Perlite

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Record totals were established in 1972 for production and consumption of crude and expanded perlite in the United States and effectively reversed the overall decline that had hit the domestic perlite industry in 1971. Compared with 1971 production, the quantity of crude perlite mined increased 31% and the quantity and value of crude perlite sold or used each increased 26%. Although there were three fewer expanding plants in operation during 1972, the quantities of expanded perlite produced and sold or used exceeded those of 1971 by 10% and 9%, respectively. The value of expanded perlite sold or used also reached a record total of $25.35 million for an increase of 9% over that of 1971. New Mexico and Illinois continued to be the leading States in production of crude and expanded perlite, respectively.

Table 1.—Crude and expanded perlite produced and sold or used by producers in the United States

(Thousand short tons and thousand dollars)

Year	Crude perlite						Expanded perlite		
	Quantity mined	Sold		Used at own plant to make expanded material		Total quantity sold and used	Quantity produced	Sold or used	
		Quantity	Value	Quantity	Value			Quantity	Value
1968	558	202	1,975	226	2,246	428	339	336	15,265
1969	613	205	2,087	266	3,013	471	405	402	22,100
1970	607	176	2,056	280	2,848	456	420	416	24,972
1971	495	175	2,062	257	2,879	432	389	385	23,156
1972	649	224	2,540	321	3,691	545	427	421	25,350

DOMESTIC PRODUCTION

Crude perlite was produced by 12 companies at 13 mines in seven States in 1972 compared with 11 companies and 12 mines in six States in 1971. The quantity of crude perlite mined was a record 649,000 tons surpassing by 11,000 tons the previous high of 638,000 tons mined in 1967. New Mexico, with 87% of the U.S. crude perlite mined, continued to be the principal producing State. Other producing States, in descending order, were Arizona, California, Nevada, Colorado, Idaho, and Texas.

Crude perlite sold or used to make expanded materials set record totals in quantity and value in 1972. Producers sold or used 545,000 tons of crude perlite valued at $6,231,000 compared with the previous high of 471,000 tons and $5,100,000 in 1969.

Crude perlite was expanded at 84 plants in 30 States in 1972, and record quantities were established for expanded perlite produced and sold or used. The quantity of expanded perlite produced was 427,000 tons compared with the previous high of 420,000 in 1970. The quantity of expanded perlite sold or used in 1972 was 421,000 tons and exceeded the previous high of 416,000 in 1970 by 5,000 tons. The value of expanded perlite sold or used was $25.35 million compared with the previous record total of $24.97 million in 1970. Illinois continued to be the leader in production

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of expanded perlite and in the quantity sold or used. Other States with significant production of expanded perlite in 1972 included California, Colorado, Florida, Kentucky, Mississippi, New Jersey, Pennsylvania, and Texas.

Table 2.—Expanded perlite produced and sold by producers in the United States

State	1971				1972			
	Quantity produced (short tons)	Sold or used			Quantity produced (short tons)	Sold or used		
		Quantity (short tons)	Value (thousands)	Average value per ton		Quantity (short tons)	Value (thousands)	Average value per ton
California	23,512	23,250	$1,778	$76.45	21,227	21,221	$1,827	$86.12
Florida	17,547	16,741	909	54.32	19,124	18,249	1,001	54.84
Indiana	7,253	7,253	462	63.70	14,866	16,331	968	59.27
Kansas	716	716	(1)	(1)	767	767	59	76.71
Maryland	(2)	(2)	(2)	(2)	(2)	3,208	299	93.22
Massachusetts	1,294	1,210	159	131.41	(2)	(2)	(2)	(2)
Missouri	3,278	3,278	(1)	(1)	(1)	(1)	(1)	(1)
New York	3,569	3,515	284	80.72	5,739	5,739	469	81.76
Ohio	7,709	7,709	(2)	(2)	12,791	12,791	774	60.52
Pennsylvania	23,161	22,664	1,254	55.32	29,231	29,790	1,667	55.97
Texas	13,720	13,717	1,309	95.39	21,696	21,210	1,270	59.87
Other Eastern States [3]	232,405	230,560	13,856	[4] 58.15	257,668	252,742	14,662	58.01
Other Western States [5]	54,858	54,870	3,146	[6] 53.45	43,460	39,291	2,354	59.91
Total [7]	389,022	385,483	23,156	60.07	426,569	421,339	25,350	60.17

