Environmental Commitment and Performance
Bridgestone Europe | 2012

It’s not only what you make,
it’s also how you make it
This document is the updated version of the 2011 Environmental Commitment and Performance.
Table of contents

Our environmental commitment 3
  • Close to customers, wherever they are 4
  • Eco-friendly, reliable tyres 5
  • A systematic approach to eco-design 6
  • Four life cycle stages, four opportunities to make a difference 7

Our environmental performance 9
  • A sophisticated selection of materials 12
  • Optimised production processes 14
  • Advanced technologies for eco-friendly tyre use 16
  • A second life for used tyres 20

Our environmental initiatives 23
  • The power of dialogue 24
Our Environmental Mission Statement

To help ensure a healthy environment for current and future generations...

We, the Bridgestone group, are committed to continually working toward a sustainable society with integrity and in unity with our customers, partners, communities and the world around us.

Focus on three objectives

To translate this mission statement into action, we have defined 3 main objectives for eco-development:

**In Harmony with Nature:** to contribute to biodiversity through habitat enhancement, and through environmental education and research.

**Value natural resources:** to continually improve natural resource conservation through operational improvements and product design.

**Reduce CO₂ emissions:** to continually reduce emissions of Greenhouse Gases, including CO₂ from our products’ complete life cycle.

How and Where

The environmental mission is implemented through two core strategies: the commitment to an open environmental communication, and the implementation of TEAMS (Total Environmental Advanced Management System: organizing environmental activities in a consistent and harmonized way on global basis and in line with the ISO14001 standard). The Bridgestone group’s environmental mission covers all aspects of our business. We strive to improve our products and services on an ongoing basis, and so help our customers conserve natural resources. We fine-tune our operations, expressing our concern for the environment by selecting optimal raw materials, enhancing our production processes and deploying powerful logistics and we volunteer time and resources for community activities dedicated to environmental and social improvements.

http://www.bridgestone.eu/corporate/environment/mission
Bridgestone Europe

> European headquarters in Brussels
> Around 143,000 staff in 20 European countries
> Extensive research infrastructures in Italy: a major R&D and testing centre, and a state-of-the-art proving ground inaugurated in 2004
> 8 tyre manufacturing plants
  France (1), Hungary (1), Italy (1), Poland (2) and Spain (3)
> 1 plant for the production of treads
  for truck and bus tyres (Belgium)
> 6 retreading facilities
> 2 intermediate product factories
> 3 European logistics centres
> 20 national sales companies

Close to customers, wherever they are

The Bridgestone Group - the world’s largest in its industry - produces high-quality tyres and rubber products for customers around the globe. We take great pride in the staff of over 143,000 employees who embody this worldwide presence. Together, we run 183 plants, 5 technical centres and 12 proving grounds, and market our products in more than 150 countries.

The Bridgestone Group companies operate under the guidance of their parent company, the Bridgestone Corporation, which is headquartered in Tokyo. Key regional divisions of the Group include Bridgestone Europe NV/SA and Bridgestone Americas Holding, Inc., which have built up extensive activities in their respective markets.

Bridgestone Europe develops, manufactures, tests and sells tyres both as original equipment to vehicle constructors and for the replacement market, and achieved EUR 3.7 billion of Net Sales in 2011. Products are also exported outside Europe, for example to Japan.

Tyres account for 80% of the Bridgestone Group’s sales, but our expertise extends beyond tyres to industrial rubber and chemical products, office equipment components, sporting goods and bicycles. The Group as a whole generated Net Sales for USD 38.9 billion in 2011.

We view the global scope of our operations as a privilege and a responsibility. It enables us to assist communities on five continents as they strive for safer transport and greater sustainability. Their needs, their expectations and their trust inspire us to reach for new heights every day.
Eco-friendly, reliable tyres

Our customers rely on us to supply tyres that will contribute to a safe, enjoyable motoring experience. They value products that will maximise a car’s ability to cope even with the heaviest rain, and that will allow for the precise, responsive handling and braking that are crucial when drivers are faced with an unexpected obstacle. We meet our customers’ expectations by designing tyres with excellent grip.

Safety performances of a tyre such as wet grip are the first priority for Bridgestone, while tyres that help a vehicle to use less energy to move require different characteristics. Designing tyres that combine outstanding safety characteristics with high fuel efficiency has therefore traditionally involved a performance trade-off.

Technology enhances tradition...

