

ELASTIC LAYERS



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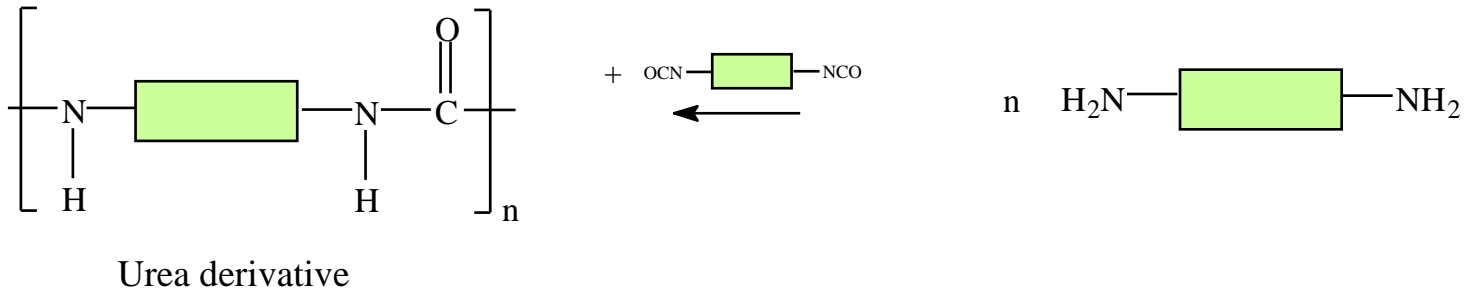
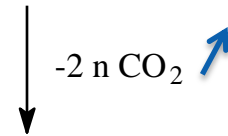
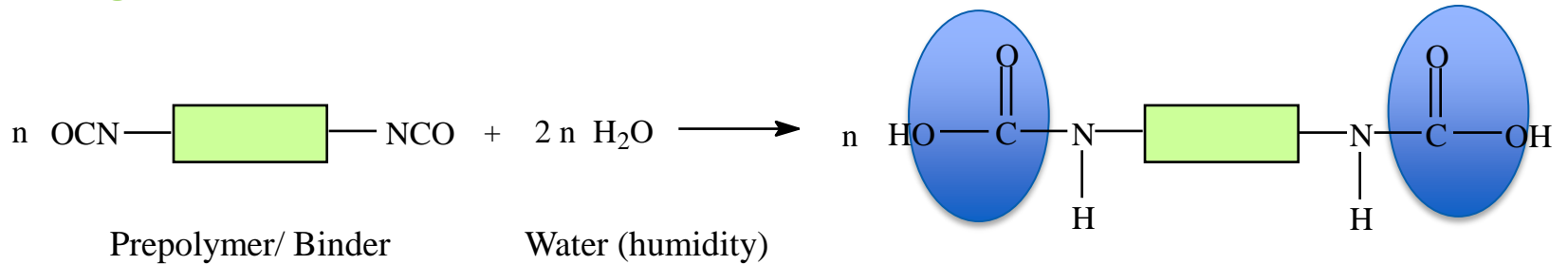
Components for Shock Pads & Elastic Layers

A photograph of an industrial factory setting. In the foreground, there are several large, cylindrical stainless steel tanks or reactors. These tanks are interconnected by a complex network of pipes, valves, and gauges. Some pipes are painted yellow, while others are silver. In the background, more industrial equipment is visible, including what appears to be a conveyor system or a large storage tank. The overall environment is clean and well-maintained. A blue rounded rectangle is overlaid on the image, containing the text 'Polyurethane binder'.

Polyurethane binder

Reaction of Binder

Curing Process





Recycled Granule

Recycled Granule

Granule Sources

Recycled Tires from cars/trucks



- + low price
- + low bulk density
- Poor control of source
- Impurities
- Ingredients (additives, oil, etc.)

