The Vinyl Institute

A Division of The Society of The Plastics Industry, Inc.

Some Common Misperceptions About Vinyl (and what you can say to refute them)

1) **No one is recycling vinyl.**

Not true. Of course, industrial scrap vinyl has been recycled for years, but now, post-consumer vinyl recycling is growing, too, with about 5 million pounds of post-consumer vinyl (primarily bottles) currently being recycled. According to a recent study conducted by the Council for Solid Waste Solutions, there are an estimated 1100 municipal recycling programs in place or planned in the United States that include vinyl.

2) **There's no market for recycled vinyl.**

Not true. In 1989, the University of Toledo identified nearly 100 uses for recycled vinyl. Overall, the potential demand for recycled vinyl is estimated to be about twice the potential supply (494 million pounds needed vs. 207 million pounds available via recycling of bottles).

3) **Vinyl is the "problem child" in municipal recycling because it contaminates other resins.**

This is a two-way street. Other resins are just as much a contamination problem for vinyl. Except for commingled (mixed) plastics applications, different plastic materials cannot be mixed successfully in most recycled products applications. This is why it's so important to develop the technology to efficiently separate one plastic from another. Thanks to the chlorine that is present in it, vinyl lends itself very well to automated sorting technology.

4) **If vinyl products were banned from the waste stream, there would be no problem sorting plastics.**

Not true. The only plastic applications that are currently easily separated are PET soda bottles and HDPE milk bottles. But according to a study conducted by the Massachusetts Executive Office of Environmental Affairs in 1988, programs that limit themselves to these two products can only hope to capture 11 percent of the plastic packaging in the waste stream. To institute a truly comprehensive recycling program, you must include all the other products made from PET and HDPE (which aren't always easily identified), plus the products made from vinyl, LDPE, polystyrene and polypropylene. With or without vinyl, comprehensive plastics separation is a challenging problem.

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5) **Individual municipalities can't afford the technology to separate different plastics. It's better to concentrate just on soda bottles and milk jugs.**

Eventually, consumers will want more. The ideal is to give them a curbside system that lets them dispose of all plastics, without requiring them to make involved decisions as to which container is "allowed" in the program. Long-term, the vinyl industry believes that the only feasible way for municipalities to do this is to band together to support the implementation of regional plastic recycling facilities (PRFs), where smaller volume plastics (the "third bale" that remains after you take out milk jugs and soda bottles) can be sorted economically.

6) **Rather than dealing with all these smaller volume plastics, it's better just to ban the ones that can't be easily recycled.**

Consumers would give up a lot if this were to happen. Vinyl has been used for years in packaging applications because it provides a combination of properties that other materials cannot provide. These include cost, appearance and technical performance. For small-volume applications in particular (such as house or regional brands), vinyl is often the most cost-effective packaging choice. In other applications, such as meat wrap, vinyl is the only suitable material.

7) **PET and HDPE packaging are listed as 1 and 2 in the SPI recycling coding system because they are the most recyclable.**

Not true. The numbers assigned to each plastic in the SPI coding system are purely arbitrary and do not reflect the material's recyclability.

8) **Vinyl gives off dioxin when it's incinerated.**

Not true. A study conducted by the New York State Energy Research and Development Authority in 1987 found that the presence – or absence – of vinyl in incinerators had no effect on the amount of dioxin produced. Rather, it was found that incinerator operating conditions (primarily, temperature) were the key to controlling dioxin formation.

9) **Vinyl should be banned from incinerators because the chlorine in it produces acid gases and causes acid rain.**

This ignores the big picture. About 50 percent of the chlorine present in incinerator wastes comes from sources other than vinyl such as table salt and food wastes. So even if all vinyl products were banned, incinerators would still need to operate with scrubber systems to make them environmentally acceptable. One of the leading manufacturers of incinerator systems, Ogden Martin Systems, has advised the EPA that its equipment "can tolerate reasonable increases in acid-producing waste components without adverse effect," and does not "perceive the anticipated increases in PVC food packaging to be problematic." As to acid rain, power plants burning fossil fuels, which produce sulfur dioxide and nitrogen oxide, are considered to be the primary cause of acid rain. In Europe and Japan, studies show that only about 0.3 percent of all atmospheric acidity can be traced to the incineration of vinyl.

