

Graphite solutions for the Nuclear industry



Technology leader



GrafTech has developed through extensive industry experience, stable materials that the nuclear industry can depend on to moderate nuclear reactions and handle nuclear fuels. Our products are backed by cutting-edge engineering and R&D expertise of the company that pioneered graphite material science.

With over 120 years of graphite science experience, over sixty years of active development and manufacturing for the nuclear industry, GrafTech products combine in unique engineered solutions customized for your application.



Industry experience

integrated solutions for the nuclear industry

RAW MATERIAL PROPERTIES

- Low boron, low ash content
- Isotropic
- Consistent structure
- Supply source longevity

NUCLEAR GRADE PROPERTIES

- High coefficient of thermal expansion
- High purity
- High density
- High strength
- Product uniformity
- Highly graphitic
- Extended life
- Decades-long supply period
- Reliable performance



MANUFACTURING CAPABILITIES

- Extrusion, molding, iso-molding
- Consistent quality, high volume manufacturing
- Large dimension product
- Heat and chemical purification
- Extreme high temperature treatment
- Precision machining capability
- Inspection and non-destructive testing
- Natural and Synthetic graphite products

RESEARCH & DEVELOPMENT

- Nuclear irradiation performance
- Crystal structure analysis
- Physical property optimization
- Customer technical service
- State-of-the-art facility
- R&D 100 Awards for five different products within five consecutive years

a complete portfolio

Many applications benefit from the high strength, heat and chemical resistance of graphite, but demanding environments require the extra performance of materials engineered specifically for nuclear applications.

reactors

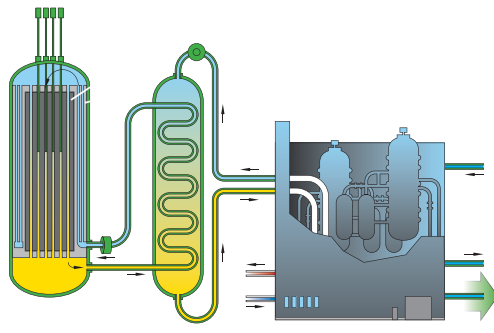


diagram courtesy of Idaho National Laboratory

We are proud of our history with the nuclear industry, a history that spans over 60 years. GrafTech International has manufactured some of the most significant nuclear graphite in the history of the nuclear industry, including the graphite used to sustain the first nuclear chain reaction at Chicago Pile in 1942.

We currently offer:

- Advanced graphite products for Generation IV Very-High Temperature reactors
- A complete line of graphite products suitable for the most demanding reactor conditions as well as active programs to test, develop and qualify future grades.

fuel processing & components

GrafTech offers high purity graphite powders designed specifically for the fabrication of fuel compacts and pebbles. GrafTech has engineered graphite materials not only for use inside the reactor core, but for critical processes outside the reactor, including fuel processing, vitrification and waste storage.



photograph courtesy of Idaho National Laboratory

about GrafTech International



GrafTech's commitment to our customers extends to taking an active role in:

- Nuclear Associations
- Standard Setting Organizations
- Research Institutes/ Committees
- New nuclear reactor development
- Non-destructive testing technology development
- Investments in infrastructure
- Researching solutions on industry issues - Nuclear Waste Handling
- Involvement in most Generation IV nuclear projects

Contact GrafTech's Customer Technical Service representatives for a customized application consultation. Additional information and Technical Data Sheets can be found at www.graftech.com

• U.S.A. Phone : +1-800-842-8805 or +1-304-624-1253 • Europe Phone : +33 4 79 41 45 00 or +39 0364 630 131 •

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