Technical rubber

- + EPDM-based material
- + higher mechanical properties
- = higher prices
- = lower availability

Recycled Granule

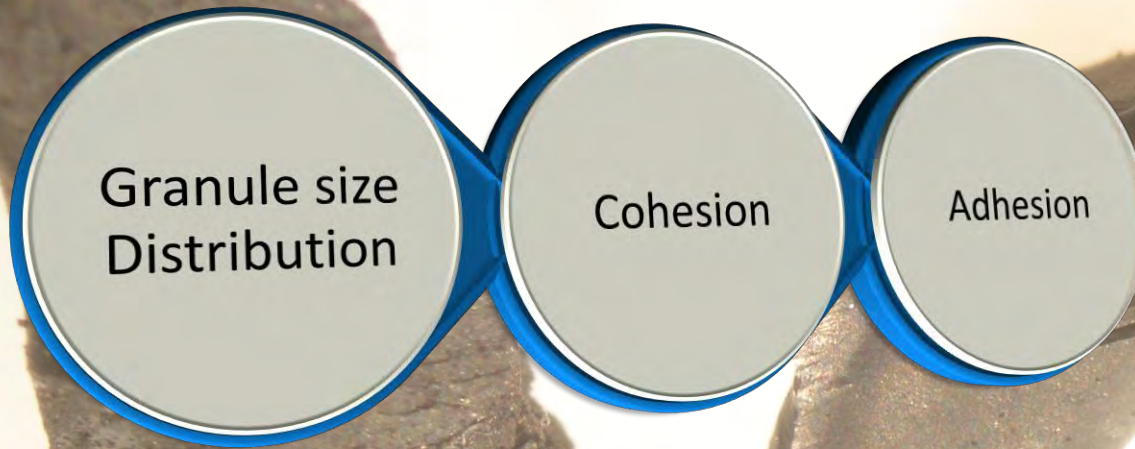
Specification of granule

- **Sieve curve**
- **Dust content**
- **Bulk density**
- **Color**



Mechanical Properties

Influencing components

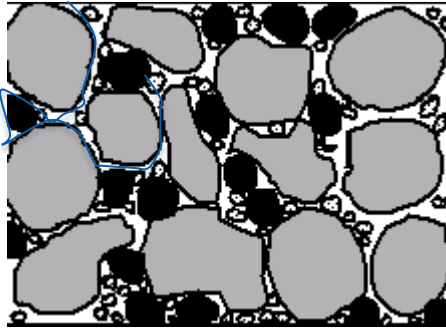


Mechanical Properties

