



Design for Environment Guidance Document

The UNICOR Office Furniture Group, hereinafter referred to as OFG, is committed to the ethos of sustainability and effective environmental stewardship. Toward that end, OFG will incorporate design for environment (DfE) principles into its processes for new product development and product design changes. Our DfE goals are as follows:

- We will keep in the forefront the health of our workers, our customers, and the environment;
- We will have a preference for materials that are renewable, recycled, recyclable, or biodegradable while maintaining expected quality endurance;
- We will continually evaluate and improve our production processes to achieve maximum efficiency in water and energy use;
- We will continually evaluate and improve the design of our products to achieve maximum efficiency in material usage;
- We will consciously prevent the use of all chemicals of concern in both product materials and in our production processes;
- We will consider the risks our products pose for the environment at the end of their useful life; and
- A premium will be placed on having our finished products be recycled, repurposed, or otherwise kept out of landfills.

To achieve these goals, OFG will adopt the following procedures:

1. Manufacturing processes will be continually evaluated to identify those that could be more environmentally friendly including such things as painting processes, adhesives, cleaning solvents, finishes, and packaging. This is intended to not only improve the indoor air quality to the end user, but also to address waste minimization, maximum efficiency in water and energy use, recycling, and the use of alternative non-hazardous process materials.
2. Raw materials used to produce existing OFG-owned product lines will be reviewed to determine whether alternatives are available that have a higher recycled content, are biodegradable, or can be recycled at the end of the products useful life. Consideration will be given to materials that do not contain chemicals of concern listed in BIFMA e3 Annex B and Annex C. For materials comprising 90% of a products weight, the material supplier will be required to complete a Material Declaration Form.
3. For product lines not owned by OFG, contract award will include a rating factor for product environmental aspects such as the percentage of materials that are renewable, recycled, recyclable, or biodegradable as well as the ease of disassembly and repair.
4. New product lines developed by OFG will include, as part of the vision statement, the goal to design a product that uses natural resources as efficiently as possible

- (including raw materials, energy, and water) and minimizes the impact on the environment during the entirety of its life cycle.
5. For OFG product lines designed by an external firm, the design services contract will require the company to incorporate DfE principles into the product design and to supply a completed DfE Checklist at the end of the project.
 6. Proposed changes to existing OFG products will be evaluated using DfE principles.

Primary responsibility for implementing these procedures is assigned to the OFG Product Support Center (OFG-PSC) Manager or designee. He/she will develop and maintain a master DfE schedule that shows the plants, manufacturing processes, and existing products to undergo DfE analysis. Periodically, but no less than bi-annually, the OFG-PSC Manager will convene an ad hoc DfE team to prioritize projects, assign project team members, review progress of ongoing projects, and review the overall status of meeting goals contained in this guidance document. The ad hoc team will typically consist of the following staff:

- **OFG-PSC Manager** – Serves as team leader, publishes the agenda, and memorializes team discussions and decisions in a written document that is published to OFG-PSC's SharePoint page. He/she also publishes DfE project documents to OFG's SharePoint page.
- **Product Managers** – Provide input on priorities for their respective plants, manufacturing processes, and products.
- **Sales Manager** – Provides input from the customer's perspective and shares market knowledge that may influence priorities.
- **Contracting Officer** – Provides guidance on alternative product materials and suppliers.
- **Design Manager** – Provides input on product development, design trends, and alternate materials.
- **Factory Managers** – Provide guidance on manufacturing processes, chemicals used in the plant, energy and water usage, solid waste, and local Environmental Management System objectives and targets.
- **DfE Project Team Leaders** – Provide a written update on individual projects.

Individual DfE project teams will consider the following minimum elements as part of the review:

1. Renewable materials;
2. Recycled materials;
3. Recyclable materials;
4. Biodegradable materials;
5. Length of a products life including its reuse, repair, and disposal at the end of its useful life;
6. Amount of water used to manufacture the product and its parts;



7. Amount of energy used to manufacture the product and its parts; and
8. Material efficiency.

The DfE project teams will document considerations made, alternatives considered, and justification used to reach decisions. At a minimum, the documentation should include:

1. DfE Checklist – See Attachment A.
2. UNICOR Supplier Material Declaration Form for materials comprising 90% of product weight – See Attachment B.
3. Material Analysis Tool – See Attachment C for an example.

Project documentation will be sent to the OFG-PSC Manager after each team meeting so that it can be posted to the OFG-PSC SharePoint page.

Signed: _____


Janet E. Conner
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6/12/14

Date