

Sustainability Brief: Aluminosilicate Glass Technology (ASG)

Saving Virgin Materials, Reducing Impact on Landfills

One of Interface's Seven Fronts for achieving sustainability includes reducing our dependence on virgin materials, and increasing our use of recycled, recyclable and renewable materials. We have made great strides on this front, especially in the use of recycled fibers for our carpet products; however, we recognize that the face weight of a carpet tile constitutes only a small portion of the total product composition. Carpet tile backing represents the greatest percentage of tile weight, and the raw materials used for backing construction have the largest impact on our material usage ratios. As a result, the reduction and substitution of materials in the carpet backing pose the largest challenges for us as we strive to "close the manufacturing loop" for our products.

The Challenge:

Since we embarked on our journey towards sustainability in 1994, we have set aggressive goals and measured our progress along the way. We track total material brought into our plants based on multiple environmental impacts of these materials, including their recycled content. Previously, over 60 percent of the material used to manufacture the backing for GlasBac® carpet tiles was virgin calcium carbonate (limestone). It accounted for over 40 percent of the total weight of the incoming raw materials, including both backing and facecloth, at our Troup County, GA facilities. We realized that in order to achieve significant progress in conversion of our materials from virgin to recycled, we had to identify and use a source of recycled backing material.

The Solution:

We have now replaced calcium carbonate with aluminosilicate glass (ASG) in all of the GlasBac carpet tiles manufactured in Troup County. Coal combustion byproducts (CCBs) such as ASG are produced during the production of electricity at coal-fired power plants. Because of the high volume of power generation by coal combustion, CCBs rapidly accumulate, creating tons of solid waste destined for landfills. In the United States, more than 128 million tons of this byproduct were produced in 2002. Because of the size of this

disposal problem, the U.S. E.P.A. supports programs to increase their commercial applications. The Coal Combustion Products Partnership (C²P²) Program is a cooperative effort of the U.S. Environmental Protection Agency and the CCBs industry to promote their beneficial use and the environmental advantages that can result.

The Benefits:

Interface's choice to use ASG for our products has numerous benefits. It decreases the amount of virgin materials (calcium carbonate) we take from the earth, and it helps reduce the impact on landfills that would normally receive the CCBs.

The lower specific gravity of ASG also delivers enhanced backing construction qualities that result in lower product weights, in keeping with our goals for eliminating waste through dematerialization (doing more with less). This is all achieved while maintaining the highest levels of quality and product performance. ASG is already being used in many other building products, including concrete, cement, aggregates, wallboard, roofing tiles and shingles.

Aren't there concerns regarding coal-derived products?

Some people have raised concerns pertaining to heavy metal content and radioactivity related to certain coal-derived products. Although those concerns are relevant to some processes, they are not relevant to the use of ASG for carpet backing. ASG consists of ceramic spheres formed during the combustion process. ASG is inert and nonhazardous, as classified by the U.S. E.P.A., (2002). There are trace elements of some heavy metals present in the glass, just as there are in other naturally mined materials, including the material we seek to replace (calcium carbonate). As with calcium carbonate, the levels of heavy metals present are well below any reportable exposure limits or reporting requirements. The ceramic form of ASG prevents leaching of trace metals from the material.

To learn more, contact your local Interface Flooring Systems Account Executive or visit us on the web at www.interfaceflooring.com.

Useful References

American Coal Ash Association 2002 Survey for CCB production -

[http://www.aaa-usa.org/PDF/aaa_2002_ccp_svy\(11-25-03\).pdf](http://www.aaa-usa.org/PDF/aaa_2002_ccp_svy(11-25-03).pdf)

<http://www.ftc.gov/bcp/gmrule/guides980427.htm>

<http://www.ofee.gov/eo/13101.htm>

<http://www.aaa-usa.org/FAQ.htm>

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