

**How Manufacturers Are Responding to Extended Producer Responsibility Programs and How These Programs Can be Made More Effective**

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**Introduction**

In the last few years, extended producer responsibility programs have been established throughout many OECD Countries. Industries selling products on a global basis are now attempting to comply with these programs.

**Figure 1**  
**MAJOR DATA ELEMENTS NEEDED FOR INTERNATIONAL REPORTING**

- Weight of the package
- Shelf area
- Declared Weight
- Declared Volume
- Product to Package Ratio
- Empty Space Ratio
- Specific material type
  - ✓ Resin type
- Fiber content
- Rigid
- Heavy metal content
- Country of Origin
- Packaging Category
  - ✓ Primary
  - ✓ Sales Unit
  - ✓ Transport
  - ✓ Service
- Packaging Element
  - ✓ Cap, Carton, etc
- Percentage of Recycled Material
  - ✓ Post consumer
  - ✓ Pre consumer
  - ✓ Industry scrap
- Data on the recyclability of the packaging material
- Percent composition of each component (for example)
 

✓ Fiber	84.5%
✓ Aluminum film	5.8%
✓ Acetate film	3.8%
✓ Ink	1.4%
✓ Glue for Aluminum	.7%
✓ Glue for acetate	3.8%
✓ Carton glue	.3%

Since each of these programs is different in its methods of determining fees, data requirements, labeling requirements and other reporting requirements, the message sent to manufacturers is confusing at best and has limited the effectiveness of these programs.

This paper discusses the process by which manufacturers are attempting to comply with extended producer responsibility programs (this paper mainly addresses packaging because these programs are more mature, but is applicable to other extended product responsibility programs). It provides direct examples of how these programs contradict each other and how industries react to these requirements.

Additionally, this paper discusses the cost to industries of obtaining the necessary data and preparing the reports as required. In most cases, the cost of data collection and report preparation far exceeds the cost of the fees themselves. This paper provides examples of how data gathering and report preparation requirements can be simplified. Most importantly, this paper makes recommendations on how extended producer responsibility programs can deliver a consistent message to manufacturers regarding appropriate product and packaging design.

**Data manufacturers must have**

Today, product manufacturers can be preparing environmental packaging reports for as many as 30 countries and states. Many require complete and accurate data, which may not be available and is very difficult and costly to obtain. Additionally, product manufacturers are requiring their suppliers to certify many criteria of their packaging, including heavy metal content, fiber content and recycled content. Since many countries require the auditing of packaging reports, product manufacturers are using these certifications to prove compliance. **Figure 1** shows the major data elements a packaging manufacturer must have to meet international

reporting requirements.

Unfortunately, the data necessary to complete environmental packaging reports is different in every country. Further, the data requirements are constantly changing making the database requirements for multinational companies increasingly difficult. For example, in the EU alone the same piece of paperboard can be defined as paper in France, composite in Germany, aluminum in Spain and other in Belgium. The data necessary to complete even the reports for the PRO Europe countries is different. Germany requires you to have data on shelf area and packaging volume. In France, you need data to be able to determine if the packaging is rigid, because if it is, you must use a difference fee structure. In Belgium, you must classify each packaging element (1 –99) as to whether it is a can, bottle, jar, rigid case, pot, case, or tube.

The UK's shared responsibility program adds additional complexities to the necessary data requirements for multinational corporations. Since each sector of the packaging chain is responsible for a portion of the fee, you must have the data on where each of your packaging components were manufactured and whether or not the final product was sold in the UK or exported. If you are a retailer in the UK, you must have data for each product you sell and know whether or not it was imported. Though much of this data is available, it is not in one interactive database. Therefore, making accurate reports is nearly impossible and very costly.

By creating a shared responsibility program (the UK's program is shared among different industrial sectors, other "shared" programs are shared between industry, government, and the countries' citizens), the United Kingdom has increased the amount of reporting entities ten fold (now all raw material manufacturers, converters, packagers and retailers must submit reports). Further, the fees paid by each sector become so diluted that the economical justification to modify the packaging (by the product manufacturer) is diminished.