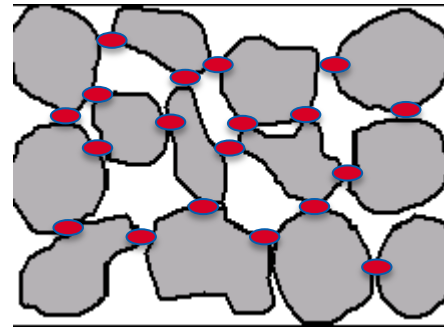
Influencing components

Granule
size
Distribution

Contact points – linking bondage

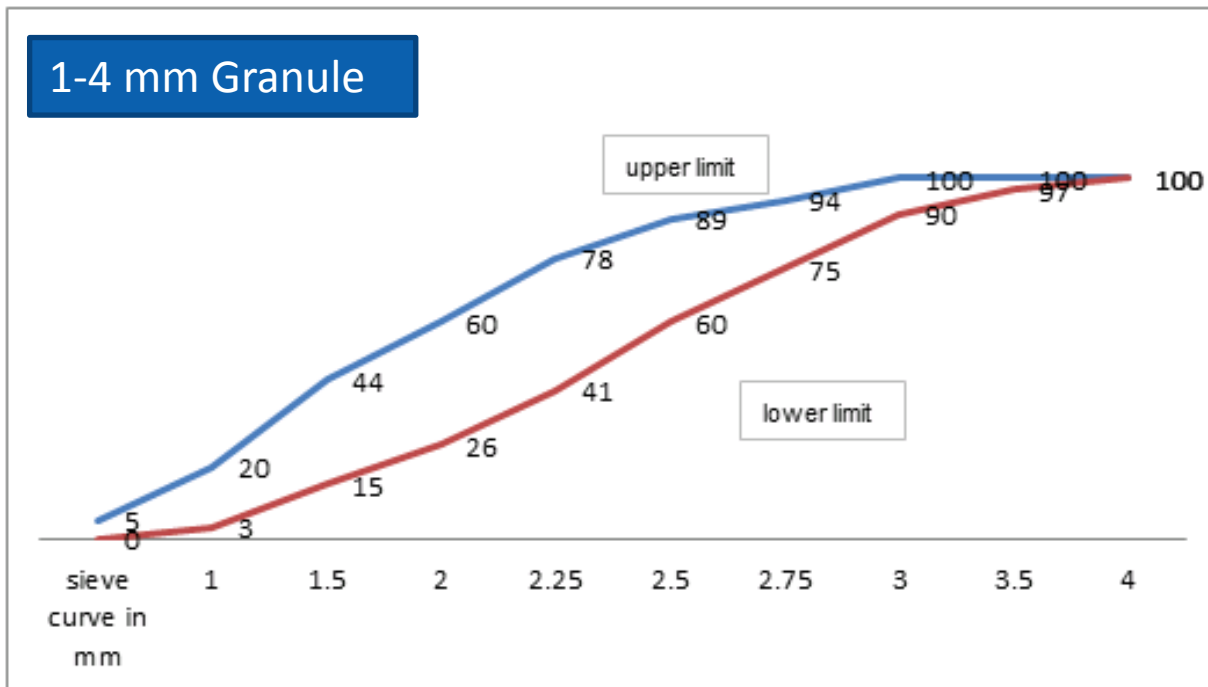


Contact points – linking bondage



Mechanical Properties

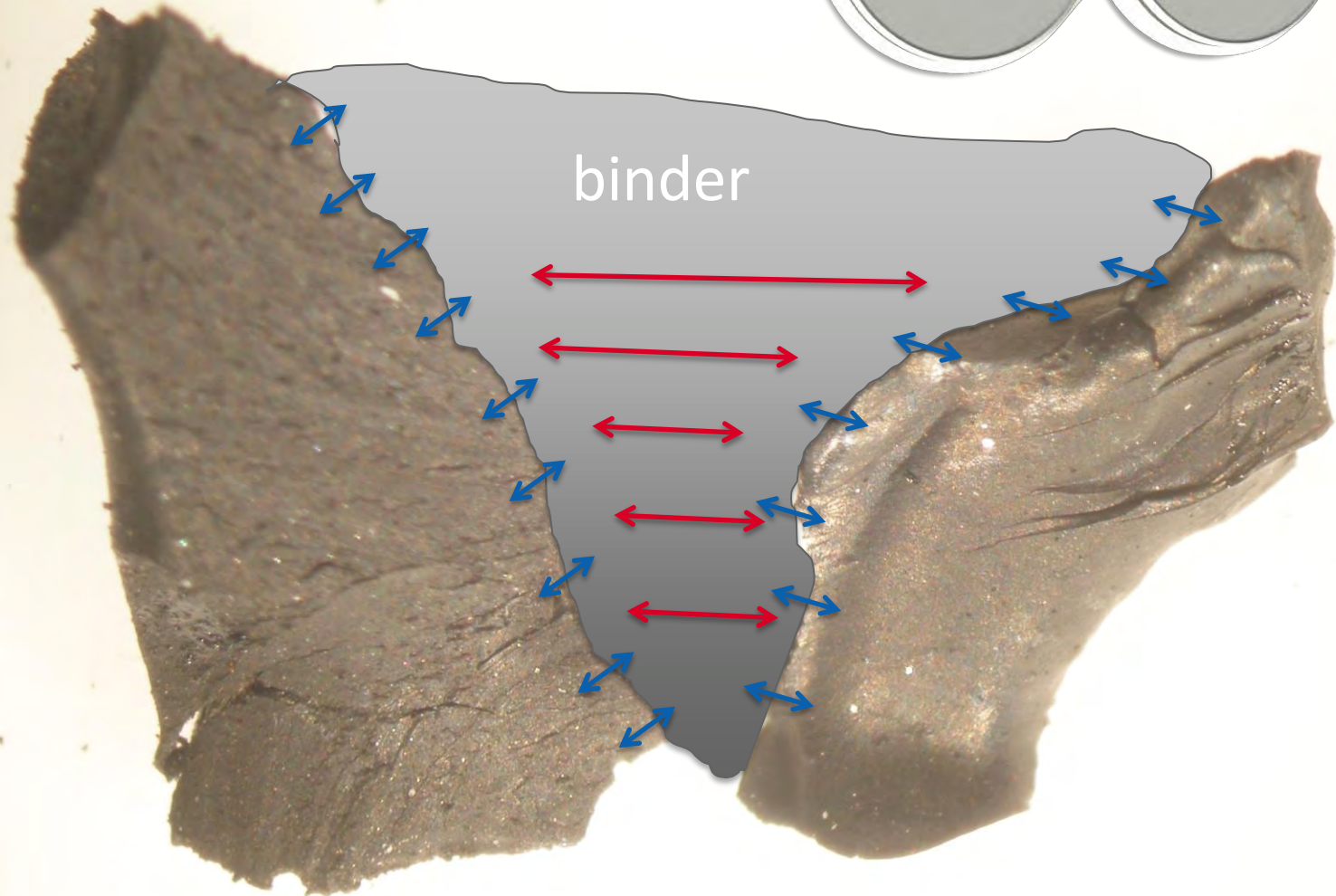
Influencing components



sieve curve in mm	tolerated range in %
1	0-5
1.5	3-20
2	15-44
2.25	26-60
2.5	41-78
2.75	60-89
3	75-94
3.5	90-100
4	97-100
4.5	100

