

Pyroid® Protective Coatings for Carbon Products

MINTEQ® International Inc, - ultra-pure, Pyroid® pyrolytic carbon coatings and SiC coating on traditional graphite provides high density, strength and hardness along with very low porosity that is virtually impermeable to fluids and gases.



Benefits of Pyroid® Protective Coatings for Carbon and Graphite Products

MINTEQ® International Inc, - Semiconductor and photovoltaic manufacturers use a wide array of carbon and graphite products in the manufacturing process. During the process these products which include epitaxy susceptors, satellite platforms for the MOCVD, and other tooling are first subjected to an extreme deposition environment consisting of:

- High temperature.
- High vacuum.
- Aggressive gaseous precursors.

- Zero contamination requirements.
- Long lasting exposure operations

Pyrolytic carbon and Silicon Carbide coatings are used in environments where it is necessary to avoid contaminants, particles and reactions which will interfere in the deposition

Pyroid® Protective Coatings offers both superior heat conduction and extremely high purity with very low porosity that is virtually impermeable to fluids and gases.

Pyroid® Pyrolytic Carbon coating is:

- Stable at high temperature and vacuum

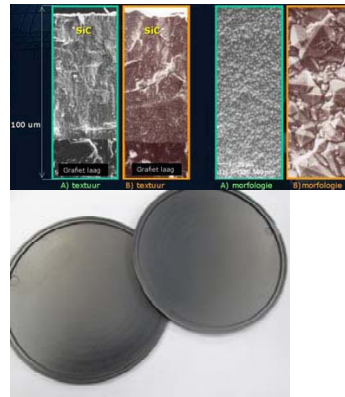
And Provides:

- Uniform heat distribution throughout the tool and piece in the process



Minteq Pyrogenics Group

| Typical Pyroid® Pyrolytic Graphite Analysis | |
|--|-------------------------------|
| > 99.999% (75 element analysis) | |
| Element | Concentration (ppm wt) |
| F | < 0.05 |
| Na | 0.01 |
| B | < 0.01 |
| Al | < 0.01 |
| Na | 0.01 |
| Mg | < 0.05 |
| K | < 0.05 |
| Ca | < 0.05 |
| Cr | < 0.1 |
| Si | 0.37 |
| Ti | 0.04 |
| V | < 0.005 |
| Mn | < 0.005 |
| Fe | < 0.01 |
| Ni | < 0.01 |
| Cu | < 0.05 |
| Zn | < 0.05 |
| P | < 0.01 |
| all others | < 0.01 or better |



Customer Benefit:

Using Pyroid® Protective Coatings for Carbon and Graphite surfaces ensures uniform heat distribution in the resulting in superior quality and increased productivity Semiconductor and UV producers.

For Details or Samples

484-541-7090

Pyroid® Pyrolytic SiC coating offers:

Excellent thermal and chemical resistance and a particle resistant surface.

Applications

- Susceptor for silicon epitaxial growth
- Single crystal silicon manufacturing equipment
- MOCVD susceptors
- Tooling
- Oxidation resistance components



MINTEQ