

okamura

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Eco-Conscious Products

| afe and environmentally friendly kamura's environmental priorities in proc ssessment ensure the delivery of safe, eco-co hat give consumers peace of mind. | uct design and | A harmony of design, ecology, and economy Okamura reduces raw material inputs during manufacture by analyzing finite elements with CAE and adopting other leading-edge methods. We harmonize design, ecology, and economy. | | |
|--|--|---|---|--|
| Teeping clean air ne furniture is a critical part of any office space ictor that motivates Okamura to protect the air y positively using raw materials and paints free compounds (VOCs). | quality of offices | Designs for easier reuse and recycling after use Okamura designs products that can be easily broken down into homogeneous materials to facilitate the reuse of parts recovered from post-use products and material recycling. The materials used in major components are clearly identified. | | |
| eveloping eco-conscious products | | | | |
| Customer needs Social requirements | | Regulations Industrial standards | | |
| | | - | | |
| | Our resp | onsibility | | |
| Motto "Quality pays for itself" | | ronmental vision /AVE 2010 | Action principles The 3Rs (Reduce, Reuse, and Recycle) | |
| | | - | | |
| Product planning assessment | Product a | ssessment Eco-conscious production | | |
| Functions, performance, design Product safety Environmental consciousness Price Responses to regulations | Material sel Efficiency in Energy effic Ease of disa Recyclability | n material use ciency ssembly | Conserving energy Mitigating harmful emissions Zero emissions | |
| | | - | | |
| | Requirements ir | n product design | | |
| Conserving resources and reducing volume Using recycled materials Reusing materials and product parts | | recycling air quality t safety | Reduced packaging materials Information disclosure | |
| | | | | |
| Design for the environmer | t | Product testing | | |
| NT's aluminum base, a o a simulated analysis of bespeaks the outstandin Okamura's eco-conscious o product developers optimizer by minimizing the amounts without sacrificing the our strength, and safety of the pro- | finite elements, g efforts behind dsigns. Okamura's the use of resources of materials used tstanding quality, | Measuring the volumes of VOCs emitted Testing durability and load bearing strength Testing stability Testing for transport Measuring the volumes of specific harmful substances | | |

Materials & Recycling

Total control of every material used

Okamura collects thorough information on the materials, surface finishing methods, and other aspects of the parts used in its products, from the main components of its office equipment to individual screws. Detailed data on materials are provided upon request.





Recycled materials are used in resins and wood quality parts. These materials make up about 58% by product weight.

Recyclability:

D4% ly in mind during the

With future recyclability firmly in mind during the design stage, we use homogeneous materials as much as possible. After use, our products can be collected and disassembled into homogeneous materials.

Wood

In deference to the ecology of the earth's forests, Okamura does not use wood from illegally felled trees. We efficiently make use of wood only from properly managed forests. We have stipulated a wood-use policy that promotes the preservation and sustainment of the diversity of life on our planet, and are actively involved in expanding the use of sustainably harvested wood and wood from certified forests.



Resins

ABS resins is used to ensure recycling in the future. Resins recovered after use are reprocessed and reused by resin manufactures. Okamura is an active user of recycled resins for its products.



Aluminum

Recovered aluminum is processed into a recycled form by alloy manufacturers and later into aluminum. Energy consumption can be reduced by 97% by generating recycled metal from recovered aluminum rather than creating aluminum from its source material bauxite.

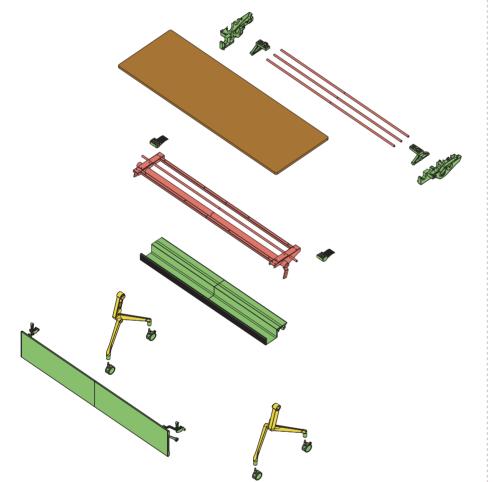


Indicating materials

Okamura indicates the materials used to facilitate recycling after use.



