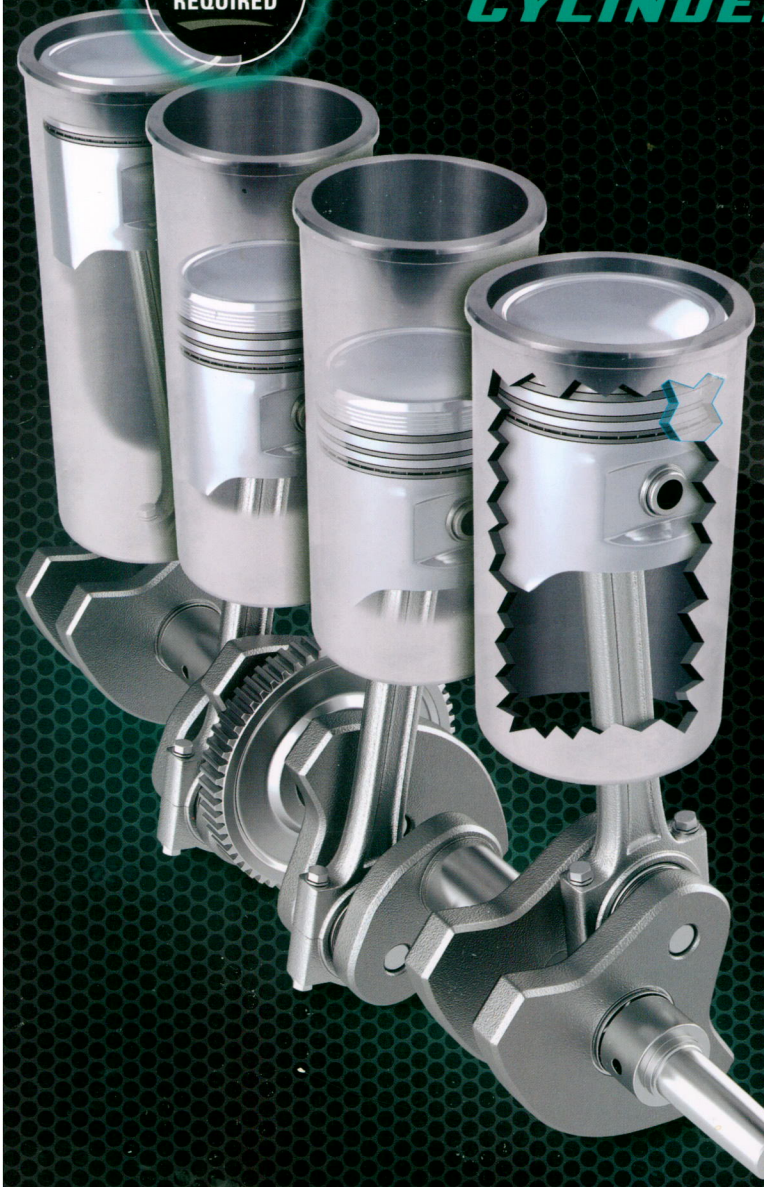
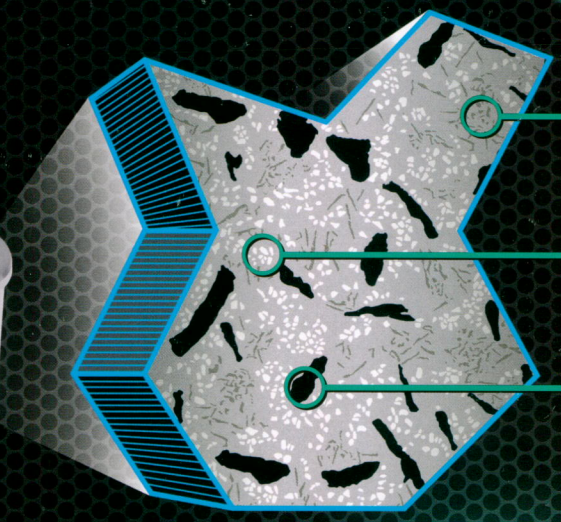
INTELLIGENT COMPOSITES

