

Ecoenergy



**RETREADS THAT RESPECT THE ENVIRONMENT
AND CUT YOUR COST PER KILOMETRE**

May 2010

MARANGONI  TM



Marangoni answer to energy



M3ARe



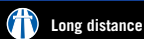
MTAE



MTA - MTA/55



MTA/65



Long distance



Long distance - Regional



Regional - On-Off

Current world economy trends combined with the prospect of decreased raw material availability are drawing the interest of government organisations and enterprises alike, with efforts increasingly focused on efficient raw material recovery and cutbacks. One of the industries worst hit by the situation described above is the tyre industry, with the related market segments.

Over the last few years, the price of rubber has gone up by well over 50% with no sign of trend reversals and we are all aware of the continuous record highs in petrol prices. No wonder therefore that in many countries there is a soaring interest in used tyre management and in recycling tyres that, after having undergone the severe test processes required, are deemed suitable for retreading.

Marangoni has consistently been committed to the foregoing market segment with the development of increasingly eco-friendly retreading compounds. This enables re-use of the original tyre casing, which ensures drastic reductions in rubber consumption and extended life for tyres that would otherwise end up directly in waste disposal facilities. The overall retreading process is subject to severe quality testing not only to meet but to surpass the high levels set by Marangoni that are definitely stricter than those provided for by the EEC ONU 108 and 109R standards. Obviously, only the tyres that pass all the technical testing by the Marangoni technicians can be retreaded.



tyres offer maximum performance in terms of:



Savings

In the tyre retreading process, the primary savings are offered through the reuse of the casing, which has an estimated construction cost amounting to $\frac{2}{3}$ of the new product.



Energy

The use of a new compound with extremely low hysteresis (reduced development of heat) means less resistance to rolling and consequently a significant reduction in fuel consumption.



Ecology

The decrease in CO₂ emissions that cause environmental pollution is obtained by reducing fuel consumption.

saving on retreaded tyres



MZY3



MTE2



MDA2+



Parameters that influence fuel consumption:

Tread compound

The tread, while rolling, undergoes a cyclical deformation that causes a loss of energy (hysteresis). High hysteresis of the tread compound implies an increase in rolling resistance and a consequential increase in fuel consumption. The compounds used in the Ecoenergy line are characterized by extremely low hysteresis, allowing fuel savings between 3-5% without affecting other performance areas (wear, tear resistance, traction).

Inflation pressure

The use of tyres inflated to an incorrect pressure may cause increased rolling resistance, untimely wear of the tread, tyre overheating and, consequentially, irreversible damage to the casing.

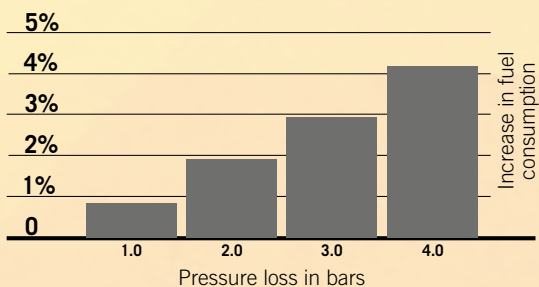
Incorrect wheel alignment

An incorrect wheel alignment leads to an increase in fuel consumption (from 4 to 12%) and a more rapid wear of the tread. The influence of 3-axle trailer tyres on the overall rolling resistance of the vehicle may reach up to 55%, while the influence of drive axle tyres may reach up to 30% and that of front axle tyres as much as 15%.

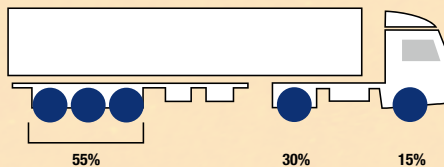
Available sizes

| Rim | Size | Pattern |
|------|-------------|---------|
| 19.5 | 445/45R19.5 | MTA |
| | 425/55R19.5 | MTA/55 |
| 22.5 | 385/55R22.5 | MTAE |
| | 385/65R22.5 | MTAE |
| | 385/65R22.5 | M3ARe |
| | 385/65R22.5 | MTE2 |
| | 385/65R22.5 | MZY3 |
| | 425/65R22.5 | MTA/65 |
| | 315/70R22.5 | MDA2+ |
| | 315/80R22.5 | MDA2+ |

Table of fuel consumption based on tyre inflation pressure



Contribution of each axle to rolling resistance





Marangoni S.p.A.

Via del Garda, 6 • 38068 Rovereto (TN) Italy • Tel. +39 0464 30 11 11 • Fax +39 0464 43 61 69
e-mail: marangoni.pneumatici@marangoni.com • www.marangoni.com



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