Mechanical Properties

Influencing components

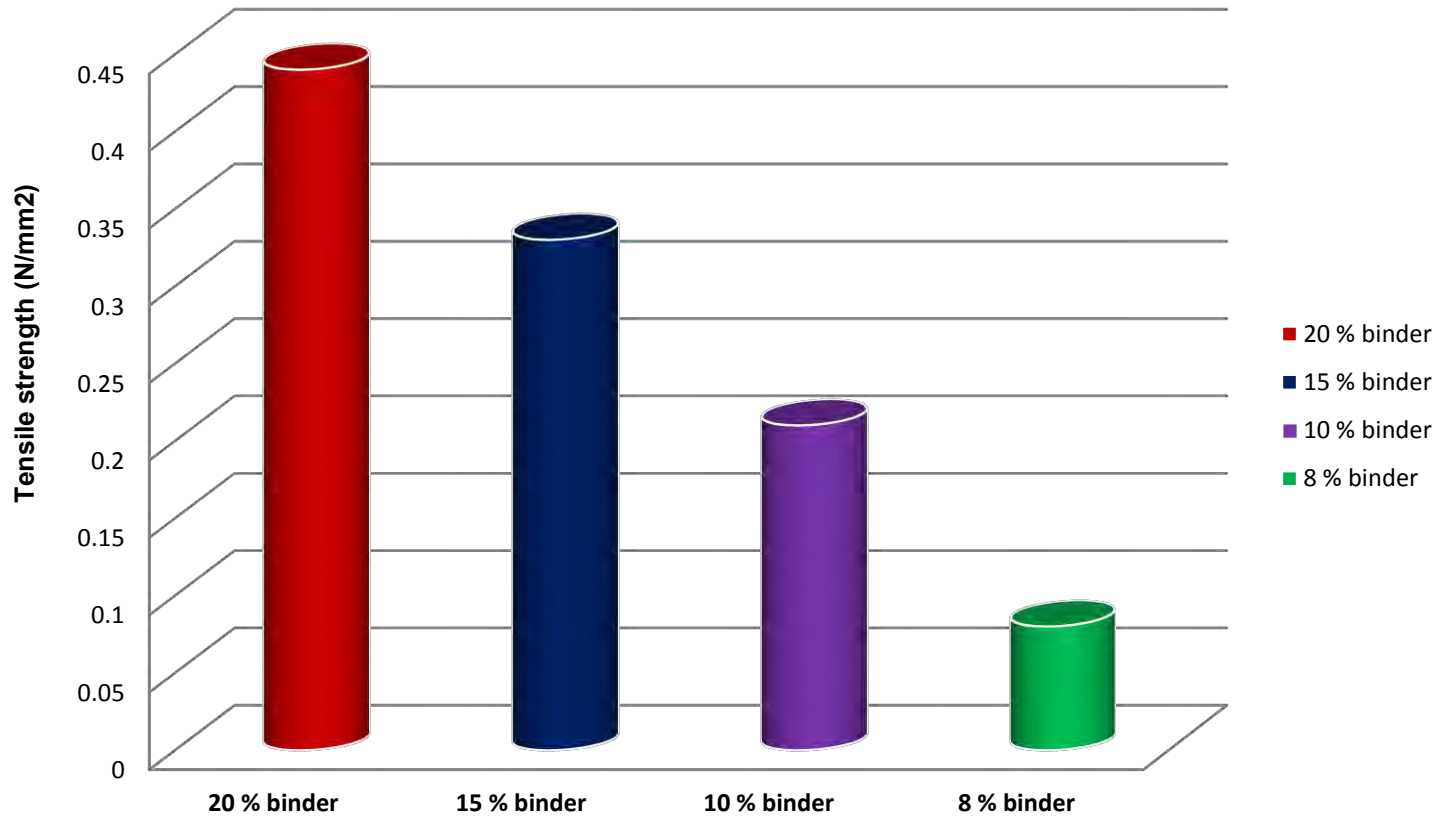


Measurements

Mechanical Properties

