



## EARTH MATTERS

BETTER COMPANY. BETTER PRODUCT. BETTER WORLD.





## *Statement of Environmental Ethics*

We expect all members to balance the needs of the company with careful, responsible stewardship of the environment. We believe the scope of this stewardship includes—

- human and financial resources
- corporate facilities
- community
- natural environment and natural resources

With an emphasis on personal responsibility, we expect wise and effective use of all resources.

We will have documented policies for making decisions with regard to reducing waste, recycling waste and manufacturing by-products, conserving energy, and using recycled or rapidly-renewable materials in our products and processes.

## STEWARDS OF THE ENVIRONMENT

Crystal Cabinet Works, Inc., a family-owned manufacturer of fine custom cabinetry, strives to surpass other custom cabinet manufacturers in our stewardship of natural and human resources. Sound environmental practices add inherent value to our products and complement our customers' desire to make purchasing decisions as part of a healthy lifestyle.

Earth Matters is designed to present Crystal's environmental initiatives and achievements to those who may be considering adding our products to their home. The company's goal of balancing high-quality, handcrafted and durable cabinetry with added environmental benefits continues to distinguish Crystal in the custom cabinet marketplace.

## KCMA ENVIRONMENTAL STEWARDSHIP PROGRAM

Crystal is proud to have been directly involved with the development of the Kitchen Cabinet Manufacturers Association's new Environmental Stewardship Program (ESP). All of Crystal's cabinet manufacturing facilities are certified under this KCMA program that was developed to build upon the National Association of Home Builders (NAHB) Green Home Building Guidelines.

The ESP is designed as a framework for manufacturers to highlight sound environmental business practices concerning:

product and process resource management, air quality, environmental management policies and systems, and community relations. Due to Crystal's solid environmental record, no major changes were required in our operations or products in order to achieve certification, which requires a rigorous annual compliance review.



## SUSTAINABLE MANUFACTURING

Over the past several years, Crystal has been implementing *lean manufacturing* technology and processes in its operations. *Lean* refers to a systematic approach to identify and reduce waste and inefficiencies in manufacturing operations. Crystal agrees with the U.S. Environmental Protection Agency: *lean manufacturing* is a great opportunity to further pollution prevention and waste reduction as overall production efficiencies are improved.

Factoring in changes in production levels over time, Crystal's commitment to sustainable manufacturing has resulted in impressive environmental gains in the last ten years:

- Releases of smog-forming volatile organic compounds (VOC) have decreased by a third.
- Use of federally-reportable chemicals decreased by over 40%.
- Generation of solid waste decreased by over 30%.
- Generation of wood waste decreased by 40%.

Using computerized optimization technology, Crystal has reduced lumber consumption by over 150 tons and composite wood product use by 200 tons per year! That means that there is far less wood waste per cabinet than ever before.

These efforts were accomplished through increased employee awareness, technological upgrades, and improvements in materials efficiencies.



## Natural Resource Stewardship Policy

We strive to understand and utilize recycled and rapidly-renewable materials and suppliers or strategic partners who practice responsible stewardship. We consider this policy to include the effective use of raw materials and finding ways to recycle and or reuse our by-products. We favor the use of recycled-content materials when feasible. We support any and all organized recycling programs and participate as a matter of corporate philosophy (e.g. paper, cardboard, beverage containers, scrap metal, transport packaging, wood fiber, etc.). We will favor the use of products or suppliers that share this philosophy.





## *Energy Conservation Policy*

We strive to understand and reduce the impact of our processes, policies and product on greenhouse gas emissions by reducing energy consumption. Some of the ways we will do this include: installing energy-conserving lighting and motors; evaluating the use of biomass rather than fossil fuels when feasible; adding hybrid vehicles to our fleet, etc.

We understand energy conservation to include our choice of materials, processes, policies and equipment. We expect value-added, responsible use of resources so we might ensure future sustainability and quality of life.

## ENERGY

Crystal has implemented several energy conservation initiatives over the past few years.

**HYBRID VEHICLES.** Hybrid cars were recently added to Crystal's fleet of company vehicles which has reduced gas consumption and tailpipe emissions from vehicles used by our employees.

**BIOMASS FUEL.** One of Crystal's manufacturing facilities utilizes its own wood waste to heat its facility. Fossil fuels are only used as backup fuel for facility heating.

