

# Ashtabula Complex

Ashtabula Plant 1  
2900 Middle Road  
Ashtabula, OH 44004

Ashtabula Plant 2  
2426 Middle Road  
Ashtabula, OH 44004



The Ashtabula Complex for Cristal's Millennium Inorganic Chemicals business comprises two facilities—Plant 1 and Plant 2—that produce titanium dioxide (TiO<sub>2</sub>). The company is the world's second-largest producer of TiO<sub>2</sub>, a bright white powder made from titanium ore that has the ability to pigment virtually any material. TiO<sub>2</sub> makes possible the opacity, brightness and durability in paint formulas that have made modern paints more cost efficient, easier to use and friendlier to the environment. TiO<sub>2</sub> also gives plastics and rubber opacity and whiteness. It is used in such diverse products as printing inks, paper, ceramics, glass, leather, synthetic fibers and colors formulated for art paints.

The Ashtabula Complex is Cristal's largest TiO<sub>2</sub> production facility and accounts for 30 percent of the company's overall production. The two plants occupy approximately 140 acres adjacent to Fields Brook and one and a half miles south of Lake Erie. Both plants produce TiO<sub>2</sub> through the chloride process which uses chlorine to react with titanium-bearing ores in a high-temperature process. TiO<sub>2</sub> is extracted in a rutile form, which allows greater purity and higher control over the size distribution of the pigment particles than other manufacturing processes.

Titanium tetrachloride (TiCl<sub>4</sub>) is produced as an intermediate product in the chloride process for making TiO<sub>2</sub>. The complex also sells TiCl<sub>4</sub> for use in the titanium metals industry and in the production of catalysts and specialty pigments.

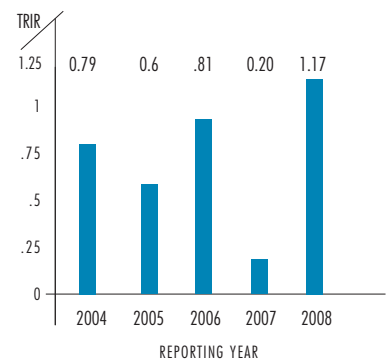
## Performance Summary

Our commitment to sustainable growth balances our responsibility to provide economic value for our stakeholders, while respecting the social concerns of the community in which we operate and demonstrating care for the environment around us.

### PROVIDING ECONOMIC VALUE

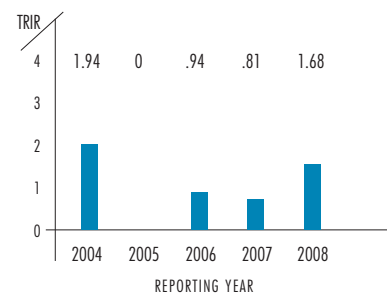
- Approximately 460 employees and contractors
- Annual payroll and benefits of approximately \$48.6 million
- Site purchases more than \$78 million of local goods and services annually
- Annual property tax payments of approximately \$3.7 million

### Employee—Total Recordable Incident Rate (TRIR) Rate of injuries per 100 employees



The complex continues to have one of the best safety records in the industry and continues to strive for zero workplace injuries.

### Contractor—Total Recordable Incident Rate (TRIR)



The company continues to hold its contractors to the same stringent safety standards working at the Ashtabula Complex.

## RESPECTING SOCIAL CONCERNS

We recognize that being a socially responsible member of the community requires actively working to support community needs. In 2006, the Growth Partnership for Ashtabula County recognized the Ashtabula Complex with the President's Award for being the company that had done the most over the past year to positively impact the county and its residents.

- **Community Outreach.** Employees have taken a leadership role in the facilitation of the Ashtabula Community Advisory Panel. The Complex hosts the monthly meetings and has employee representatives participate.
- **Community Involvement.** The company is actively involved in the local community including the American Red Cross, Ashtabula Chamber of Commerce, Ashtabula County Medical Center Foundation; Ashtabula Safety Council; Civic Development Corporation, Goodwill; Growth Partnership for Ashtabula County, Kent State University – Ashtabula; Leadership Ashtabula County and the Rotary Club.
- **Education.** In 2006, employees from Millennium Inorganic Chemicals Ashtabula complex supported numerous educational activities including Kent State University High School Math Competition; After School Discovery's Learning Symposium; the Ohio Chemistry Technology Council's Teachers in Education program.
- **Volunteerism.** Employees participate in a range of community activities including the Ashtabula Arts Center, Boy Scouts of America, YMCA and many others.
- **Philanthropy.** The company and employees support the Civic Development Corporation, the United Way of Ashtabula County and many other worthwhile charitable causes in the area.

