

ORZEŁ S.A.

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www.orzelsa.com



**ZAKŁAD PRODUKCJI
GRANULATU GUMOWEGO
TIRE RECYCLING PLANT**
granulat@orzelsa.com

ORZEL S.A.

ORZEL S.A. is engaged in the business of recycling waste tires since 2002. This activity relates to such areas as:

- market of waste tires as a raw material used by the Tire Recycling Plant;
- market for SBR rubber granules;
- market for steel wire from waste tires;
- market for textile cord from waste tires;
- market for active fine powder;



Tire Recycling Plant is using unique technology to process several thousand of waste tires annually. Strong emphasis on ecology and multimillion investment in research and innovative technology has caused that ORZEL SA is an important partner in the rubber and plastic market. As a few in Europe, we are able to customize products to the individual Customer needs, while maintaining the highest quality standards, the appropriate composition of the mixture.



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Spółka jest zarejestrowana w Sądzie Rejonowym Lublin - Wschód w Lublinie z siedzibą w Świdniku, XI Wydział Gospodarczy Krajowego Rejestru Sądowego, **KRS:** 0000296327, **NIP:** 713-298-44-45, **Kapitał zakładowy:** 7.878.888,00 zł w całości opłacony.

RECYCLING OF TIRES

The technology used in the recycling process carefully selected tires is the multiple mechanical grinding to the required granule size. The result is a SBR granules free from any contamination , the steel wire and textile (-0.1%). Certificates and physico-chemical analysis are available upon request.

PRODUCT	DESCRIPTION	APPLICATION
ORZEL ACTIVE FINE POWDER	40mesh (0-0,4mm), 30mesh (0-0,6mm),	pipes, rubber hoses, watering, floor tiles weatherproof, conveyor belts, rubber parts for the automotive industry, seals for doors, windows, insulation, vibration belts and mats.
ORZEL POWDER	(0,0-0,6 mm), (0,0-0,8mm), (0,0-1,0mm)	production of rubber compounds, car mats, rugs, shoe soles, rubber protection for machines, adhesion enhancing component added to the asphalt, insulating blocks along the roads, floor mats for animals, rubber hoses;
ORZEL INFILL	(0,5-1,5 mm), (0,6-2,0 mm), (0,8-2,0mm), (1,0-2,5mm), (1,0-3,0mm),	artificial grass to fill in soccer fileds, wheels;
ORZEL BASE	(1,0-4,0 mm), (2,0-4,0mm), (2,0-6,0 mm), (2,0-8,0mm), (3,0-6,0 mm), (3,0-8,0mm), (4,0-20mm)	surface layer for playgrounds, treadmills, polyurethane sheets and vibration isulation mats, vibration insulation of machinery and equipment foundations, primers for the construction of sports surfaces, sleepers for the construction of sports surfaces, hopper under decks stations, construction of road embankments and strengthening of the ground, paddocks for cattle, horses;
STEEL WIRE	Contamination 5-8%	feed material for the steel industry;
TEXTILE CORD	Calorific value 27-28MJ/kg	alternative fuel used in cement plants, power plants, and pulp and paper industry;



ORZEL ACTIVE FINE POWDER

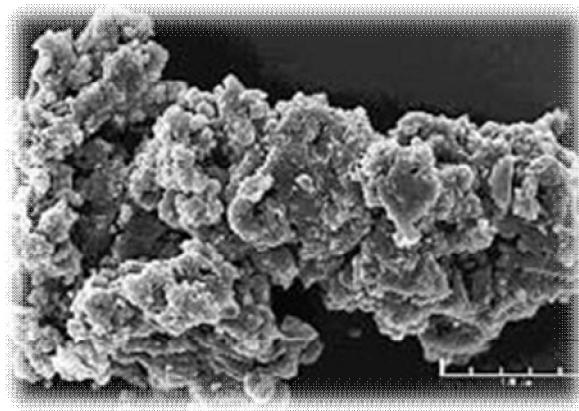
Our **know-how** is focused on tire recycling process and the production of SBR rubber granules and recently on the production of Orzel Active Fine Powder, which is combination of natural and synthetic rubber with a particle size 30mesh or 40mesh. The use of unique technology allows us to process other types of technical rubber, which may be used in thermoplastic compound and rubber.

Input material for the production of active fine powder is made from specially selected waste truck tires SBR rubber granules. Active fine powder is primarily used as a filler, in particular, as a substitute for natural rubber and synthetic rubber. The replacement of expensive components by active rubber powder may significantly reduce the cost of each product.

