

### Erionite Mineral Characterization:

#### What is erionite:

- Erionite is a naturally occurring, fibrous zeolite mineral with properties and health effects similar to asbestos. It usually is found in volcanic ash/tuffs that have been altered by weathering and ground water.
- Erionite is classified as an IARC Class I carcinogen based on epidemiology studies from exposure in the Cappadocia region of Turkey (IARC monographs 42:225-239, 1987).

Various studies have since increased awareness of the exposure and risk associated with this mineral especially as it relates to gravel pit excavation and general disturbance of rock formations/soils during engineering activities. In addition, identification of erionite occurrences have increased since the 1970's.

- Only recently have comprehensive studies from various [government](#) and [stakeholder](#) groups been undertaken to establish much needed information on mineral classification, mineral reference material specimens, development of analytical methods, as well as continued exposure studies.

#### What it is NOT:

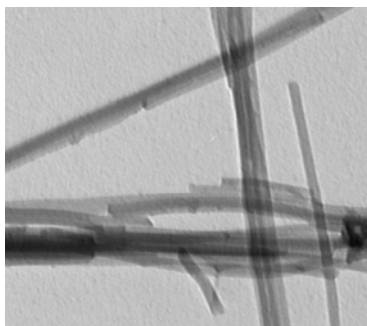
- Erionite is **not** currently regulated by the U.S. [EPA](#) in the same manner as asbestos.
- Unlike many asbestos minerals, erionite was never intentionally mined and formulated into building material products.

#### iATL solutions:

- iATL offers unique expertise and experience and facilities relating to erionite investigations.
- iATL staff has written dozens of publications and presentations concerning erionite characterization.
- iATL understands the lack of verifiable standardized reference material for erionite. As such, we maintain one of the world's leading libraries of mineral specimens that include dozens of research quality erionite specimens from around the world.
- iATL provides full analytical testing capabilities for erionite in bulk material, gravel, soil, and in airborne matrices. iATL continues to perform contract laboratory work for the US Mine Safety and Health Administration (MSHA) investigating erionite. We have also performed countless sample analyses for other public and private entities.

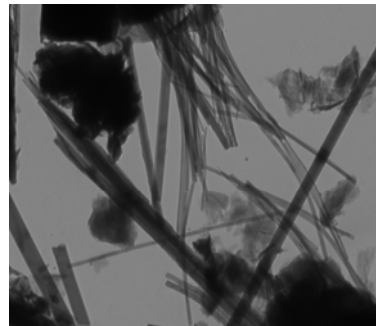
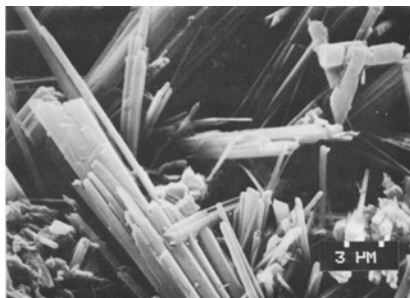
*Please contact your customer service representative for more information about erionite*

TEM and SEM micrographs of Durkee, Oregon and Cappadocia, Turkey erionite.



4-117  
Durkee Erionite  
Monochrom. 014  
Printed Mag: 111800x @ 7.0 kV  
14.7x 14.7µm  
Microanalyst: R. Izbicki

TEM IM  
001-124-007  
Direct Mag: ASB00A  
0-120.0kV X-1157.0V  
iATL



4-117  
Cappadocia Erionite  
Monochrom. 014  
Printed Mag: 10800x @ 7.0 kV  
15.0x 15.0µm  
Microanalyst: R. Izbicki

TEM IM  
001-124-007  
Direct Mag: 1000x  
0-120.0kV X-1157.0V  
iATL