ENVIROMENTAL IMPACT

Our customers are more aware than ever before of the impact of human activity on the environment. Today, people are making choices based on environmental impact – the food they eat, the cars they drive, the electricity they use and the things they buy. Home furnishing and décor materials are no exception.

Life Cycle Analysis
A true study of environmental impact considers everything from start to finish – from the raw materials extracted, to manufacture, all the way through to the final disposal of the material, including refuse. Every stage has an impact on the environment and it’s up to producers to minimise this.

Raw Materials
Unlike scarce resources like petroleum (used to make vinyl, synthetic carpet fibres and other plastics), the raw materials for ceramic tiles are abundant. They consist mostly of aluminium silicates, which make up most of the earth’s crust. The methods used to quarry these materials are designed to limit environmental impact. Quarry sites are restored after completion, and there are strict limits on the emission of dust, waste production and water consumption.

Production
Since the 1970s, the Italian ceramic tile industry has led the way by considering the environmental consequences of their manufacturing techniques. Ceramic industries applies the same principles and uses the same responsible techniques in our local factories. We use innovative production design in the following ways:

- **Gaseous emissions**
  As part of production of ceramic tiles, florecent, particulate matter and lead compounds are released. Over 90% of these are removed by purification plants at our factories.

- **Water consumption and waste**
  Water is required for tile production to prepare mixtures and glazes and to wash down production lines. Some evaporates in production, some becomes waste water and as much of it as possible is recycled. Our Gryphon factory uses the latest Italian technology in our EKO kiln, and all the water used in the production process, besides steam generated in drying, is recycled.

- **Energy consumption**
  High temperature firing is necessary for ceramic production, but the industry is always improving its energy consumption thanks to new technologies. This kind of innovation means it takes less than half the amount of energy it did in the 1970s to produce the same quantity of tiles today. The EKO kiln at our Gryphon factory uses waste energy to pre-heat the combustion air, ensuring complete combustion to minimise gas consumption and emissions.

- **Waste and residues**

Installation
Most materials used in installation are natural and abundant, consisting of mixtures of cement, sand and water. Some organic additives (acrylic resins, polyvinyl resins etc.) are used to enhance the performance of the mortar, but tile adhesives contain no harmful solvents. Other types of adhesives that don’t share these properties (e.g. epoxy) have limited application.

Disposal
Most floor and wall coverings cannot be disposed of without substantial environmental impact through incineration, and can’t be reused or recycled. There’s no such risk of environmental contamination from tiles when a building is demolished, thanks to their inert nature. Tiles can sometimes be reused too, for example in the preparation of foundations. In addition, because of their durability, tiles don’t need to be replaced, except by choice, meaning less waste and less energy consumption in the long term.

DESIGN DIVERSITY

With an infinite colour palette to choose from, and finishes in glossy, matt or satin, there are tiles to suit every taste and every space. New printing techniques mean you can reproduce just about any image on tile. Even the texture of marble, granite or wood can be replicated, giving customers the look and feel of almost any finish with all the advantages of tiles.

What’s more, the variety of tile formats (size and shape) makes it possible to put together creative visual effects. The industry’s constant research and development is responsible for innovation in design – for instance, today’s large sizes didn’t exist a few years ago.

CONCLUSION

As we’ve seen, tiles are an excellent choice. Most are more resistant to chemicals than marble and granite, and don’t suffer from scratches and cuts the way wood, vinyl and carpets do. They last for years, and are available in styles to suit any design requirements. They’re also safe and hygienic, easy to clean and made in an environmentally responsible way. So the next time a customer asks you ‘why tiles?’, you’ll have plenty of answers.

CERAMIC NEWS • VOLUME 1

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This newsletter contains everything you need to know to be able to recommend tiles with confidence to your customers. Let’s learn about tiles’ strong points.

Floors and walls are covered for two main reasons – to improve the appearance of the space, and to protect the surfaces. Today, customers can pick from an overwhelming number of options but tiles continue to offer many advantages over the competition.
Why Tiles?

