Industrial Minerals

Industrial minerals are non-metals including crushed rock, sand, and gravel. They are essential for construction of buildings and highways, and are used in many household products and industrial processes.

Basics

Industrial minerals are non-metal and non-fuel mineral resources including, for example, crushed rock, gravel, clays, sand (silica), gypsum, bentonite, and barite. They are the fundamental ingredients of roads and buildings, and they are essential for many industrial, commercial, and personal products and activities. Read more

Frequently Asked Questions

How do pyrite and pyrrhotite damage building foundations?
American Geosciences Institute

Which mineral commodities used in the United States need to be imported?
American Geosciences Institute

Where can I find statistics about the supply and demand of industrial minerals?
American Geosciences Institute

What is frac sand?
American Geosciences Institute

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Critical Minerals
Critical minerals are those that are essential to the economy and whose supply may be disrupted. Critical minerals also tend to be those on which a country is heavily import-reliant, so the minerals that are deemed critical will vary from country to country. Demand for many of these minerals has skyrocketed in recent years with the spread of high-tech devices that use a wide variety of materials.

Metals
Metals are found in many different places around the world. Many natural Earth processes affect their distribution and abundance. Metals are essential to our economy and lifestyle, and the global demand for metals continues to rise.

Mineral Resources
Global demand is rising for mineral resources of all kinds, including metals, industrial minerals, and solid fuels like coal. Mineral resources are unequally distributed around the globe, reflecting the vast differences in geology of different parts of the Earth. Geoscientists play an essential role in locating mineral resources and designing processes for their safe extraction.

Mining
Mining is essential to meet rising global demand for minerals. Geoscientists locate mineral resources and figure out how to extract them economically while minimizing health and environmental impacts. The method of mining, as well as potential environmental impacts, depends on the type of resource being mined.

Maps & Visualizations

Interactive map of offshore sand and gravel resources of the United States
Bureau of Ocean Energy Management

The Bureau of Ocean Energy Management's Marine Minerals Information System (MMIS) provides an interactive map with
information on offshore sand and gravel resources for 18 states on the Atlantic and Gulf coasts of the United States. The system includes: Sand and gravel resources Marine...

Case Studies & Factsheets

Roadway deicing in the United States

Background In areas prone to winter precipitation, transportation infrastructure must be able to quickly respond to snow and ice on roadways. Ice removal is a vital service in these communities. Deicing chemicals melt ice by lowering the temperature at which it melts. They can also prevent new ice...

Webinars & Forums

Building the Modern World: Geoscience that Underlies our Economic Prosperity

This webinar, also presented as a Congressional briefing on June 12th, brings together experts from industry, academia, and non-profits to discuss the geoscientific underpinnings of our economy and society.