10) **Vinyl should be banned from incinerators because it contains heavy metal additives.**

This is an evolving issue. Many vinyl products are being reformulated to eliminate the use of heavy metals. Granted, some use of heavy metals is likely to continue, but banning vinyl from incinerators will not eliminate this problem. Rather, regulating agencies (like the EPA) must make sure that all incinerator residues (ash) are disposed of appropriately.

11) **European packagers and grocery stores have banned vinyl.**

Not true. First, limitations on the use of vinyl packaging are taking place on a selective basis and some are already being reversed because the parties involved have gotten further information to make a more informed decision. In other cases, such as Switzerland and Holland, bans or restrictions have been proposed, but are being challenged. In Great Britain, one of the leading retailers, Marks & Spencer, has chosen vinyl over other materials as the chain's "most environmentally friendly polymer." In Switzerland, retailer Migros has stated that its whole attitude toward vinyl will change when incinerator scrubber technology is fully employed. The current trend in Europe – led by the Germans – is to take a comprehensive look at waste reduction and make industry a partner in that process. This involves all industries, not just the vinyl industry. Overall, Europe remains a larger consumer of vinyl packaging than the U.S.

12) **Vinyl plastics decompose in landfills and give off vinyl chloride monomer.**

Not true. Like all plastics, vinyl is an extremely stable landfill material. It resists chemical attack and degradation, and is so resistant to the conditions present in landfills it is often used to make landfill liners. On those occasions when vinyl chloride monomer is detected in landfills, it typically can be traced to the presence of other chemicals and solvents.

13) **Vinyl products are a prime contributor to the problem of indoor air pollution.**

Not true. At least three studies have been conducted to measure the amounts of vinyl chloride monomer and vinyl plasticizers released from typical household products. Those studies found that concentration levels were well below those considered to pose a significant health risk.

14) **Hydrogen chloride is a toxic "killer" fire gas. Fires that involve vinyl products are unusually hazardous.**

Not true. Hydrogen chloride is an irritant gas, but studies have concluded that humans can survive exposure to much higher levels than those that are found in the typical fire. The most common hazard associated with fires is carbon monoxide – a lethal combustion gas given off by virtually all materials that burn (both synthetic and natural). The presence of vinyl does not make a fire unusually hazardous.

15) **Burning vinyl caused the deaths at the MGM Grand and Stouffer Hotel fires in the early 1980s.**

Not true. Combustion products from burning vinyl were never officially cited as the cause of death in these fires. The primary cause eventually was found to be inhalation of carbon monoxide, although the official investigation also cited several building code violations as contributing factors. In large fires such as these, there are often additional deaths caused by heart attack, burns or falls.

16) **Vinyl products (PVC) are cancer-suspect agents.**

Not true. While vinyl chloride monomer (VCM) is known to cause certain, rare types of cancer under extreme conditions of prolonged exposure at high levels, once VCM is converted to PVC, this hazard no longer exists. Because VCM is known to be a hazardous material, it is used and handled under the most strictly regulated conditions. These precautions help minimize any potential health threat that might exist for those who work with the material, or those who live in communities where VCM is handled or processed.

17) **Vinyl products present health hazards in food-contact applications.**

Not true. Vinyl is widely used in such applications at bottles, flexible food wrap and rigid blister packing without posing any sort of contamination problem. All vinyl compounds used in food-contact applications must be produced following U.S. Food & Drug Administration guidelines, and vinyl in general is "generally recognized as safe" for food-contact applications. Vinyl is also fully approved for use in blood bags and other medical applications, as well as in pipe used to transport drinking water.