

PUMICE AND PUMICITE

By Wallace P. Bolen

Pumice and pumicite consumption in the United States increased nearly 4% in 1994 compared with that of 1993, according to the U.S. Bureau of Mines (USBM). The increase was attributable strictly to increased consumption of domestically produced pumice and pumicite as imports and exports were unchanged. By volume, most imports were for construction related uses with small but significant amounts used for abrasives and stonewashing. Zaire imported pumice into the United States for the first time in 1994. (*See table 1.*)

Production

Pumice and pumicite sold or used by U.S. producers increased to 490,000 metric tons with a value of \$11.8 million. The average price of pumice continued to fall from \$25.68 per metric ton to \$24.08 per ton. As in 1993, the average value decreased because less of the costlier stonewashing grade pumice was consumed while more construction grade pumice was consumed, hence the lower average price. Oregon remained as the largest source of pumice followed by, in descending order, New Mexico, Idaho, California, Arizona, and Kansas.

Domestic production data for pumice and pumicite were developed by the USBM from one voluntary survey of U.S. operations. Thirteen companies with 14 active operations contributed 100% of the quantity and value of pumice and pumicite sold and used as shown in table 1. One of the companies, with one operation, did not respond to the 1994 survey. This company's sold and used data were estimated.

Domestic producers were Tufflite Inc., Phoenix, AZ; California Industrial Minerals Co., Friant, CA; Glass Mountain Pumice Inc., Tulalake, CA; U.S. Pumice Co., Chatsworth, CA; Hess Pumice Products, Malad City, ID; Producers Pumice, Meridan, ID; Calvert Corp., Norton, KS; Kansas Minerals Inc., Mankato, KS; Copar Pumice Co. Inc., Espanola, NM; General Pumice Corp., Santa Fe, NM; Utility Block Co., Albuquerque, NM; Cascade Pumice Co., Bend, OR; and Central Oregon Pumice Co., Bend, OR.

Consumption

The amount of pumice sold or used by U.S. producers increased 4% as demand grew in the abrasives and building block markets. Demand continued to decrease for stone washing pumice as domestic sales fell 7%. Imports of stone washing grade pumice were thought to have experienced an even greater decrease although hard numbers were not available.

The most important market for pumice remained building block, consuming 64% of the total pumice sold or used in the United States. Other important uses, in descending order, were for horticultural and landscaping, 12%; stone washing laundries, 8%; abrasive uses, 7%; and concrete aggregate, 5%. The remaining pumice and pumicite was used for absorbent, diluents, filter aids, roofing granules, water treatment, and other unspecified uses. Because construction activity remained strong in 1994, construction related uses of pumice continued to be a robust market. Concrete aggregate and stonewashing markets declined in 1994 while all other market segments improved. (*See table 2.*)

Foreign Trade

Pumice imports in 1994 remained unchanged at 143,000 tons. Greece continued to be the largest source of imports but the amount of pumice imported dropped 47,000 tons or 41%. Zaire's first time imports to the United States of 56,000 tons represented 39% of total imports. Other major exporting countries to the United States were Ecuador, Italy, Mexico, and Turkey. Besides these countries, 14 other countries exported pumice to the United States.

Exports remained at 18,000 metric tons with a value of \$5.7 million. Canada received 58% of U.S. exports while Japan received 14%. The remainder of exports went to 29 other countries located on every continent except Antarctica. (*See table 3.*)

World Review

Globally, Italy remained the dominant producer of pumice and pozzolan, with annual production around 5 million tons. Other leading countries in the production of pumice

and related materials where Chile, France, Germany, Greece, Spain, Turkey, and the United States. Besides these countries, 19 other countries produced pumice around the world. (*See table 4.*)

Outlook

Consumption of pumice and pumicite in 1995 is expected to increase slightly from 1994, even though construction activity is expected to be slowing down. Stonewashing consumption will probably continue to decrease while both imports and exports will show some growth.

TABLE 1
SALIENT PUMICE AND PUMICITE STATISTICS 1/

(Thousand metric tons and thousand dollars)

	1990	1991	1992	1993	1994
United States: Sold and used by producers:					
Pumice and pumicite	443	401	481	469	490
Value (f.o.b. mine and/or mill)	\$10,700	\$9,190	\$14,900	\$12,000	\$11,800
Average value per ton	\$24.13	\$22.90	\$30.99	\$25.68	\$24.08
Exports e/	20	13	13	18	18
Imports for consumption	280	118	257	143	143
Apparent consumption 2/	703	506	727	594	615
World: Production, pumice and related volcanic materials	11,500 r/	10,800	10,900 r/	11,200 r/	11,400 e/

e/ Estimated. r/ Revised.

1/ Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits.

2/ Production plus imports, minus exports, plus adjustments for Government and industry stock changes.

TABLE 2
PUMICE AND PUMICITE SOLD AND USED BY PRODUCERS IN THE UNITED STATES, BY USE 1/

(Thousand metric tons and thousand dollars)

Use	1993		1994	
	Quantity	Value	Quantity	Value
Abrasives 2/	31	3,390	35	3,660
Building block (includes decorative)	279	3,760	315	3,030
Concrete admixture and aggregate	43	883	24	751
Horticultural and landscaping	57	1,530	59	1,730
Laundries	42	1,870	38	1,870
Other 3/	17	618	19	770
Total	469	12,000	490	11,800

1/ Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits; may not add to totals shown.

