



Professionally Built For The Individual.™

Reimers Furniture Manufacturing, Inc.(RFM)

ENVIRONMENTAL IMPACT STATEMENT:

RFM'S manufacturing operations is typical of most North American manufacturing companies depending upon a very large network of suppliers who provide components for the office seating industry. This supply chain has large multi billion dollar sales manufacturing organizations that in turn have material and component suppliers across North American and over seas. The office chair industry is simple in its network supply chain with all suppliers adding value to the basic raw materials and components.

RFM'S supply chain can be divided into 3 categories; Metal, Plastic, and Wood. All of the categories are identical in their supply chain function raw materials (ore, oil, trees) are processed by "mills" into a basic product (steel base, aluminum ingots, polymers, lumbar, wood fibers) that in turn is moved along the supply chain where our direct suppliers add value to produce components that RFM converts into an assembled product that is a durable good - task-chairs.

The role RFM plays in this cycle of manufacturing durable goods and recycling is without a doubt minor. The players at the front of the line in our supply chain are the true torch carriers for the North American recycling responsibility. The materials we use in our task chairs Metal, Plastic and Wood are being processed by large manufactures that are world leaders in the technology that enables efficient materials recycling. Everyone of the industries, that provide all of our chair materials, have made out standing and significant energy, waste, and production savings with recovering post consumer goods in the recycle process. It is acknowledged nation wide that our metal, plastic, and tree post consumer recycle efforts are continuing to improve significantly. Steel and aluminum leads the field with nearly all of this product being recycled to reduce the demands of "virgin" ore. Plastic and Tree materials are not to the level of recovery as steel and aluminum, but the expected increased in plastics manufacturing technology recycling will be substantial.

Typical RFM task-chair material content by weight

| <u>Material</u>          | <u>% of Total Weight</u> |
|--------------------------|--------------------------|
| Metal-steel and aluminum | 53%                      |
| Control                  |                          |
| Back bar                 |                          |
| Cylinder                 |                          |
| Hard ware                |                          |
| Casters (stems)          |                          |
| Back ratchet             |                          |
| Arm uprights             |                          |
| <br>                     |                          |
| <u>Plastic</u>           |                          |
| Fabric                   | 20 ½ %                   |
| Arm pads                 |                          |
| Seat & back cushions     |                          |
| Bases                    |                          |
| Casters                  |                          |
| Handles                  |                          |
| Protective bags          |                          |
| Cylinder components      |                          |

Wood

Cartons

26 ½ %

Tags

Fabric

Seat & back shells

Cardboard filler boards

The impact of our supply chain component network efforts in getting post consumer waste into the material and components we procure from them is detailed below:

1. Steel - over 90% of the steel content we purchase comes from North American processors and manufactures. The recycle programs that this industry has, gets the entire available "used" steel waste back into new product. The structural demand of the chair product usually governs how much post consumer waste and virgin material can be mixed. Nearly all of the Task chair steel components have strength requirements - back bars, heat treat bolts, arm T-uprights, cylinder columns, caster shafts and stems, control springs, control pivot shafts, and control load bearing housings. The higher the stress and load requirements the lower content of impurities in the steel composition and the less percentage of post consumer recycle steel. Steel is seldom discarded after completing its useful life as a consumer item. We have recycled steel in our product in the 01% to 25% range it can't be more because of the high strength requirements.

2. Aluminum - Like its counterpart steel, aluminum is seldom discarded after completing its useful life as a consumer item. We have a very small amount of aluminum in our product - only a fraction of a percent. We have two features where aluminum is used - An injection molded aluminum base and a small aluminum extrusion in the back ratchet assembly. Both of these products have very high strength/stress requirements: Bases used on 24-7 chairs and Big and Tall chairs and the ratchet to allow the back height adjustment to support the back weight on all chairs of this euro back type. We have recycled aluminum in these products in the 01% to 25% range - it can't be more because of the high strength requirements.

3. Plastic - The use of plastic on the RFM chair is very limited. With fabric excluded from the plastic category it accounts for only 17% of the chairs material content. The Reimers Task chairs have no out back plastic, no seat bottom cover plastic, no control plastic shroud, no plastic seat and back shells. Plastic has been used in the best engineering application - urethane foam cushion in the seat and back to provide the most healthful, comfortable, and support for the individual. The bases and casters are glass-reinforced nylon plastic which is the best solution for abrasion resistance, appearance, and low maintenance with high strength features. The other uses of plastic on the Reimers chairs are ideal plastic application - activating handles, shrouds for cover pinch points on the arm mechanisms, control mechanisms, and protective covers for the cylinder working seals. The base and caster plastic has very high strength requirements; the post-recycled material content can only be in the 01% to 25% because of the strength factors. The other plastic uses of handles and shrouds allow higher post recycles content over 25%, but this plastic is a very small percentage of the total amount of plastic used.

4. Fabrics - the commercial fabrics used on the RFM task chair is really part of the plastic category. Upholstery fabric is one of the lowest percent of post consumer recycling of the total materials used in our chairs. The textile industry has been very effective in recycling the "clothing" textiles nation wide - this includes the recycle to wiping products, and fiber market as well as usable clothing into export market. The amount of post consumer materials recycled back into the fabric used for commercial upholstery has been very low. In the Tuff-cloth type of upholstery fabrics with very high performance qualities, abrasion resistance, etc. must have yarns with low recycle

content under 2%. Several fabric manufacturers of upholstery fabric have stepped forward with new fabrics made from 100% post consumer recycled beverage bottles. We offer this product in our standard fabric offerings as a grade D. The 100% post recycled fabric is available on the state proposal. An RFM fabric card is enclosed; i.e. card name - Evergreen, Patterns Novo, Enviro, Rebound, and Sequel with a large variety of colors in each pattern line. Evergreen fabrics have been provided in the RFM offering for an environmental answer to the recycling program. All the patterns on the Evergreen card are supported with recycle textile programs because the fabric has no chemical backer compounds that would contaminate the fabric out of this recycle loop.