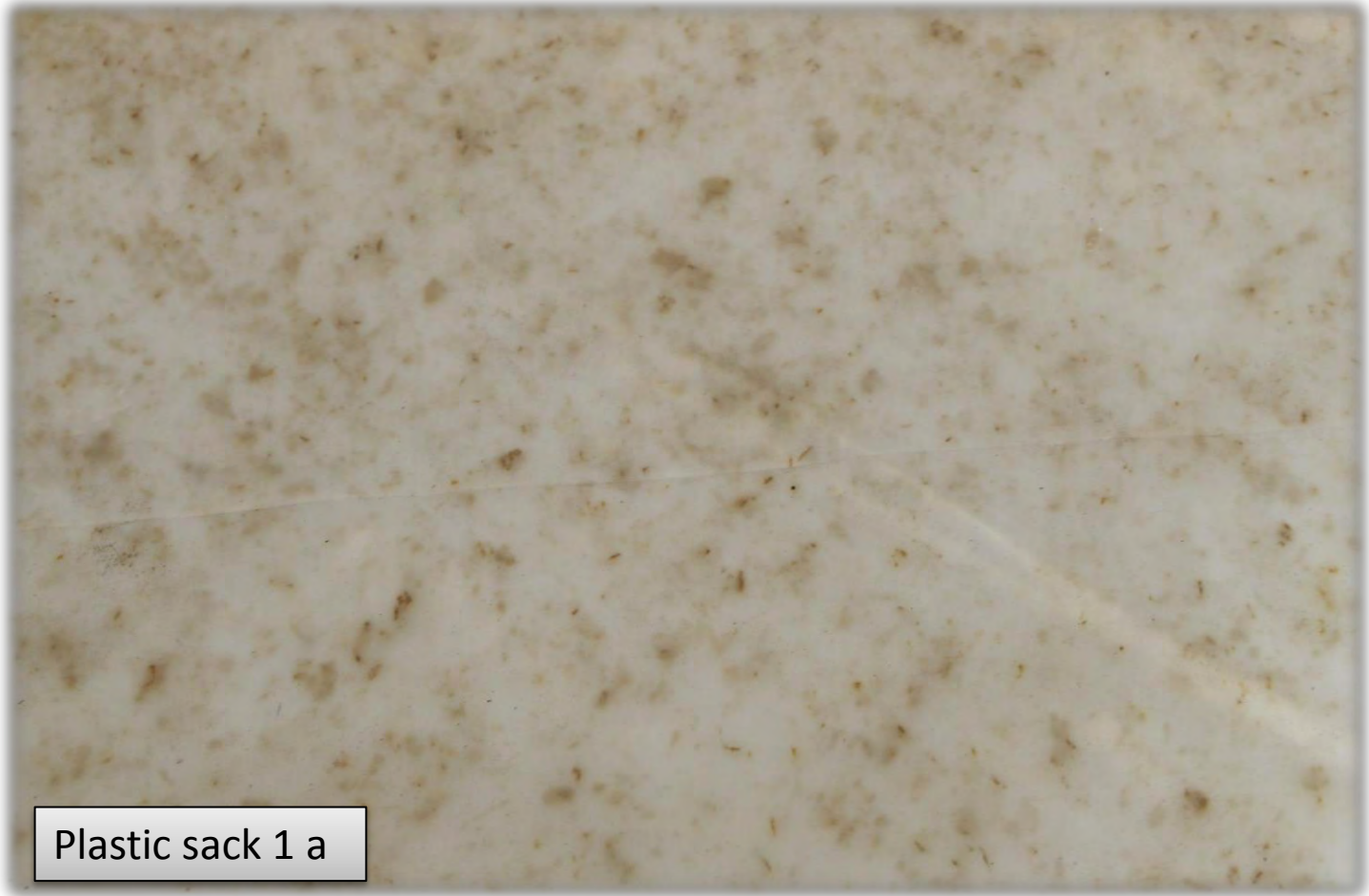
Relation between binder content and mechanical properties (EN 12230)