**ENERGY-EFFICIENT MANUFACTURING.** By recently converting factory lighting, Crystal saved enough kilowatts of energy to power 40 homes a year. The installation of energy-efficient air compressors at one Crystal facility saved enough energy to pay for itself in less than nine months! Other energy-efficient projects over the past few years have included the installation of energy-efficient motors and motor technology to reduce peak energy demand.

## RECYCLING

Each year, Crystal's facilities recycle unused paint, used cardboard, mixed paper, plastic transport packaging, and scrap metal to the tune of over 600,000 pounds (that's 300 tons!) per year. In addition, over 3,000 tons of wood waste is "down-cycled" on an annual basis for use as animal bedding.

**CLOSE THE LOOP:** The cardboard used in Crystal's packaging system is made from post-consumer recycled materials. The corrugated media has 100% post-consumer recycled content and the lining has an average post-consumer recycled content of 10%. We encourage our customers to close the recycling loop and recycle used cardboard cartons at local recycling facilities.

## ENVIRONMENTAL PARTNERS

At Crystal, we strive to form strategic partnerships with suppliers who share our commitment to responsible environmental decisions and stewardship of natural resources.

**HARDWOODS:** Crystal Cabinet Works, Inc. recognizes the importance of forest sustainability and fully supports the major tenets of the KCMA's Sustainable Forest Beliefs.

- The global wood products industry has an inherent responsibility to ensure world forest sustainability.
- We are committed to the conservation and intelligent use of natural resources to meet the human and environmental needs of today without limiting the ability of future generations to meet their own needs.
- Third-party certification confirms sustainable forestry practices but the lack of such certification does not imply poor forest management.

**COMPOSITE WOOD PRODUCTS:** All of our standard boxwork materials meet recycled content and formaldehyde emission limits set forth by the Composite Panel Association's ANSI-accredited Environmentally Preferable Product specifications.

Crystal is constantly evaluating new finishes and materials to reduce emissions not only at our production facilities but also once the product is installed.

## INDOOR AIR QUALITY

Because most people spend the majority of their time indoors and some studies have indicated that the air inside homes has a higher concentration of pollution than outdoor air, the quality of indoor air has received increasing coverage in the popular press and has begun to affect consumer purchasing decisions. Sources of contaminants in indoor air include biological sources (mold, mildew, dander, microbes), combustion sources, household and consumer products, and building materials. Indoor air issues can arise when contaminants are allowed to accumulate due to reduced ventilation. Potential health effects depend on the amount of contamination present, the length of exposure, and one's individual susceptibility.

### WHAT ABOUT FORMALDEHYDE?

*Formaldehyde is a simple molecule of carbon, hydrogen, and oxygen that comes from both natural and industrial sources; it is formed as other chemicals degrade. Formaldehyde does not accumulate but quickly breaks down to carbon dioxide, hydrogen, and water. Formaldehyde is a natural component of human metabolic processes. The status of formaldehyde as a human health hazard is a major debate in recent years as scientists cannot reach consensus about the available scientific data. Some assert that formaldehyde is a human carcinogen, while others argue that a person is not at risk for cancer at the levels of everyday exposure to formaldehyde emitted in miniscule amounts from consumer and household products.*

## TAKING ACTION

As a result of this debate and our desire to be responsive to customer concerns about formaldehyde, we have developed Green-Core by Crystal, our family of no added urea-formaldehyde composite wood products. The following pages provide detailed information on our Green-Core product. In addition, we have listed other Crystal environmentally-preferable offerings that will complement your Green-Core cabinetry.



Crystal's Green-Core products are made with materials that have a reduced effect on human health and the environment and are a perfect option for the environmentally- and health-conscious consumer. When you choose Green-Core by Crystal, you are assured the added benefits and the finest custom cabinetry with a tradition of handcrafted quality for 60 years.

## CABINET BOXWORK

**Renewable wood fiber and no added urea-formaldehyde resins** are combined in Green-Core by Crystal. Low-emitting Green-Core boxwork meets or exceeds the performance requirements of competing products and is available by special request:

**GREEN-CORE:** A 100% recycled exterior-grade particleboard available in Crystal, Quest, or Inset box constructions.

**GREEN-CORE PLUS:** A plywood made with a patented soy-based resin available in Crystal Plus, Quest Plus or Inset Plus box constructions.

When ordering, specify Green-Core, Green-Core Inset or Green-Core Plus along with the appropriate cabinet lines. Special pricing and extended lead times may apply.