This dilemma exemplifies the complex challenges involved in manufacturing truly exceptional tyres. Tyres have evolved into high-tech components where all aspects of production and design are scrutinised and optimised for best results. Bridgestone’s engineers excel in this delicate art and seize every opportunity to improve on past successes.

Reconciling the conflicting requirements of road safety and sustainability ranks highly among our R&D objectives. Our latest achievements in this area include the NanoPro-Tech™ technology, which optimises the distribution of fillers in the compound used to produce the tyre and reduces the friction of the molecules.

This process helps to limit rolling resistance without compromising continuous improvement in safety. Technological advances such as these consolidate our long tradition of excellence in tyre manufacturing and boost our ability to design reliable, eco-friendly products.

…transparency enhances trust.

Consumers in the European Union will soon be able to ascertain the environmental and safety performance of new tyres at a glance. Standardised tyre labelling, to be introduced by the end of by the end of this year, will require tyres to be graded for wet grip, fuel efficiency and exterior noise. Bridgestone welcomes this initiative, which will provide motorists and the automotive industry with some of the key information required to compare products.

A systematic approach to eco-design

To ensure that environmental aspects are taken into account at all stages of tyre design and production, Bridgestone has implemented processes that place environmental considerations firmly at the centre of its activities.

All tyres produced by Bridgestone Europe are manufactured by plants which run annual environmental programmes and which are certified according to the ISO 14001 standard. This standard issued by the International Organisation for Standardisation sets out stringent requirements for the environmental management systems that support the implementation of an organisation's environmental policies and programmes.

Analysing the life cycle of a tyre...

In 2002, Bridgestone's Technical Center Europe launched a Product-Oriented Environmental Management System (POEMS) to fine-tune the design of its tyres. The system has received ISO 14001 certification and is verified every six months to confirm that it remains geared to compliance and continuous improvement of environmental product performance. It is simple, flexible and effective.

The POEMS process began with an analysis of the environmental impact of a representative passenger car tyre throughout its entire life cycle. This Life Cycle Assessment (LCA) was performed in 2001 in the wider framework of the European Tyre and Rubber Manufacturers’ Association (ETRMA). It examined resource usage and emissions at all stages, from raw materials extraction and manufacturing through transportation and distribution to use, re-use, maintenance and recycling or final disposal.

...for the purposes of product-oriented environmental management

The LCA revealed that the environmental impact of tyres depends primarily on product design and usage. Following on from this initial analysis, POEMS has been deployed to pilot analyses of the various design features that affect the environmental parameters of tyre use. These include the implications of material selection and tyre geometry on external noise, rolling resistance and wear. POEMS guides all our processes. It ensures that the environmental impact of our tyres is reliably controlled at all stages of product design.
Four life cycle stages, four opportunities to make a difference

The use phase accounts for no less than **84% of the environmental impact of a tyre**. Bridgestone strives to limit the impact of its products at all life cycle stages, but the data suggest that the use stage offers the greatest scope for significant reductions. By comparison, the end-of-life stage represents just 3% of the total environmental impact.

The life cycle stages

![Diagram showing the life cycle stages of a tyre: Raw Materials, Production and Logistics, Use, End of Life.]

- **10% Impact of tyre raw materials**: Greater eco-friendliness at this stage depends on the choice of ingredients and the degree of environmental awareness throughout the supply chain.
- **3% Impact of tyre production**: Improvements in Bridgestone’s manufacturing processes are continuously reducing the environmental load at the factory stage.
- **3% Impact of end-of-life tyres**: The responsible involvement of consumers, dealers, manufacturers, waste transporters and recyclers is crucial at this stage and helps to promote new uses for old tyres.
- **84% Impact of tyre use**: Bridgestone has developed special technologies to minimise the impact of tyre use without sacrificing continuous improvement in safety performance. Motorists also play a central role at this stage, as they can achieve drastic reductions through regular tyre maintenance and appropriate driving behaviour.

The LCA identifies the relative environmental importance of each tyre life phase and helps to identify effective actions for continuous improvement.