2/ Includes cleaning and scouring compounds.

3/ Includes absorbent, diluents, filter aids, road construction and maintenance, roofing granules, and other unspecified uses.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF PUMICE, BY CLASS AND COUNTRY 1/

(Thousand metric tons and thousand dollars)

Country	Crude or unmanufactured		Wholly or partly unmanufactured	
	Quantity	Value	Quantity	Value
1993:				
Ecuador	9	664	--	--
Greece 2/	116	3,510	--	--
Italy	(3/)	6	1	454
Mexico	2	270	--	--
Turkey	15	1,920	--	--
Other 4/	(3/)	67	(3/)	182
Total	142	6,430	1	635
1994:				
Ecuador	4	373	--	--
Greece 2/	69	5,500	--	--
Italy	(3/)	57	1	472
Mexico	2	325	--	--
Turkey	11	1,220	--	--
Zaire 2/	56	4,500	--	--
Other 5/	(3/)	68	(3/)	119
Total	142	12,000	1	591

1/ Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits; may not add to totals shown.

2/ The Journal of Commerce Port Import/Export Reporting Service data.

3/ Less than 1/2 unit.

4/ Includes Austria, Canada, Germany, Guatemala, India, Japan, Monaco, Taiwan, and the United Kingdom.

5/ Includes Austria, Canada, Chile, China, France, Germany, India, Israel, Japan, Republic of Korea, Pakistan, Syria, Taiwan, and the United Kingdom.

Source: Bureau of the Census.

TABLE 4
PUMICE AND RELATED MATERIALS: WORLD PRODUCTION, BY COUNTRY 1/ 2/

(Metric tons)

Country 3/	1990	1991	1992	1993	1994 e/
Argentina 4/	118,000	69,700 r/	89,100 r/	89,000 r/	89,000
Austria: Trass	8,950	8,200	7,490	9,100 r/	9,000
Burkina Faso e/	10,000	10,000	10,000	8,000	8,000
Cameroon: Pozzolan e/	130,000	130,000	130,000	130,000	130,000
Cape Verde Islands: Pozzolan e/	53,000	53,000	53,000	25,000	5,000
Chile: Pozzolan	305,000	321,000	385,000	448,000 r/	450,000
Costa Rica e/	4,900	8,000	8,000	8,000	8,000
Dominica: Pumice and volcanic ash e/	100,000	100,000	100,000	100,000	100,000
Ecuador e/	34,000	33,500 5/	35,000	35,000	35,000
Ethiopia e/	23,000	37,000	49,000	40,000	40,000
France: Pozzolan and lapilli	336,000	400,000 e/	404,000	526,000 r/	500,000
Germany: Pumice (marketable) e/	318,000	366,000	591,000	647,000 r/ 5/	650,000
Greece:					
Pumice	665,000	445,000	400,000 e/	400,000 e/	400,000
Pozzolan	795,000	536,000	500,000 e/	500,000 e/	500,000
Guadeloupe: Pumice e/	220,000	230,000	220,000	210,000	210,000
Guatemala: Pumice	5,000 r/ e/	6,130 r/	6,590 r/	6,300 r/	6,000
Iceland	28,200	33,400	33,500	45,000 r/ e/	230,000
Iran	238,000	215,000	330,000	185,000 r/	200,000
Italy: e/					
Pumice and pumiceous lapilli	725,000	700,000	600,000	700,000	700,000
Pozzolan	4,500,000	4,500,000	4,400,000	4,500,000	4,500,000
Macedonia: Volcanic tuff e/	250,000	200,000	100,000	75,000	75,000
Martinique: Pumice e/	140,000	150,000	140,000	130,000	130,000
New Zealand	101,000	52,600	112,000 r/	50,000 e/	100,000
Serbia and Montenegro: Volcanic tuff	110,000 r/ e/	102,000 r/	109,000 r/	108,000 r/ e/	105,000
Slovenia: Volcanic tuff e/	100,000	90,000	50,000	40,000	40,000
Spain e/ 6/	900,000	800,000	800,000	700,000	700,000
Turkey e/	438,000	447,000	736,000	1,050,000 r/	1,000,000
United States (sold and used by producers)	443,000	401,000	481,000	469,000	490,000 5/
Yugoslavia: Volcanic tuff 7/	418,000	380,000	XX	XX	XX
Total	11,500,000 r/	10,800,000	10,900,000 r/	11,200,000 r/	11,400,000

e/ Estimated. r/ Revised. XX Not applicable.

1/ Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits; may not add to totals shown.

2/ Table includes data available through May 4, 1995.

3/ Pumice and related volcanic materials are also produced in a number of other countries, including (but not limited to) Japan, Mexico, the former U.S.S.R., and Zaire; output is not reported quantitatively, and available information is inadequate for the formulation of reliable estimates of output levels.

4/ Unspecified volcanic materials produced mainly for use in construction products (includes pumice, perlite, pozzolan and toba).

5/ Reported figure.

6/ Includes Canary Islands.

7/ Dissolved in Apr. 1992.