## DOOR STYLES

Crystal's wood veneer door styles have a substrate of no added urea-formaldehyde 100% Recycled Green-Core MDF:

Redondo, Springfield

Crystal's laminate door styles with a substrate of no added urea-formaldehyde 100% Recycled Green-Core Particleboard:

Albany, Chesterfield, Esprit, Glenview, Lansdale, Plateau, Prescott, Westhaven



## GREEN BUILDING POINTS

Using Green-Core materials in your kitchen may help qualify your project for points under the recycled content and low-emitting materials sections of prominent green building third party verification systems including:

**LEED [USGBC]**

**Green Home Guidelines [NAHB]**

**GreenPoint Rated [Bay Area California]**

## COMPLEMENTARY CHOICES

### Wood Specie:

Consider choosing LYPTUS®, a premium-grade hardwood that is grown in South America on highly productive plantations. LYPTUS® is mixed with indigenous trees to preserve and sustain native ecosystems. It has a short renewal cycle and can be harvested in just 14-16 years compared to 50-70 years for North American hardwoods. LYPTUS® ranges in color from red to brown, resembling mahogany, and is available from Crystal in an array of beautiful dark stains.

Another option is BAMBOO, a rapidly-renewable plant-based product. Bamboo, a fast growing grass, is strong, durable and finishes beautifully with many of the same characteristics as wood. Bamboo may qualify for green building points due to its rapid renewability. Bamboo doors can be manufactured with low-emitting Green-Core substrate.

### Finish:

Consider choosing a less material-intensive natural finish to complement the natural characteristics inherent in your wood doors and drawer fronts.

## **A GOOD NEIGHBOR AND COMMUNITY PARTNER**

Crystal's impressive gains in the last decade in terms of wastes, emissions, and chemical usage, recognized by the State of Minnesota, were achieved in part through a community-based pollution prevention planning "good neighbor" project. To assist other companies, Crystal's early initiatives in the mid-1990's were also highlighted in case studies prepared by technical assistance outreach non-profits and research institutes. More recently, Crystal has participated in the State of Minnesota's award-winning Eco-Experience display at the Minnesota State Fair.

At Crystal, we will continue to build upon our legacy of balancing environmental considerations with durable cabinetry and healthy lifestyle choices for our customers and our communities.

Thank you for partnering with us.





## ENVIRONMENTAL RESOURCE LINKS

Crystal's Web

[www.crystalcabinets.com](http://www.crystalcabinets.com)

KCMA Environment Stewardship Program

[www.kcma.org/consumer\\_sub.htm?id=109](http://www.kcma.org/consumer_sub.htm?id=109)

EPA *Lean*

[www.epa.gov/lean/](http://www.epa.gov/lean/)

EPA Indoor Air

[www.epa.gov/iaq/](http://www.epa.gov/iaq/)

The Formaldehyde Council

[www.formaldehyde.org](http://www.formaldehyde.org)

KCMA Sustainable Forest Beliefs

[www.kcma.org/member\\_sub.htm?id=72](http://www.kcma.org/member_sub.htm?id=72))

Composite Panel Association Environmentally-Preferable Product Program

[www.pbmdf.com/AboutCPA/EPP.asp](http://www.pbmdf.com/AboutCPA/EPP.asp)

LEED Leadership in Energy and Environmental Design

[www.usgbc.org](http://www.usgbc.org)

Green Home Guidelines

[www.nahbrc.org/greenguidelines/index.asp](http://www.nahbrc.org/greenguidelines/index.asp)

GreenPoint Rated

[www.builditgreen.org/greenpointrated](http://www.builditgreen.org/greenpointrated)

Lyptus

[www.weyerhaeuser.com/lyptus](http://www.weyerhaeuser.com/lyptus)



PHOTOGRAPHY: THOEN & ASSOCIATES



THIS CONTEMPORARY KITCHEN FEATURES QUEST, CRYSTAL'S FRAMELESS LINE OF CABINETS, AND USES GREEN-CORE PLUS FOR THE DOORS AND BOXWORK.

THE USE OF RECLAIMED MATERIALS, CONCRETE AND RAPIDLY-RENEWABLE BAMBOO CREATES CONTEMPORARY YET TIMELESS CABINETS THAT IS SENSITIVE TO RESOURCE CONSUMPTION AND OUR ENVIRONMENT.

  
GREEN CORE  
by CRYSTAL





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