The above mentioned figures refer to the ETRMA tyre life cycle assessment of a passenger car tyre. These are calculated in terms of “total environmental impact” using the Eco-indicator 99 methodology which analyses and weights all potential environmental damages (e.g., ozone layer depletion, ecotoxicity, acidification, eutrophication, land-use and others including - but not limited to - climate change). The full text of the European tyre LCA study is available upon request by contacting: environment@bridgestone.eu

Other studies focus on the global warming potential of a product and provide results in terms of CO2. For example, the Japan Rubber Manufacturers Association study states that the CO2 emissions repartition during a passenger tyre life cycle is: Raw Materials 4.1%, Production and Logistics 1.7%, Product Use 87%, End of Life 7.2%.
Our environmental performance

At Bridgestone, we have been producing tyres for nearly 80 years. We look back on this long tradition with gratitude for the trust of our customers and for the dedication and ingenuity of our staff. Generations of Bridgestone employees have helped to keep our products ahead of the curve since 1931. We hope that future generations of Bridgestone colleagues will look back on our shared history with the same sense of continuity and pride.

It follows that we assess our products both in terms of their technical performance and in terms of their impact on the environment. Building on the tyre life cycle analysis, we have launched ambitious, **comprehensive initiatives to limit their ecological impact through**:

- a sophisticated selection of materials
- optimised production processes
- advanced technologies for eco-friendly tyre use
- new uses for old tyres
“The European tyre industry is currently going through major changes at all business operations stages: material procurement, production and product design.

We have phased out highly aromatic oils, and we have implemented accurate processes to ensure that our material supply chain complies with the recent European regulations on chemicals (CLP, REACH*). At the tyre manufacturing stage, we continue to reduce our carbon footprint, an initiative which also ties in with the forthcoming European CO₂ reduction targets. And we are preparing for the implementation of the new EU regulations relating to minimum tyre performance requirements and tyre labelling.

The introduction of labelling is in itself an epic change. As of November of this year, passenger car tyres and many types of truck tyres sold in Europe if produced starting from July 1st 2012, will have to be labelled. The labels will enable tyre manufacturers to rate their products for three of the key performance indicators: fuel efficiency, wet grip and exterior noise.

Reliable labelling will help consumers to make informed choices, and it will be an opportunity for Europe’s tyre manufacturers to showcase some of the key features of their products.

Preparing for the introduction of the labels has involved a company-wide effort. It is not just a matter of printing the label, but also of aligning our testing and knowledge management processes with the specificities of the new regulation. This also requires the development of training procedures and the involvement of many functions, from design to logistics to process control through to the dealer network and our partners. Every function in the company has been involved and has contributed to this.

Bridgestone has invested in systems and processes that will ensure that our labels are fully reliable. Sample checks by the authorities are planned, and we are in favour of any further controls aiming to promote an effective implementation of labelling throughout the sector. Wet grip, fuel efficiency and exterior noise are not

Gianluca Tosatti
European Regulations and Environmental Affairs Manager
Bridgestone Technical Center Europe, Rome
the only parameters that define the quality of a tyre. At the Technical Center, we are just as interested in other aspects - aquaplaning, dry grip, handling control, interior noise, wear resistance and so forth. While there will certainly be a particular interest in the label performances, we will continue with our goal to improve the performance of our tyres across the board. We have hundreds of engineers developing new materials, new designs, new tread shapes every day. They are involved in a number of programmes focusing on environmental, safety or supply chain aspects.  

*The EU regulations on Classification, Labelling and Packaging (CLP) and on the Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH).

**EU Tyre Labelling Regulation**

“The labels will enable tyre manufacturers to rate their products for three key performance indicators: fuel efficiency, wet grip and exterior noise.”
A sophisticated selection of materials

Key ingredients
Tyres consist primarily of synthetic and natural rubber. Other materials are added to improve performance, durability and safety. Processing transforms these substances into a new material - the vulcanised rubber compound from which tyres are mainly made.

Natural rubber
With its unique elastic properties, the sap of the rubber tree remains an essential element of a tyre. Truck tyres contain even more of this key ingredient than passenger car tyres.

Synthetic rubber
Usually produced from petroleum or natural gas, synthetic rubber is added to natural rubber to achieve the desired elasticity.

Fillers
Carbon black and silica are widely used to provide the necessary structure to the compound.

Textile
In passenger car tyres, rayon or polyester cords are radially disposed along the carcass (“radial tyre”), while nylon cords are placed under the tread or near the bead area.

Steel
High-strength steel cords are applied under the tread of passenger car tyres and in the carcass of truck tyres, while other steel wires are located near the bead to assure adherence to the rim.

Other materials
Other materials, such as oils, sulphur and zinc oxide, have various functions. Anti-degradants are used to protect the compound.