TYPE OF ORZEL ACTIVE FINE POWDER

PRODUCT	FRACTION	DESCRIPTION
ORZEL ACTIVE FINE POWDER	ORZEL40 TT	40mesh (0-0,4mm), TT- truck tires
ORZEL ACTIVE FINE POWDER	ORZEL40 PT	40mesh (0-0,4mm), PT- passenger tires
ORZEL ACTIVE FINE POWDER	ORZEL40 MT	40mesh (0-0,4mm), MT- mix tires
ORZEL ACTIVE FINE POWDER	ORZEL30 TT	30mesh (0-0,6mm), TT- truck tires
ORZEL ACTIVE FINE POWDER	ORZEL30 PT	30mesh (0-0,6mm), PT- passenger tires
ORZEL ACTIVE FINE POWDER	ORZEL30 MT	30mesh (0-0,6mm), MT- mix tires

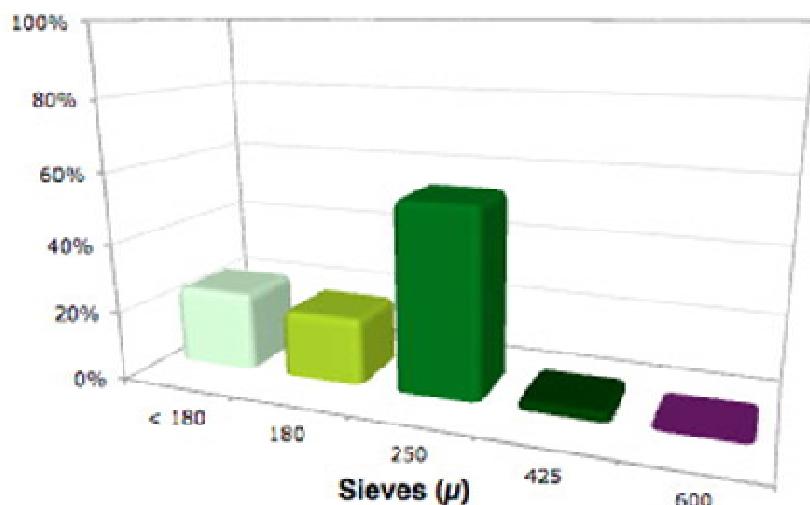
ORZEL ACTIVE FINE POWDER- UNIQUE SPECIFIC SURFACE ACTIVATED



In the devulcanization process (eg. production of tires) are not broken all the double bonds and there is no full cross-linking rubber. In the process of shredding tires and Orzel Active Fine Powder production is succeeding in increasing the specific surface area the molecule which promotes cross-linking in a subsequent vulcanization process.

ORZEL ACTIVE FINE POWDER - DEVULCANISATION

Orzel Active Fine Powder due to its size and shape of the particles has a very good ability to re-vulcanization process and the resultant mechanical properties can be very effectively used in rubber.

GRANULOMETRIC ANALYSE**Particle Size Analysis of Typical 420 μ Product****APPLICATION OF ORZEL ACTIVE FINE POWDER**

The huge advantage of Orzel Active Fine Powder is surface activated, which allows to used in many areas include for the production of rubber compounds, blends of thermoplastic elastomers and as a modifier of asphalt.

ORZEL ACTIVE FINE POWDER IN RUBBER INDUSTRY

Orzel Active Fine Powder used in the industry for the production of technical products: pipes, rubber hoses, watering, floor tiles weatherproof, conveyor belts, rubber parts for the automotive industry, seals for doors, windows, insulation, vibration belts and mats.

Using Orzel Active Fine Powder as a component of the rubber compounds may be achieved increasing the static and dynamic properties of rubber products. Orzel Active Fine Powder used in rubber compound may shorten the vulcanisation process.

During the tests with Orzel Active Fine Powder noted:

- Increasing structural strength,
- Improving the parameter elongation at break relative to the standard material,
- Increasing mechanical properties.

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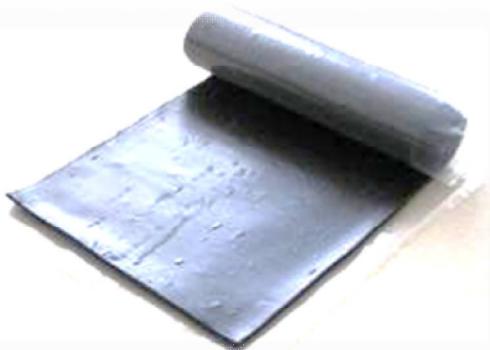
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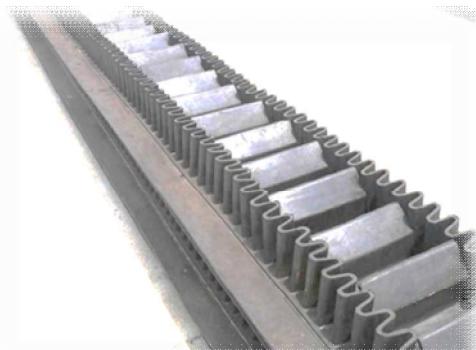
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EXAMPLES OF APPLICATION OF ORZEL ACTIVE FINE POWDER



RUBBER COMPOUNDS



BELTS



CAR FLOOR MATS



TECHNICAL PARTS



MODIFIER OF ASPHALT



ROOF COVERINGS

Orders and inquiries, please contact the following address:

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