

# EPOXIES AND FLOORING

EPOXY RESIN COMMITTEE



Flooring is one of the most important applications for epoxies, accounting for 30% of all epoxies sold in Europe in the construction and coating sector.<sup>1</sup>

## High standards

Epoxies play a major role in meeting the standards required for high quality flooring. Especially in public buildings like hospitals or food processing plants, where hygienic floors are of the utmost importance, epoxy coatings are the preferred choice because they allow stronger cleaners to be used.

They also provide high resistance to abrasion, tear and corrosion, which are needed in the case of high traffic spaces. Additionally, epoxy technology equips architects with a tool to design floors in various shapes and colours, making buildings and open spaces more attractive. A number of large sport-halls across the world, such as the ones built on the occasion of Olympic events, include epoxy floors.

## Economic advantages

Epoxy resin coating for flooring substantially reduces replacement, repair and maintenance costs. Their main advantages are tangible in two areas:

- *Replacement costs:* installation of epoxy flooring can be more costly than other materials. However, in the long run, epoxy coated floors will not need to be replaced as often as other flooring such as, for example, linoleum or carpets.
- *Repair and maintenance costs:* epoxy-coated floors are chemical- and leak-resistant, preventing damages in high-risk buildings, such as hospitals or industrial spaces. They are easier to maintain clean and sanitised because of fewer joints and improved resistance to powerful cleaning agents.

Overall, epoxy flooring technologies offer significant cost savings even when considering a higher initial investment. Based on current estimates of flooring life cycle costs in Europe, epoxy coated floors offer repair and maintenance savings of approximately €125 million annually.<sup>2</sup>

## Greater sustainability

Compared to other commonly used heavy-duty flooring solutions such as tiles and carpet rolls, epoxies are more sustainable solutions than other types of flooring. They are easier to install and do not require labour and waste-intensive custom cutting, producing less waste during cleaning and

<sup>1</sup> Epoxy Resins: Silent Enablers of a Sustainable Economy. Market Overview and Socio-Economic Analysis of the European Epoxy Resin Industry, 2010

<sup>2</sup> Epoxy Resins: Silent Enablers of a Sustainable Economy. Market Overview and Socio-Economic Analysis of the European Epoxy Resin Industry, 2010

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recoating operations and resulting in lesser amounts of waste.<sup>3</sup> In addition, as epoxy-based floors need to be replaced less frequently than other flooring, they also result in fewer disposal operations and resources needed.

It has been calculated that by reducing flooring waste by 20%, Europeans could save up to €70 million in waste handling costs each year.<sup>4</sup>

**Did you know?** Epoxy floorings prevent slip and fall accidents thanks to their inherent anti-slip texture. What might seem as a non-critical feature, actually translates into wider societal benefits.

Slip and fall accidents are, in fact, the primary cause of work-related injuries<sup>5</sup>. Minimising work related injuries and their resulting pain and incapacitation are key in any industrial sector.

Europe would gain increased production output in factories, but also see a reduction in employee absenteeism. Furthermore, healthcare and/or social security costs would be reduced and compensation claims and/or litigation would be minimised. It has been calculated that these direct and indirect costs amount to nearly €7 billion in the European economy<sup>6</sup>. Studies say that if 5% of the flooring in Europe is assumed as epoxy-based, approximately 30% of the accidents can be prevented as a result of using epoxy, saving Europeans €100 million in incident-related costs.<sup>7</sup>

Savings category	Reduction assumptions	Savings €m
<b>Investments, maintenance and repair costs</b>	€3.30 per m2	125
<b>Reduced flooring waste</b>	20%	70
<b>Falling incidence savings</b>	30%	100

*Summary of savings generated by epoxy flooring<sup>8</sup>*

<sup>3</sup> Epoxy Resins: Silent Enablers of a Sustainable Economy. Market Overview and Socio-Economic Analysis of the European Epoxy Resin Industry, 2010

<sup>4</sup> Epoxy Resins: Silent Enablers of a Sustainable Economy. Market Overview and Socio-Economic Analysis of the European Epoxy Resin Industry, 2010

<sup>5</sup> Preventing slips and trips at work, Health and Safety Executive, 2012

<sup>6</sup> Preventing slips and trips at work, Health and Safety Executive, 2012

<sup>7</sup> Epoxy Resins: Silent Enablers of a Sustainable Economy. Market Overview and Socio-Economic Analysis of the European Epoxy Resin Industry, 2010

<sup>8</sup> Epoxy Resins: Silent Enablers of a Sustainable Economy. Market Overview and Socio-Economic Analysis of the European Epoxy Resin Industry, 2010