* Source: Average LCA data, ETRMA 2001
** Source: Bridgestone Technical Center 2009
Promoting awareness throughout the supply chain

Bridgestone Europe relies on in-house supply capabilities for a part of its natural rubber, synthetic rubber, carbon black and steel cord. This part of the supply chain is, therefore, covered by internal environmental protection arrangements.

Environmental considerations also rank highly among the criteria we apply when choosing suppliers, with ISO 14001-certified suppliers benefiting from a selection advantage. Our suppliers’ compliance with legal and other requirements is verified.

Using reclaimed materials

Reduce, re-use, recycle - Bridgestone has adopted a range of waste reduction initiatives as part of a wider effort to limit its ecological footprint. Most of the zinc oxide used in tyres is made from recycled zinc, for example. Other relevant recycled materials include crumb rubber, a substance generated by crushing the waste rubber of used tyres.

However, a high proportion of recycled rubber tends to translate into a loss of compound durability performance, also increasing tyre wear and rolling resistance and consequently reducing service life and fuel efficiency. As of today, the limited and unstable supply of high-quality crumb rubber adds another layer of complexity. Bridgestone uses post-consumer recycled tyre material in all its tyre lines, but limits the crumb rubber content to small amounts that cannot affect the quality of the product.

Investing in innovation

Bridgestone’s Technical Center Europe develops and upgrades compounds and reinforcing materials in order to enhance the on-road performance and the sustainability of our tyres. The use of innovative chemicals in this process is tightly controlled to ensure that these substances meet the various environmental and legal requirements. All design choices are assessed in terms of their impact throughout the entire life cycle of the product.
**Optimised production processes**

**Tangible results**

Our Group’s concern for the environment has triggered a series of profound changes at Bridgestone Europe. With the help of our environmental management system, we have implemented a range of projects and programmes to boost the environmental sustainability of our operation.

The starting point for these initiatives was a detailed analysis of the environmental aspects of our production. This analysis enabled us to pinpoint aspects with a significant impact on the environment and adopt internal procedures to control them. All Bridgestone Europe factories are ISO 14001:2004 certified, and our environmental improvement programmes are carried out and verified within the framework of this standard.

The table below documents the evolution of key environmental indicators linked to our manufacturing processes, highlighting the improvements we have achieved since this process was launched. The data represent production efficiency in terms of input or output per ton of tyres.

We monitor these indicators carefully, and we continue to seek out new opportunities to refine our environmental performance.

### Ratio (divided by production volume)

<table>
<thead>
<tr>
<th>Water consumption \ [m³/ton]</th>
<th>Solvent consumption \ [kg/ton]</th>
<th>Waste generated \ [kg/ton]</th>
<th>Energy usage \ [Giga Joule (GJ)/ ton]</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>9.0</td>
<td>7.4</td>
<td>57</td>
</tr>
<tr>
<td>2004</td>
<td>8.4</td>
<td>6.6</td>
<td>55</td>
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<td>2005</td>
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<td>5.7</td>
<td>3.2</td>
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<td>2010</td>
<td>4.5</td>
<td>2.2</td>
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</tr>
<tr>
<td>2011</td>
<td>4.1</td>
<td>1.9</td>
<td>52.6</td>
</tr>
</tbody>
</table>

Source: Bridgestone Technical Center Europe

* Being related to production volume, some of the figures from 2008 reflect the effects of an industry-wide slowdown and the opening of new factories and production lines, which affected the environmental efficiency during the start-up phase. Bridgestone Europe has launched environmental improvement programmes with the aim of exceeding, in the shortest possible time frame, the excellent results achieved before the facilities expansion. The data have been updated to represent the main 6 factories until 2008, and 9 factories as of 2009, including the new ones.

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Constant efforts are made to reduce the carbon footprint of our tyres.
Saving energy

We attach great importance to the efficient management and rational use of energy, and the fact that we have nearly halved the amount of energy used to produce our tyres shows that our efforts are meeting their mark. We used approximately 8.7 GJ to manufacture a ton of tyres in 2011, compared to 17 GJ in 1990. Our efforts to save energy have enabled us to reduce our emissions of greenhouse gases dramatically over the years. Key technological and organisational improvements include the introduction of cogeneration facilities producing energy and heat from a common fuel source.

Reducing water consumption

Bridgestone Europe is keenly aware of the need to conserve water, one of the world’s most precious resources. Already in 2010, water consumption per ton of tyres produced by our plants has been halved of the amount used in 2003, reaching very low figures for this type of product, while continuing to improve our “water use efficiency” also in 2011. We obtain no more than 15% of our water intake from deep wells.