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Reducing Chemicals

GREENGUARD certificated

GREENGUARD is an indoor environment air quality standards used to certify products with low chemical emissions for the protection of interior environments. Certification is granted only to products that pass the pollutant emissions testing conducted in process-controlled dynamic environmental chambers following test protocols developed by Air Quality Sciences, Inc. The test protocols comply with ASTM, U.S. EPA, LEED, and BIFMA standards and requirements. NT Series received GREENGUARD certification in March 2012.

Reducing VOCs to safeguard health

Okamura minimizes the use of formaldehyde, toluene, xylene, and other VOCs, which can result in sick building syndrome and allergic dermatitis. Environmental load can be reduced while achieving outstanding comfort and strength.



GREENGUARD Emission Criteria

| Emission Types | Measure | |
|---------------------|------------------------|--|
| Individual VOCs | <0.1TLV | |
| Formaldehyde | <0.025ppm (<0.03mg/m3) | |
| 4-phenylcyclohexene | <0.0033mg/m3 | |
| Total VOCs | <0.25mg/m3 | |
| Total aldehydes | <0.05ppm | |

Minimizing environmental load

Amid calls to limit the use of the earth's resources, the reuse and recycling of post-use products are now a global agenda. To ensure safe and sure progress in recycling, manufacturers must limit the use of substances with environmental loads. The latest round of enhancements in the regulatory framework started with the European Parliament's Restriction of Hazardous Substances (RoHS) directive. Though office furniture is not currently included among the targets of this regime, Okamura is working to reduce substances with environmental impacts in response to customer demand and in anticipation of future legislation.



*1 These standard values contain exemptions set in the RoHS directive

*2 Directive put into effect in European Union member states in July 2006 to restrict the use of hazardous substances in electronic and electrical equipment.

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LEED Credit Summary

| Program | Category | ltem | | Contribution | Point of contribution |
|---|--------------------------|--------------------|---|--|-----------------------|
| LEED 2009 for Commercial Interiors | Materials & Resources | MR 3.2 | Materials Reuse –Furniture and Furnishings | This product (NT Series) is designed to be refurbished and easy replacement. And it can be used any longer by having proper maintenance. Product can contribute to the this point by reusing. In Japan, Okamura has a service network by its subsidary, Okamura Support and Service. | 1 |
| | | MR 4 | Recycled Content | 24% (1/2Pre-Consumer: 5.3%, Post-Consumer: 21.3%) | 1-2 |
| | MR 5 | Regional Materials | Assembled in Yokosuka town, Kanagawa, Japan, | 1-2 | |
| LEED 2009 for New Construc- tion and Major Renovations Action Act | | MR 3 | Material Reuse | This product (NT Series) is designed to be refurbished and easy replacement. And it can be used any longer by having proper maintenance. Product can contribute to the this point by reusing. In Japan, Okamura has a service network by its subsidary, Okamura Support and Service. | 1-2 |
| | MR 4 | Recycled Content | 24% (1/2Pre-Consumer: 5.3%, Post-Consumer: 21.3%) | 1-2 | |
| LEED 2009 for Existing Build- ings, Operations and Mainte- nance Resources | Materials & Resources | MR 1 | Sustainable Purchasing –Ongoing Consumables | 24% (1/2Pre-Consumer: 5.3%, Post-Consumer: 21.3%) | 1 |
| | | MR 2 | Sustainable Purchasing –Durable Goods | | 1-2 |





For inquiries and consultation requests:

Visit the Okamura website for the latest updates on Okamura products. http://www.okamura.jp/

