



LIFE GREEN VULCAN



# Regulatory scenarios and evolutions of the rubber recycling market:

## Rubber Conversion interviews Renzo Maggiolo (UNIRIGOM)

**The recycled rubber market appears to be strongly conditioned, negatively, by regulatory developments, especially by the European ones. Is this really the case, and what is the reason?**

*The approval by MITE (today MASE - Ministry of the Environment and Energy Security) of DM 78/2000 (End Of Waste Regulation) despite having finally dictated the rules to establish, unambiguously, when the products derived from the treatment of ELTs can be considered secondary raw materials, thus exiting the classification of waste, has introduced a series of prescriptions in terms of formal obligations and has established the range of application of vulcanised rubber. If the secondary raw material obtained is a "product" why can't it have the same "dignity" as virgin raw materials? And if a new application not foreseen by the Ministerial Decree arises, will you have to wait for it to be modified knowing that it takes years to achieve it?*

*Moreover, the EU is now regulating microplastics including ELT rubber granulate, for which the same restrictions apply. This will soon lead to the prohibition of the use of recycled rubber as infill on artificial turf sports fields, establishing a 6 year moratorium. A real disaster for the Italian industry, given that Italy is number one in Europe in this sector and is, to date, the most important outlet market for rubber recycled from ELTs.*

**What is the regulatory situation on rubber recycling and reuse in the main markets (EU, US+Canada, China, India)? Which regulations are the most advanced ones and what impact does regulatory evolution have on the market?**

*As I said above from a regulatory point of view, with the EoW, Italy has moved forward but all the tools are missing, and this also applies to a large part of Europe. Generally speaking, secondary raw materials, will find opportunities by overcoming historical and psychological mistrust as well as relying on a favorable tax treatment. An example is the Green Public Procurement, which has never established itself due to the lack of coercion for those who do not comply with the provisions.*

*If we exclude the USA, which has seen a lot of development in the application of recycled rubber granules in the sector of modified bitumen for asphalt and some other applications, the other countries are at a standstill. The economic conditions in India do not favor recycling except for small segments such as the production of regenerated rubber recovered more from the inner tubes than from ELTs. For China there are no real data, so it is difficult to assess anything.*

*For the EU, the real revolution comes from REACH which establishes stringent rules for the use of recycled rubber while limiting the PAH content in the manufacturing of rubber articles in contact with human skin. Though good for health and the environment, this certainly entails an increase in costs for the supply chain.*

## **Which will be the markets where, in the near future, regulatory evolution will drive demand?**

*In the absence of national and EU legislation and tax-facilitations, the “destiny” of recycled rubber in the EU is not the best. The failure to initiate a harmonization across the different standards each state has adopted (or is adopting), makes it difficult to predict a positive future.*

*Italy, the EU champion of recycling of materials from waste, must speak up with more determination to affirm and defend the excellence of our specialized industry.*

*Obviously, in the absence of opportunities for secondary raw materials, will grow the use for energy recovery which, among other things, takes place more outside than inside the EU and in particular, in Italy. A real gift to nations that make the most of this resource.*

## **What are the main reference regulations in the EU and Italy? How does Italy place itself in the European context?**

*For rubber, the EU has done few things since it has delegated to the individual Member States to legislate and regulate.*

*In Italy, the decision to introduce the EPR (Extended Producer Responsibility) was successful in terms of environmental protection and health, since it made sure that 100% of the ELTs placed on the market are collected and treated, even if, as we have seen, not everything translates into an effective material recovery. Ministerial Decree 82/2011 and subsequently 182/2019 regulated the entire supply chain. The latter has left many perplexities that lead to the need for its revision.*

## **How can companies in sectors other than the automotive, where recovery is more complex (e.g. footwear), comply with the end of life requirements?**

*First of all, the EPR must be used in order to guarantee the resources for the completion of the end-of-life cycle. Then we need to work on educating the population and raising a collective awareness for the protection of the environment. Finally, a correct eco-design and technology can make it possible to recycle materials that today are considered difficult if not impossible to recycle.*

## **What are the foreseeable regulatory developments in Italy and the EU and with what timing?**

*The EU is preparing a regulation that should impose a quota of recycled rubber in the production of new tyres. This completely changes the scenario and the perspective. It is evident that success relies on the possibility of devulcanizing*

*recycled rubber with simple, environmentally friendly, economically feasible methods to obtain devulcanized products stable over time.*

**Currently, regulations do not distinguish between vulcanized recycled rubber used as filler and the devulcanized rubber used in compounds. Is an evolution in this direction foreseeable?**

*I don't know if it's predictable, but it is absolutely necessary. The real "circular economy" for rubber, especially derived from ELTs, is achieved only through the completion of the loop, with recycled rubber being used in the production of new compounds thus returning in the objects from which it is derived. So, from end-of-life tires to new tyres. Today this only takes place in the tire tread reconstruction sector but not in the production from scratch.*

*Vulcanised rubber will continue to have applications as a filler but will be a less prospective trend than the one described above. Also in this area, Italy is at the forefront since some companies, our Associates, have started the production of "devulcanized rubber" starting from recycled rubber vulcanised from ELTs.*

*This is the real challenge for the immediate future.*