2000 year old mosaics discovered in ancient Greek city, Zeugma

DURABILITY

If you have any doubt about how long tiles can last, you only have to look at some of the ancient buildings that have their tiles intact. Some date as far back as 3000 years ago, and at certain sites in Rome, ancient tiles are still stepped on to this day.

HEALTH AND SAFETY

Tiled rooms create some of the safest environments around. In fact, they’re a common choice in areas where hygiene is at the top of the list of requirements – hospitals, the food industry, kitchens and the like.

Zero Risk: Toxins and Allergies

In recent years, customers have raised concerns about toxic emissions (mainly formaldehyde and other Volatile Organic Compounds) from various types of flooring – laminates, vinyl and carpets. There is none of that worry when it comes to tiles. Because the nature of ceramic materials and the high temperatures used to manufacture tiles, they are chemically inert – this means they are very stable, and don’t break down. Even in conditions of very heavy use, the amount of material removed from the surface is negligible and, in any case, also inert.

Carpets are also known to be reservoirs of allergy-triggering and asthma-producing substances like dust mites, pollen and pet dander. As we’ll see later, tiles are a breeze to clean.

Fire Resistant

The safety of tiles has been studied – both from the aspect of accidental exposure to a flame, and in specific industrial environments where the presence of an open flame is part of the ordinary work conditions. These studies consider how much tiles feed and spread a flame, and the quantity and nature of gases that are produced in the presence of combustion. Tiles are not damaged by contact with flames, do not spread or feed a fire, and do not emit substances of any kind if exposed to a flame. In fact, tiles protect the surfaces they’re applied to, reducing their exposure to heat and the resulting danger of collapse.

No Static

If you’ve ever walked across a carpet and touched a metal object, you know that friction on some materials can cause a build-up of static electricity, resulting in a small shock. While static electricity isn’t a major health concern for most of us, an electrical shock can cause an explosion if near flammable substances, and can damage electronic components.

Therefore it is a consideration for operating theatres, laboratories, chemical plants and for those who work with computer hardware. There is no such build-up of static electricity with ceramic tiles, making it an ideal choice in those environments.

A Note on Slippage

If a liquid forms on a smooth hard surface, it creates a film on which it is easy to lose your footing. But using the right tile in the right area can greatly reduce the risk of slipping.

Advise your customers and help them plan accordingly. A good solution for outdoor spaces exposed to water is the use of slip-resistant ceramic tiles. A rough or sparse surface with relief means you avoid squeaking (sliding on a film of water). In addition, a high degree of surface hardness and chemical resistance, means you can clean the rough surface of the tiles without worrying about damaging them.

CERAMIC NEWS VOLUME 1

4 MAINTENANCE

Easy to Clean

Ceramic makes for one of the most easily cleaned and hygienic surfaces available. As of course, always, the right tiles must be chosen for the area in which they are to be used and must be properly installed. Because tiles have a hard, generally smooth and compact surface, dirt and spills are easily cleaned with a moist rag or, at most, a detergent. They don’t absorb liquids, vapours, odours or smoke. With appropriate and frequent maintenance, they will never need any special cleaning in the entire lifespan of the product. Even deep stains (e.g. one caused by a lit cigarette) can be cleaned, since tiles are resistant to the chemical and abrasive effects of strong detergents.

‘easily cleaned and hygienic surfaces available’

‘spills are easily cleaned with a moist rag or, at most, a detergent’

COST

Cost is a crucial consideration for customers when deciding on décor options. You can confidently advise them that tiles are a very cost-effective choice in comparison to other options.

Global Cost

When thinking about cost, it’s important to know that the price of materials and installation does not represent the full economic evaluation. To accurately compare the cost of different flooring options, the full economic cost must be calculated for the life of the building. In other words, it must be long-term. It must include any special maintenance and the possible replacement of the flooring material over the lifespan of the building. We call this the global cost.

CERAMIC NEWS VOLUME 1