## STONE (CRUSHED) ${ }^{1}$

(Data in million metric tons, unless otherwise noted) ${ }^{2}$
Domestic Production and Use: Crushed stone valued at $\$ 8.8$ billion was produced by 1,450 companies operating 3,400 active quarries in 48 States. Leading States, in order of production, were Pennsylvania, Texas, Ohio, Florida, Virginia, Missouri, Illinois, Georgia, North Carolina, Kentucky, and Tennessee, together accounting for about 50.3\% of the total output. It is estimated that, of the 1.5 billion tons of crushed stone produced in 1998, about $43 \%$ was for unspecified uses. Of the remaining total, about $83 \%$ was used as construction aggregates mostly for highway and road construction and maintenance; $14 \%$ for chemical and metallurgical uses, including cement and lime manufacture; $2 \%$ for agricultural uses; and $1 \%$ for special uses and products. To provide a more accurate estimate of the consumption patterns for crushed stone, the "unspecified uses" are not included in the above percentages. Of the total crushed stone produced in 1998, about $71 \%$ was limestone and dolomite; 16\%, granite; 7\%, traprock; and the remaining 6\%, was shared, in descending order of quantity, by sandstone and quartzite, miscellaneous stone, marble, slate, calcareous marl, shell, and volcanic cinder and scoria.

The estimated output of crushed stone in the 48 conterminous States shipped for consumption in the first 9 months of 1998 was 1.1 billion tons, which represents an increase of about $6.5 \%$ compared with the same period of 1997. Additional production information by quarters for each State, geographic division, and the United States is published in the Quarterly Mineral Industry Surveys for Crushed Stone and Sand and Gravel.

| Salient Statistics-United States: | 1994 | 1995 | 1996 | 1997 | $1998{ }^{\text {e }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Production | 1,230 | 1,260 | 1,330 | 1,420 | 1,500 |
| Imports for consumption | 9 | 11 | 11 | 12 | 12 |
| Exports | 5 | 6 | 3 | 4 | 4 |
| Consumption, apparent | 1,234 | 1,265 | 1,338 | 1,428 | 1,508 |
| Price, average value, dollars per metric ton | 5.39 | 5.36 | 5.40 | 5.66 | 5.75 |
| Stocks, yearend | NA | NA | NA | NA | NA |
| Employment, quarry and mill, number ${ }^{\text {e }}$ | 75,350 | 75,940 | 76,020 | 77,590 | 78,500 |
| Net import reliance ${ }^{4}$ as a percent of apparent consumption | - | - | - | - |  |

Recycling: Road surfaces made of asphalt and crushed stone and, to a lesser extent, cement concrete surfaces and structures were recycled on a limited but increasing basis in most States.

Import Sources (1994-97): Canada, 62\%; Mexico, 23\%; The Bahamas, 7\%; and other, $8 \%$.

| Tariff: Item | Number | Normal Trade Relations (NTR) | Non-NTR $^{5}$ <br> $\frac{\mathbf{1 2 / 3 1 / 9 8}}{12 / 31 / 98}$ |
| :--- | :---: | :---: | :---: |
| Crushed and broken stone | 2517.10 .0000 | Free | $30 \% \mathrm{ad} \mathrm{val}$. |

Depletion Allowance: (Domestic and Foreign) 14\% for chemical and metallurgical uses; $5 \%$ if used for riprap, ballast, road material, concrete aggregate, and similar purposes.

Government Stockpile: None.

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Events, Trends, and Issues: Crushed stone output increased $5.3 \%$ in 1998. It is estimated that 1999 domestic production and U.S. apparent consumption will be about 1.57 billion tons each, a $5.3 \%$ increase. The Transportation Equity Act for the $21^{\text {st }}$ Century (Public Law 105-178) appropriates $\$ 205$ billion through year 2003, a $44 \%$ increase compared to the previous Intermodal Surface Transportation Efficiency Act (ISTEA) legislation. The new law guarantees that $\$ 165$ billion will be obligated for highways and $\$ 35$ billion for transit work. The guaranteed amounts are linked to actual Highway Trust Fund receipts and can only be used for highways and highway safety programs. The States are also guaranteed a return of at least $90.5 \%$ of their contributions to the Highway Trust Fund. The legislation also established timetables for determining if States are complying with the Environmental Protection Agency's new air quality standards for particulate matter, also known as PM 2.5.

The crushed stone industry continued to be concerned with safety regulations and environmental restrictions. Shortages in some urban and industrialized areas were expected to continue to increase owing to local zoning regulations and land development alternatives. This is expected to continue to cause a relocation of crushed stone quarries away from high-population centers.

World Mine Production, Reserves, and Reserve Base:

|  | Mine production |  | Reserves and reserve base ${ }^{6}$ |
| :--- | :---: | ---: | :--- |
| United States | $\underline{1997}$ | $\mathbf{1 9 9 8}$ |  |
| Other countries | 1,420 | 1,500 | Adequate except where special <br> World total |
|  | NA | NA | NA |

World Resources: Stone resources of the world are very large. High-purity limestone and dolomite suitable for chemical and metallurgical use are limited in many geographical areas. The largest resources of high-purity limestone and dolomite in the United States are in the central and eastern parts of the country.

Substitutes: Crushed stone substitutes for roadbuilding include sand and gravel and slag. Substitutes for aggregate include sand and gravel, slag, sintered or expanded clay or shale, and perlite or vermiculite.

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[^0]:    ${ }^{\text {e}}$ Estimated. NA Not available.
    ${ }^{1}$ See also Stone (Dimension).
    ${ }^{2}$ See Appendix A for conversion to short tons.
    ${ }^{3}$ Including office staff.
    ${ }^{4}$ Defined as imports - exports + adjustments for Government and industry stock changes. Changes in stocks were assumed to be zero in the net import reliance and apparent consumption calculations because data on stocks were not available.
    ${ }^{5}$ See Appendix B.
    ${ }^{6}$ See Appendix D for definitions.