Revaluing waste

As inevitable for an industrial activity, also our manufacturing processes generate various types of waste – such as out-of-spec rubber, textile and metallic wastes, vulcanised tyres, raw material packaging, dust from indoor testing and trimming phase. Further to our constant efforts to reduce their generation and conscious of their residual value, we strive to find out greener applications for our scrap material in similar or different processes. In 2010, Bridgestone Europe had reached a level of 77% of industrial wastes sent to recycling or used to generate heat.

Limiting VOC emissions

The Volatile Organic Compounds (VOCs) involved in rubber processing are associated with the evaporation of solvents. To reduce our emissions of VOCs, we have invested in technologies that enable us to cut back on the use of these solvents. This programme was launched in order to meet and exceed the requirements of the relevant European Directive (1999/13/EC). It has enabled Bridgestone Europe’s plants to limit VOC emissions to an average of less than 2 kg per ton of tyres in 2010.

Minimising the warehousing of chemicals

Our tyre plants have successfully implemented a storage optimisation programme for a range of chemicals targeted by EU regulations. EU Directive 2003/105/EC calls for stringent accident prevention and control measures for factories storing certain levels of these chemicals, setting even tighter limits than earlier EU legislation. It provided additional momentum to Bridgestone Europe’s ongoing drive to ensure the safety of its staff, its customers and its global neighbours.
Advanced technologies for eco-friendly tyre use

How can a tyre help to reduce fuel consumption?

There is far more to a tyre than meets the eye. Every component, every design feature, every step of the manufacturing process is likely to affect the performance and the characteristics of the final product. Our detailed understanding of these diverse aspects and of their complex interactions enables us to engineer tyres for specific purposes and requirements.

Through a combination of advanced design features...

The contribution to vehicle fuel efficiency is a key consideration for all our tyres. This parameter is also directly linked to rolling resistance, the phenomenon by which the deformation of a rotating tyre leads to heat build-up in the compound, and thus to a loss of energy. The higher the rolling resistance, the more energy is needed to rotate the tyre.

Bridgestone’s NanoPro-Tech™ technology represents a breakthrough in tyre design. It optimises the distribution of fillers in the compound, reducing the friction of the molecules and the associated energy losses. As an added bonus, it also significantly improves wet grip. It is the latest in a succession of technological advances that enable us to supply products designed to keep our customers safe while reducing their petrol bills.
...that translate into low rolling resistance

Reduced rolling resistance means reduced vehicle fuel consumption, all other aspects being equal. It is, however, just one of many factors involved. Others, such as vehicle aerodynamics, largely depend on the design of the car. Many more relate to operating parameters, such as vehicle and tyre maintenance standards, driving style and a range of variables which include speed, route and load, as well as weather and road surface.

Among the long list of parameters that affect fuel efficiency, many are within the consumer’s direct control. Simple gestures, such as keeping tyres properly inflated and adopting an economical driving style, enable motorists to save on fuel. They also contribute to greater road safety and help to protect the environment.

Towards a greener future with Bridgestone’s Ecopia tyres

Bridgestone’s flagship brand for cleaner transport takes motorists one step closer to “ecological utopia”. Ecopia tyres combine advanced features such as innovative compound technology and optimised tread patterns to help to reduce vehicle emissions, while offering the high-level safety of our premium tyres.

With the Ecopia range, Bridgestone has been at the forefront of environmentally aware innovation for many years. Ecopia tyres were first used in electric cars in Japan in 1991. Building on this promising start, they made their mark in Europe in 1999 when the Ecopia B381 was fitted to the Volkswagen Lupo 3L, which was widely considered to be the most eco-friendly car of its time. Ecopia tyres for passenger cars have been available in Europe since 2009.
ECOPIA. Reduce your ecological tyre print.

Products for passenger cars

Turanza T001

Our Turanza range is optimised to provide a smooth drive with maximum comfort on long journeys. Motorists opting for Turanza tyres benefit from all the advantages of a high-performance tyre with enhanced focus on safety, comfort, wear life and fuel economy.

We introduced this premium range in April 2009 to meet industry demand for low rolling resistance – resulting in superior fuel economy – combined with outstanding safety performance.