ZERO PLATING REQUIRED

HIGH-PERFORMANCE CYLINDER SLEEVES

EVEN PARTICLE DISTIBUTION





- Graphite Reduces Friction Between the Piston and Cylinder Sleeves
- Aluminum Matrix Matches the Thermal Expansion of the Piston and Block
- Silicon Carbide Delivers Better Wear Resistance Than Cast Iron
- Tighter Tolerances Reduce Oil Consumption and Emissions >>>

intelligentcomposites.com

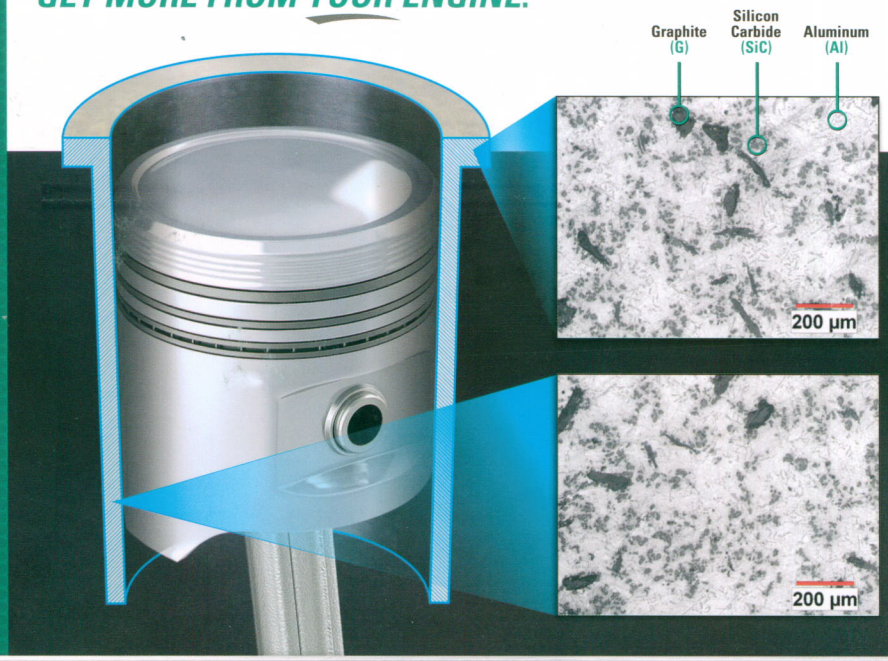
INTELLIGENT COMPOSITES
HIGH-PERFORMANCE CYLINDER SLEEVES

ALUMINUM (Al) - SILICON CARBIDE (SiC) - GRAPHITE (G)
lowers friction and wear inside internal combustion engines

— No plating or surface coating required —

Intelligent Composites' manufacturing process uniformly distributes graphite and silicon carbide particles throughout the entire casting. When friction occurs, microscopic graphite particles shear and create a tribo-film that adds lubricity to any environment.

Contact Intelligent Composites at (414) 758-0183 to learn how you can *GET MORE FROM YOUR ENGINE.*



COMPARATIVE ANALYSIS of CYLINDER SLEEVE MATERIALS
— JOHN LENNY JR., THESIS, RENSSELAER POLYTECHNIC INSTITUTE, 2011 —

MATERIAL	Al-SiC-G	Cast Iron	Al with Nikasil®	Al-Si	Al with Thermal Spray
PREVIOUS Applications	1	5	2	2	1
Wear Resistance	5	4	4	3	4
Scuffing Resistance	5	5	4	3	4
Thermal Conductivity	5	1	3	4	3
Low Friction	5	3	4	3	4
Fuel Economy	5	3	4	4	4
Emissions	5	3	4	4	4
Manufacturing Cost	3	5	2	3	3
Engine Performance	5	4	4	3	4
Mass Production Feasibility	3	5	3	4	5
TOTAL RATING	**42**	**38**	**34**	**33**	**36**

5 = Excellent 4 = Above Average 3 = Average 2 = Below Average 1 = Poor

CAST IN THE USA

WE MAKE ALUMINUM BETTER!

GET MORE FROM YOUR ENGINE

- **MORE Horsepower**
- **MORE Torque**
- **MORE Fuel Efficient**
- **LESS Emissions**

INTELLIGENT COMPOSITES

12247 W. Fairview Avenue
Milwaukee, WI 53226

Chris Jordan, CMO
chris@intelligentcomposites.com
414.628.9090 Direct
414.758.0183 Office

intelligentcomposites.com