During the last 2-year period Reimers Furniture purchased a state of the art computerized fabric-cutting machine. This machine has made tremendous improvements in production over the manual fabric hand cutting operations previously used. We've realized great benefits that have made RFM more responsive to our customer needs and demands; i.e., quality improvements, improved delivery, reduced waste, and greater utilization of our "Fabric" material.

We've estimated from computer documentation and evaluating fabric usage that we use less fabric and create less waste with the computer fabric cutter's skills at nesting patterns and cutting patterns with high levels of accuracy. This savings of material and of waste is between 5% to 10%. This is equal to a savings of 34,000 sq. ft. of upholstery fabric per year - enough for 1500 task chairs that would have been waste material on the floor.

#### ENVIRONMENTALLY FRIENDLY PRODUCTS:

Considering the material content of the typical RFM task chair being mostly steel, which is provided by our many suppliers as finished components, we do have an input in how some of the other minor components are processed and environmental impact of this processing.

##### 1. Water based adhesives:

In our urethane foam processing for the seat and back foams we specify engineered laminated foam constructions that provide specific features for comfort; i.e., top laminate - soft for the initial contact, lower laminates firm and thick for support and eliminating bottoming out. All of this foam laminating is with the environmentally friendly water based adhesives. In our wood lamination processing for the seat and backs we specify a high number of laminates for the seat and back for maximum strength; i.e., for each 5 glue lines for the seat and back each. All of the glues in the seat and back wood laminations are the friendly water based adhesives.

All of these glues are applied either with airless spray systems or with glue roller spreading equipment. 70% of the glues used in the laminations of seat and back foams and in the laminations of the wood seat and back shells are with water-based adhesives.

##### 2. Wood from sustainable forest:

Our wood content in the RFM task chairs proposed is a very small percentage of the total material content less than 10%. The only wood used would be the seat and back laminated wood shells. These shells are all manufactured from rotary cut veneers from gum trees by manufactures in the states of Arkansas, Georgia, and N. Carolina. The responsibility of the veneer mills is a sustainable reforestation practice of returning what was taken away. Over 90% of wood usage is from suppliers that are using sustainable forest practice.

##### 3. Powder Coating:

All of the RFM components with a finished surface are powder coated 100%. This powder coating is on products manufactured all mfg. in North America; i.e., all controls, all arm uprights, all cylinders, all in-out brackets, and all back bars.

**AIR QUALITY:**

The RFM manufacturing facility has very few emissions from processing operations. We have only foam adhesion spray operations. We don't have any finishing operations. We use less than 80 gallons of foam adhesives per month; the glue has a VOC rate of less than 3.0 lb./gal or 240 pounds per month. This is less than 50% VOC emission. Aldehyde emissions are 0% and formaldehyde emission is less than 20ppb.

**SOURCE REDUCTION AND WASTE PREVENTION:**

The RFM manufacturing operation is primarily a non-surplus generation type of operation. All orders are made to order - no chairs are made to inventory. Purchase orders are issued on a just in time basis allowing for lead times and delivery times. Chairs do not accumulate waiting for pending orders.

The RFM product line has components that are used on all styles across the line. All chair sales result in depletion of all components in inventory. Inventory levels are low enough that obsolescence has never happened with components becoming surplus. We have 4 chair bases that are used on over 200 models. We have 6 basic casters that are available on the 200 models - all standard in the industry. We have 9 different controls that are used by all the various chair manufacturers and are accepted as standard by the industry. The components that we produce that are unique to RFM are the seats and backs - that's the part that is made to order. All of our seats and backs are wood shells, and flat foam stock that is machined to make a specific model. The wood shells and flat foam stock can be/and is capable of being machined into dozens of other models seats and backs - the surplus that maybe generated with cancelled orders or any reason for overstock can be saved by re-machined for other sold orders.

The advantage of having wood seats, flat foam, and fabricated parts is the tremendous flexibility. We can save 100% of surplus parts to be used on sold orders or repairs.

RFM has in place two programs for repairing / refurbishing chairs for reuse or resale. These refurbish programs are designed to help the various authorized dealers take care of the needs of existing customers who want to use the RFM chairs through the chairs useful life or to provide a useable chair in the resale market.

The dealers have two options:

1. Replacement of the upholstery an/or other broken components with the dealer doing all of the teardown and assembly.

2. The dealer sends the chairs to RFM for all necessary refurbishing done by RFM.

In both cases the dealers are charged the appropriate costs for parts and labor and the resale of the refurbished products is handled with the dealers distribution channels.

RFM has a special warranty replacement program that salvages usable parts from damaged components where the refurbished assembled components are used for the warranty repair. We have three component products that have been selected for this warranty salvage recycle program; i.e., the swing arm linkage assembly - we have over 40,000 swing arm linkage at work on the market place that require a warranty program that is responsive to the customers needs and cost effective. All of the multi function controls, straight bar, euro bar, and the knee tilt controls are in a recycle program to replace warranty demands for broken handles, broken knobs, back bar guides, squeak problems, and clutch plate locking problems - We have 150,000 of these controls in active use requiring warranty. This requires an effective, responsive warranty program. The lift cylinders are in a refurbish program of replacing the internal gas mechanism for warranty

replacement demands. Since we have over 200,000 lift cylinder working in the field and with a lifetime warranty the replacement program must provide the maximum efficiency for the service people (dealer, reps, customer service) and the customer.