[1] Included with "Other Western States."
[2] Included with "Other Eastern States."
[3] Includes Georgia, Illinois, Kentucky, Louisiana, Maine, Maryland (1971), Michigan, Mississippi, New Hampshire, New Jersey, North Carolina (1971), Ohio (1971 value only), Tennessee, and Wisconsin.
[4] Based on quantity of 238,269 tons and value of $13,856,000 (230,560 tons "Other Eastern States" plus 7,709 tons for Ohio).
[5] Includes Arizona (1971), Colorado, Idaho, Iowa, Kansas (1971 value only), Minnesota, Missouri (1971 value only and 1972), Nebraska, Nevada, Oregon, Utah, and Washington (1971).
[6] Based on quantity of 58,862 tons and value of $3,146,000 (54,870 tons "Other Western States" plus 714 tons for Kansas and 3,278 tons for Missouri).
[7] Data may not add to totals shown because of independent rounding.

CONSUMPTION AND USES

Consumption of expanded perlite in the United States reached a record level of 421,000 tons in 1972. The percent disposition by end use is shown in table 3. As in 1971, filter aid, plaster aggregate, concrete aggregate, and insulation board (included with "Other" uses) were the principal domestic uses of expanded perlite. Compared with that of 1971, consumption of expanded perlite in filter aids, plaster aggregate, and low-temperature insulation each increased 2% in 1972 while use of expanded perlite in concrete aggregate decreased 2%. Use of expanded perlite in horticultural aggregates was 3% in 1972—the same as in 1971. "Other uses" totaled 57% compared with 60% in 1971 and included primarily insulation board, fillers, formed products, and smaller amounts of paint additives, texturing granules, charcoal base, refractories, and miscellaneous agricultural products.

Table 3.—End use of expanded perlite

(Percent)

Use	1971	1972
Filter aid	14	16
Plaster aggregate	10	12
Concrete aggregate	10	8
Horticultural aggregates	3	3
Low temperature insulation	2	4
Masonry and cavity fill insulation	1	(1)
Fillers	(2)	(2)
Formed products	(2)	(2)
Other [3]	60	57

[1] Less than 1%.
[2] Included with "Other" to avoid disclosing individual company confidential data.
[3] Includes insulation board.

PRICES

Producers sold crushed, cleaned, and sized crude perlite to expanding plants at an average price of $11.34 per short ton in 1972, and the portion used by producers in their own expanding plants was valued at an average of $11.50 per ton. The weighted average of both categories was $11.44 per ton which was the same value as in 1971.

Expanded perlite sold or used, according to expanders, had an average value of $60.17 compared with $60.07 per ton in 1971. However, average values by States in 1972 ranged from $32 to $144 per ton.

WORLD REVIEW

Greece.—Although 1972 production data for perlite in Greece were not available, production in 1971 was slightly lower than in 1970. The quantity of crude perlite ore produced in 1971 was 177,000 tons compared with 185,800 tons in 1970. Processed perlite in 1971 amounted to 104,500 tons compared with 117,600 tons in 1970. The quantity of perlite exported by Greece in 1970 and 1971 averaged 15% of crude ore production and 95% of processed ore production, respectively.

Philippines.—The quantity of perlite produced from the Legaspi City deposit of Trinity Lodge Mining Corp. was only 480 tons in 1972—a slight increase from the 1971 production of 457 tons.

TECHNOLOGY

Grefco, Inc., a subsidiary of General Refractories Co., initiated installation of air pollution control systems at its perlite processing plant in No Agua, N. Mex., and storage facilities in Antonito, Colo., in 1972. The estimated $1 million project was to be completed by mid-1973.

Two product development research projects, sponsored by the Perlite Institute, New York, were completed during the year. One project involved the durability characteristics of perlite cement plasters (stucco). The other study, in two parts, was concerned with the physical properties of perlite insulating concrete with added diatomaceous earth and hydrated lime, and the effect of moisture migration for various vent boards used in roof deck construction.