As extended producer responsibility requirements expand to countries outside of Europe, so does the complexity of the reporting requirements. Korea's new draft packaging program will require that you place the "empty space ratio" on each package sold and depending on the product contained in that package, will limit that "empty space ratio" from 10% to 25%. The information needed to calculate the "empty space ratio" is contained in a five page formula requiring data elements not previously used by any other country packaging report and not easily available.

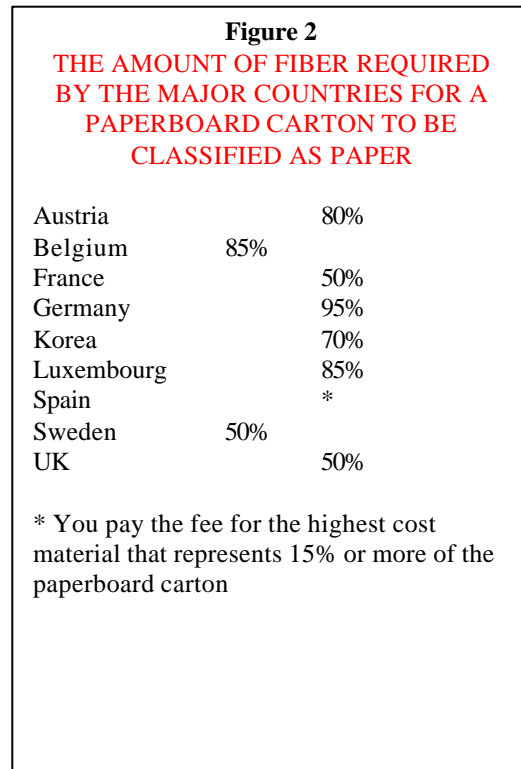
### ***Cost of meeting extended producer responsibility requirements***

The cost of meeting extended producer responsibility programs varies greatly from company to company. If a company makes a large amount of one or two products and has fewer than 20 packaging systems, reporting would be relatively simple. However, for companies selling globally and manufacturing such items as toys, drugs, cosmetics, health-care products and confectioneries therefore, producing a large variety of products, packaging reporting requirements have become a nightmare. The cost of preparing and submitting the reports far exceeds the cost of the fees themselves (except in Germany and Austria where the fees are very high). For example, a large personal care company, which manufactures and distributes its products globally, will spend millions of dollars creating and maintaining its environmental packaging database, which is necessary to complete all country reporting requirements. Additionally, it is spending thousands of dollars to complete each country report (none of these costs influence packaging change). For example, one company is spending more than one thousand dollars each month in preparing its monthly reports to Svensk Glasatervinning in Sweden for their glass bottles and paying less than \$200 in fees per month. If Svensk Glasatervinning would allow yearly or quarterly reporting or if the reporting could be part of the REPA (Sweden's third party organization responsible for all of the other packaging materials) report, the cost for report preparation would be greatly reduced.

### ***What are the messages sent to manufacturers?***

The only clear message is that by eliminating a packaging component (like a folding carton) your fees will be reduced. Since there is such a variance in the methods of calculating packaging fees in each country, making decisions regarding material substitutions that reduce the weight or volume of packaging is almost impossible. For example, switching from a 50 ml glass container (weighing 100g) to a 50 ml PET (polyethylene terphthalate) container (weighing 50g) will increase your fees as much as 132.50 DM per 1,000 containers in Germany, but will have no impact on your fees in France. If the switch is to a PP (polypropylene) container, you will decrease your fees in Japan by 1,752 yen per 1,000 containers.

When it comes to making packaging material more recyclable, the message is confusing at best and contradictory in many cases. For example, in Japan manufacturers must pay fees on all glass containers and PET containers for beverage and soy sauce. The message sent is that if you use glass or PET “the more recyclable materials” you must pay a fee, but if you use a less recyclable material such as PVC (polyvinyl chloride) or PP (polypropylene) for your containers you are not required to pay a fee and therefore have a market advantage. Additionally, PET bottles used for such products as salad oil, detergent, etc are precluded from the scheme (therefore you are not required to pay a fee) due to their “poor recyclability”?



