quarter		Year		First quarter	
	Quantity (metric tons)	Value ² (thousands)										
Canada	3,670	\$11,700	2,550	\$9,420	2,480	\$9,350	2,330	\$9,030	11,000	\$39,500	2,300	\$7,810
China	679	854	642	857	1,580	1,540	1,210	1,110	4,110	4,360	1,270	1,260
Germany	115	373	91	296	96	272	101	304	403	1,250	127	281
Japan	138	324	67	122	169	309 ^r	185	427	559	1,180 ^r	206	490
Mexico	24,900	26,700	19,900	23,000	27,800	33,000	25,000	31,300	97,600	114,000	25,200	31,600
Other	65	110	45	85	73	131 ^r	97	262	280	588 ^r	46	105
Total	29,600	40,100	23,300	33,800	32,200	44,600	28,900	42,500	114,000	161,000	29,100	41,500

^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.

Source: U.S. Census Bureau.