Ecopia EP150

The Ecopia EP150 tyre, launched in late 2009, was formulated for small and medium-sized cars. With an advanced NanoPro-Tech™ compound, this model provides much lower rolling resistance than other Bridgestone tyres of similar dimensions - without sacrificing safety.

As a result, compared to other Bridgestone tyres of the same dimension, it is around 3% more fuel efficient, enabling car owners to cut carbon emissions and reduce their environmental footprint. The precise gain in fuel efficiency depends on a range of factors, including vehicle type and driving cycle.

Full information on Ecopia tyres is available at: www.ecopia.eu
Ecological tyre print.

Products for trucks and buses

Fuel represents approximately 21% of commercial fleet operating costs in Europe. It is a much heavier expense than the acquisition of tyres, which averages at 2%. A tyre with low rolling resistance and a long service life can help fleet operators to cut their fleet’s carbon emissions considerably. It also enables them to make substantial savings.

Bridgestone Ecopia tyres are specifically designed for reduced ecological impact, and they are also available for trucks and buses in Europe. The range draws on innovative compound technology and advanced design features to provide customers with solutions that will enable them to reduce their operating costs.

On top of the existing range of Ecopia tyres, launched at the end of 2010, a new generation of Ecopia tyres was unveiled in 2012: the new ECOPIA H-STEER 001 and ECOPIA H-DRIVE 001 (size 315/70 R22.5), the most ecological and economical truck tyres that Bridgestone has ever developed.

Specially designed for advanced, fuel-conscious operators of highway fleets, these two premium Ecopia long-haul tyres deliver radically lower rolling resistance, fuel consumption and environmental impact, while maintaining overall levels of tyre performance and safety.

ECOPIA H-STEER 001 and ECOPIA H-DRIVE 001 both incorporate Bridgestone’s exclusive NanoPro-Tech™ compound which reduces energy loss in the top compound as the tyre rotates. This reduced energy loss translates as lower rolling resistance – without compromising other tyre performance areas such as drive traction, wet grip and mileage.

Reduces fuel consumption by 4.4%

Independent road tests* show that ECOPIA H-STEER 001 and ECOPIA H-DRIVE 001 provide 18.9% and 26.5% lower rolling resistance respectively than the initial ECOPIA series, leading to 4.4% lower fuel consumption.

*Tests conducted in July 2011 by TÜV SÜD Automotive GmbH, part of the highly-respected international technical service organisation TÜV SÜD Group.

Reliable

We don’t compromise on safety and performances. The superior grip, precise handling and outstanding braking performances of Ecopia tyres are similar to those of Bridgestone’s previous line-up.

Durable

All Bridgestone products are built to last, and the Ecopia range features the same durability. Advanced design features boost the longevity of the casing, pre-empt irregular wear or facilitate stone ejection. The durability of our tyres increases the scope for eventual retreading, a further contribution to eco-friendlier transport.

Quiet

Tyres engineered for a healthier environment will also reflect efforts to control rolling noise. Specialised features such as groove fences help to keep the noise levels down, both inside and outside the vehicle.

Comprehensive line-up

On top of the new generation tyres, the Ecopia range features 5 patterns: for steer use R249 Ecopia and R249 EVO Ecopia, for drive use M749 Ecopia and Greatec M709 Ecopia, and for trailer use R109 Ecopia. Overall, 10 sizes are available for these 5 tyres with 2 equivalent retread patterns, M749 Ecopia and R109 Ecopia.
New uses for old tyres

Old tyres are a valuable resource. Some may still be fit for service or suitable for retreading. Others may no longer be roadworthy, but many of their components can be reclaimed for other applications. Alternatively, they can be used as fuel to produce power or for other applications.

Retreading: unleash the full potential of your tyre

Often, all a worn-out tyre needs is a fresh tread. Retreading, the process by which new treads are vulcanised to old tyres, enables manufacturers to recondition serviceable tyres and to give them a second or even a third life.

Just like new tyres, retread tyres are manufactured to high standards; they are reliable and provide similar performances. Retreading already provides 40% of the tyres fitted in the European transport market, and nearly all of the aircraft tyres used by the major airlines. It is a cornerstone of our total fleet management solutions and greatly helps to drive down the costs per kilometre by extending total tyre life.

Retreading also represents a step towards greater sustainability. The process requires no more than a third of the oil and of the energy needed to manufacture a new tyre. It also extends the service life of the tyre, reducing the need for recycling or final disposal.