Regarding the use of laminate paper, the message is more confusing. **Figure 2** shows the amount of fiber required by major countries for a paperboard carton to be classified as paper. As can be seen from the figure, the fiber requirement ranges from 50 percent in Sweden, France and the UK to 95 percent in Germany. If the material is classified as laminated you pay larger fees, but the allowable limits are so variable that packaging designers do not know which standard to use. Further, maintaining the database that can interpret different fiber level limits can be difficult if not impossible to track.

The message regarding the use of recycled content material is even more confusing. Only the new Danish fee program (starting January 1, 1999) provides for separate and therefore reduced rates for materials made with recycled content. In every other country, the use of recycled content materials, which can increase the weight and volume of the packaging, drive packaging fees higher, thereby discouraging their use.

Regarding the use of PVC, Belgium charges the same fee for PVC as HDPE (high-density polyethylene) but charges a fee almost double for other plastics like PP or PS (polyethylene). Is this the message they want to send?

### ***Recommendations for implementing successful and cost-effective Extended Producer Responsibility Programs***

#### *1. Standardize definitions*

By standardizing material definitions, reporting on an international basis would be simplified and would reduce data requirements. Compromising on a uniform fiber limit standard would send a clear message to manufacturers on how to improve the recyclability of their products. Standardized packaging definitions will reduce international data requirements and reduce the cost to prepare reports.

2. *Limit the data required for each report*

Is it necessary to report the packaging element of each packaging component? Does it encourage change or bring about improved packaging? Does the third party organization really need this data? In developing or modifying extended product responsibility programs the usefulness of each data element must be considered carefully. Will it encourage change? How will the data be obtained? How much will it cost to collect and will the third party organization or government agency really use it? Each additional data element that is required to be reported is costly. Further, since manufacturers must maintain a file showing how environmental packaging issues are incorporated into their design protocol (to comply with the “essential requirements” in the EU) is this additional data necessary? OECD should establish a set of data elements, with standardized definitions, that all industries could maintain in their packaging database. Countries would be able to use any of these reporting elements for their reporting requirements.

3. *Limit fees to a weight and material basis*

Wherever possible, limit packaging fees to a weight and material basis. Additionally, fees based on shelf area or volume add to the cost of report filing and have little or no impact on packaging design. Further, using weight and material type for one kind of packaging and volume for another type make material decisions difficult and send inappropriate messages to manufacturers.

4. *Minimize the number of reporting entities*

It is the product manufacturer that makes packaging design decisions. Diluting packaging fees among additional sectors reduces the economical justification to modify packaging. Increasing reporting entities increases administrative costs and complicates packaging reporting.

5. *Minimize the number of reports required per country*

Where possible, reduce the number of reports required by each country. Allow for quarterly or annual reporting (you can bill monthly). Allow third party organizations to accept fees and reports for all material types and all types of packaging (primary, transport, etc.).

6. *Review other legislation to assure consistency with extended producer responsibility goals*

Monitor other in country legislation to determine its impacts on your packaging programs. For example, the EU metric only labeling Directive is scheduled to take effect on January 1, 2000. This Directive will prohibit the use of dual labeling (oz. and ml) on products sold in Europe. This Directive will dramatically decrease the recyclability of many packaging components in the European market by requiring companies to use over-labeling so that they can sell their products worldwide. Other packaging and labeling requirements directly impact the size of packaging because of information and language requirements.

7. *Keep program simple (“KISS”) and send a clear message*

Simple straightforward programs send the clearest messages, cost the least to comply with and are the easiest to administer. Establish a universal set of packaging data elements (material types, weight, declared contents, etc.) with standardized definitions that industries should maintain in their packaging design database and limit country reporting to these elements.