## CARING FOR THE ENVIRONMENT

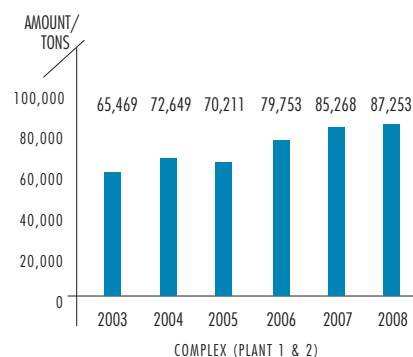
Our commitment as a socially responsible company means that we operate our facilities in a manner that protects people and the environment and preserves our world for future generations. Millennium Inorganic Chemicals is committed to continuous improvement in safety, security, environmental performance, reliability and open communication.

- **Safety Performance.** As of October 2006, Ashtabula Plant 1 had gone more than 4.4 million work hours (2,809 days) without a lost-time injury and Ashtabula Plant 2 had gone more than 4.7 million work hours (3,454 days) without a lost-time injury. The Ashtabula County Safety Council recognized the site for its safe workdays with several awards in 2006. The Ohio Chemistry Technology Council recognized the Ashtabula Complex in 2006 with the Excellence in Safety Performance Award. The National Paint and Coatings Association recognized Plant 1 and Plant 2 with their 2006 Safety Award of Excellence for outstanding achievement in maintaining a record of no "lost time" accidents during the previous five years, the only TiO<sub>2</sub> production facilities in the US that received this recognition.
- **Prevention.** The complex has a program in place to ensure the safe operation and maintenance of our processes so that accidental releases are prevented.
- **Environmental Performance.** Previously, emissions from the complex were reduced by approximately 800 tons per year with the decommissioning of the boilers at both plants in 2001 following startup of a new cogeneration plant. The site continues to pursue opportunities for emission reductions.
- **Energy Efficiency.** A cogeneration plant began operation in 2001 to provide steam and electricity to both plants. The project was recognized for reduced fuel consumption and responsible energy management with a Combined Heat and Power Certificate of Recognition.
- **Milestones.** Both Ashtabula Plants were recognized as leaders in Safety when OSHA granted both facilities STAR status under the OSHA Voluntary Protection Program in 2005. Additionally, the Ashtabula Plant 1 and 2 Environmental Management System received certification to the ISO14001 standard in September 2004.

National Titanium Dioxide Company Ltd. ("Cristal") and Millennium Inorganic Chemicals (MIC) combine to form the world's second-largest producer of titanium dioxide and a leading producer of titanium chemicals. Cristal and MIC operate eight manufacturing plants in six countries and employ nearly 4,000 people worldwide. MIC is a wholly owned subsidiary of Cristal.

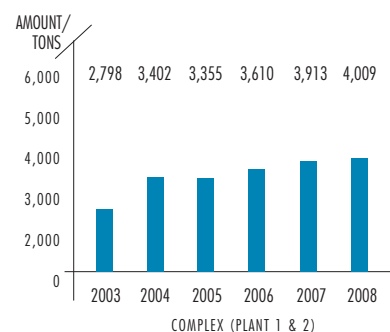
Visit [www.cristalglobal.com](http://www.cristalglobal.com) for more information about the company and its products.

## Air Emissions – NOx, SO2, CO, PM, VOC.



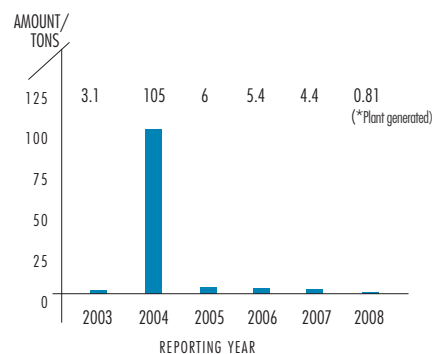
The increase in CO was attributed to new stack testing data performed in 2004 and utilized to calculate the emissions from both Plant 1 "A" train TiCl<sub>4</sub> stack. The increase in VOC was due to the additional reporting of the Cogeneration units on the Fee Emissions Report.

## Toxic Release Inventory (TRI) for Air Emissions (tons/year).



Nearly all reported air emissions are Carbonyl Sulfide, COS. New stack testing data was utilized for COS calculation. Higher sulfur coke blends caused the significant increase.

## Hazardous Waste Generated (tons/year).



We continue to be focused on ways to reduce waste generation.

\* Plant generated Reduction is as a result of finding a constructive use for paint residue generated during laboratory testing, thus avoiding the need to dispose as hazardous waste. 1264.14 tons of soils were disposed containing VOC's as part of the CERCLA required cleanup of Fields Brook.

Millennium Inorganic Chemicals  
A Cristal Company  
2900 Middle Road  
Ashtabula, Ohio 44004  
+1 440.994.1400