Quality matters

At Bridgestone, we approach retreading with the same passion for excellence as the design and manufacturing of new tyres. We sell retreaded truck and bus tyres under the Bandag brand name, and we use premium compound and leading-edge process technology to ensure that our retreads closely replicate the features and performances of our new tyres. Tyres, retreaded or new, should never compromise on quality.
Management of end-of-life tyres in the EU

All European Member States have their own way of dealing with end-of-life tyres (ELTs). Approaches vary depending on the country’s legal framework, but three types of system prevail:

1) **Producer responsibility**: the tyre producer collects and organises recovery and recycling;
2) **Liberal system**: dealers select an **authorised waste collection company** to deliver ELTs to recovery/recycling;
3) **Government responsibility**: the **authorities** organise ELT collection and treatment and finance this system through a tax.

**Bridgestone Europe** takes an active role in ELT management in all countries where it sells tyres. It is a founding member of ELT management joint companies in all countries which assign the responsibility to the producers. Where other systems apply, we promote responsible tyre disposal through local partnerships and industry associations.

Please contact us for more information at: environment@bridgestone.eu or download the European Industry ELT Report at: [http://www.ethma.org](http://www.ethma.org)
Informing motorists about the importance of proper tyre maintenance - for their own safety, and for the environment
Our environmental initiatives

Bridgestone’s global environmental policy extends well beyond the standard corporate framework. We foster ecological awareness within our Group, and we engage with people and organisations around the world to promote the responsible use of our products.

Our principle “One team, one planet” says it all. We want to play an active role in society, and we want to contribute to a more sustainable world - for the benefit of future generations everywhere.
The power of dialogue

As a company with a worldwide presence, we have many opportunities to interact with local communities on several continents. This enables us to share information about the environmental aspects of our industry and to support initiatives at regional, national and international level.

We are, for example, involved in a range of tyre safety programmes. Simple tyre care actions can enable drivers to reduce the risk of accidents and to limit the ecological impact of their journeys in the process. To help spread the word, we have performed more than 235,000 tyre safety checks on vehicles across Europe since 2005.

These checks, offered free of charge to motorists at car parks and shopping centres, confirmed the need for urgent action. They revealed that 63% inspected vehicles showed tyre pressure or wear problems.

Under-inflation does not only raise the risk of serious accidents, it also increases rolling resistance and erodes fuel efficiency. Based on our findings in 2010, we estimate that inadequate tyre care in Western Europe wastes EUR 3.1 billion liters of fuel and adds 7.4 million tons of CO₂ per year.

Our tyre check activities are performed by volunteers, reflecting our staff’s dedication to dialogue with the wider community. We rely on our local Bridgestone teams to translate our environmental commitment into action.

Our factory in Burgos has set up a particularly comprehensive programme. This involves extensive in-house initiatives as well as various high-profile community activities, including:

> **Tree Planting Practices**: our contribution to the biodiversity protection reducing in a significant way the loss of forest areas in the world.

> **Earth Week**: Burgos Plant celebrates Earth Day with education activities for children based on 3R culture and contributes to a recycling-oriented society and education for the next generations.

> **Environment Month**: The Environment Month is based on the idea of opening doors to Burgos society and considering our commitment to environment at an industrial and social level. This is our contribution to a more sustainable world for the benefit of future generations.

> **Sustainable Mobility Week**: Bike Route to promote the sustainable urban mobility and to make people aware of the CO₂ problem culture, Car Free Day contributing to promote sustainable ways of transport.

> **Writing and photography contests** in the context of Bridgestone’s campaign to save water and energy.

“**In Burgos we have developed several initiatives that show our corporate commitment focused on sustainability, as far as we want to ensure a healthy environment for current and future generations. Building awareness of environmental issues among our staff is essential. Therefore, we organize various eco-activities oriented to our teams in particular and to our community and society in general because we consider is really important to involve everybody if we want to create a common environmental project.”**

“To be in harmony with nature, in our plant we are always working on the continuous improvement of our processes to reduce the environmental load at the factory stage. We attach great importance to natural resources conservation such as water and energy, and we set targets which encourage us to progress in every significant environmental aspect of our business”.

“I hope we will be able to take these activities another step ahead every year. They are really interesting and useful for our colleagues, for the community, and for contributing to a more sustainable society for all”.
Contacts

If you wish to contact Bridgestone Europe for information, comments or suggestions about its environmental activities, please send your messages to:

environment@bridgestone.eu

http://www.bridgestone.com/responsibilities/environment/communication.html