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Mechanical Properties

I. Impact : aging of granules

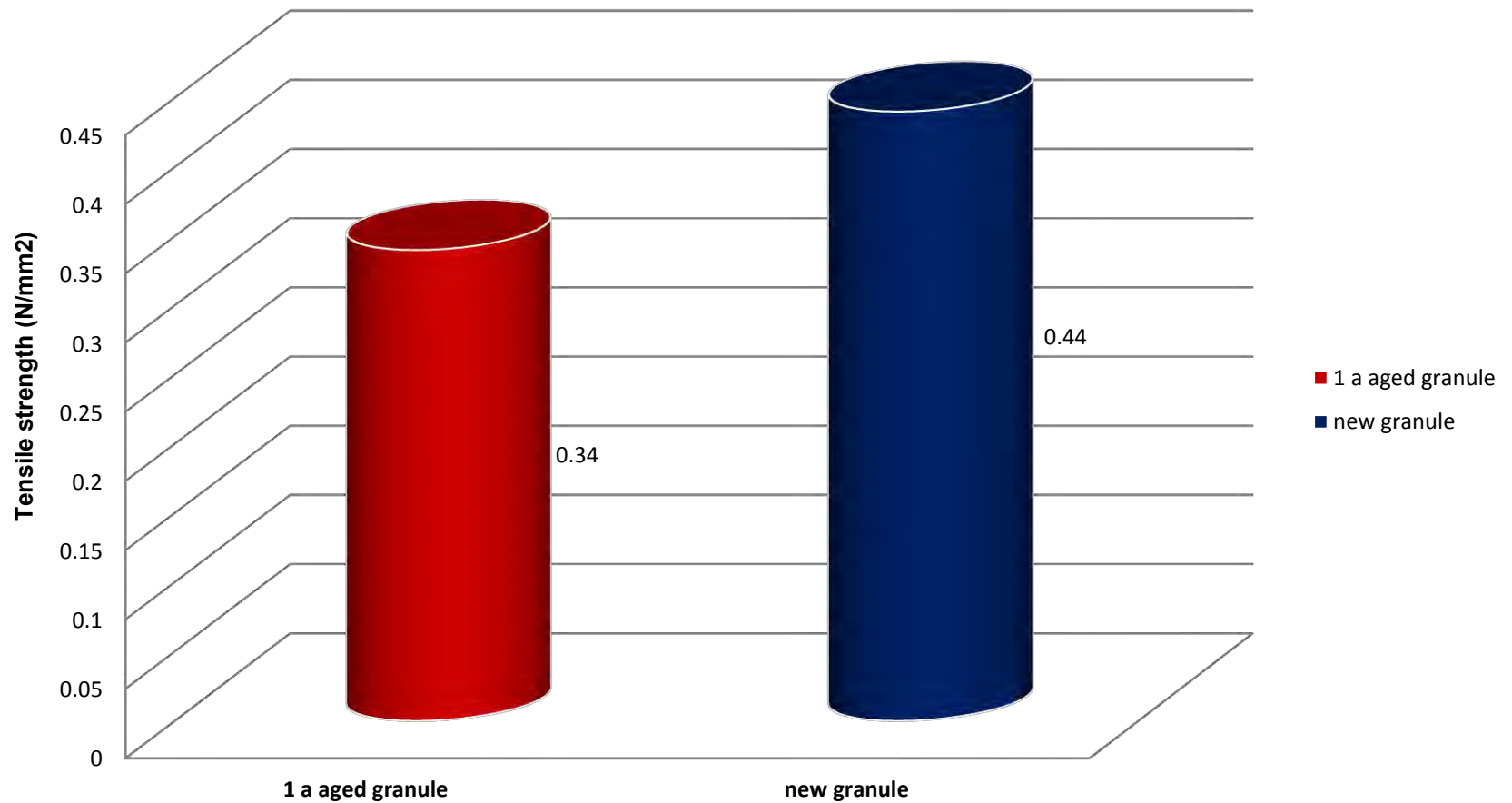


Plastic sack 1 a

Mechanical Properties

I. Impact aging of granules

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Mechanical Properties

II. Pre-Conditioning of aged granule with Solvent (VOC)

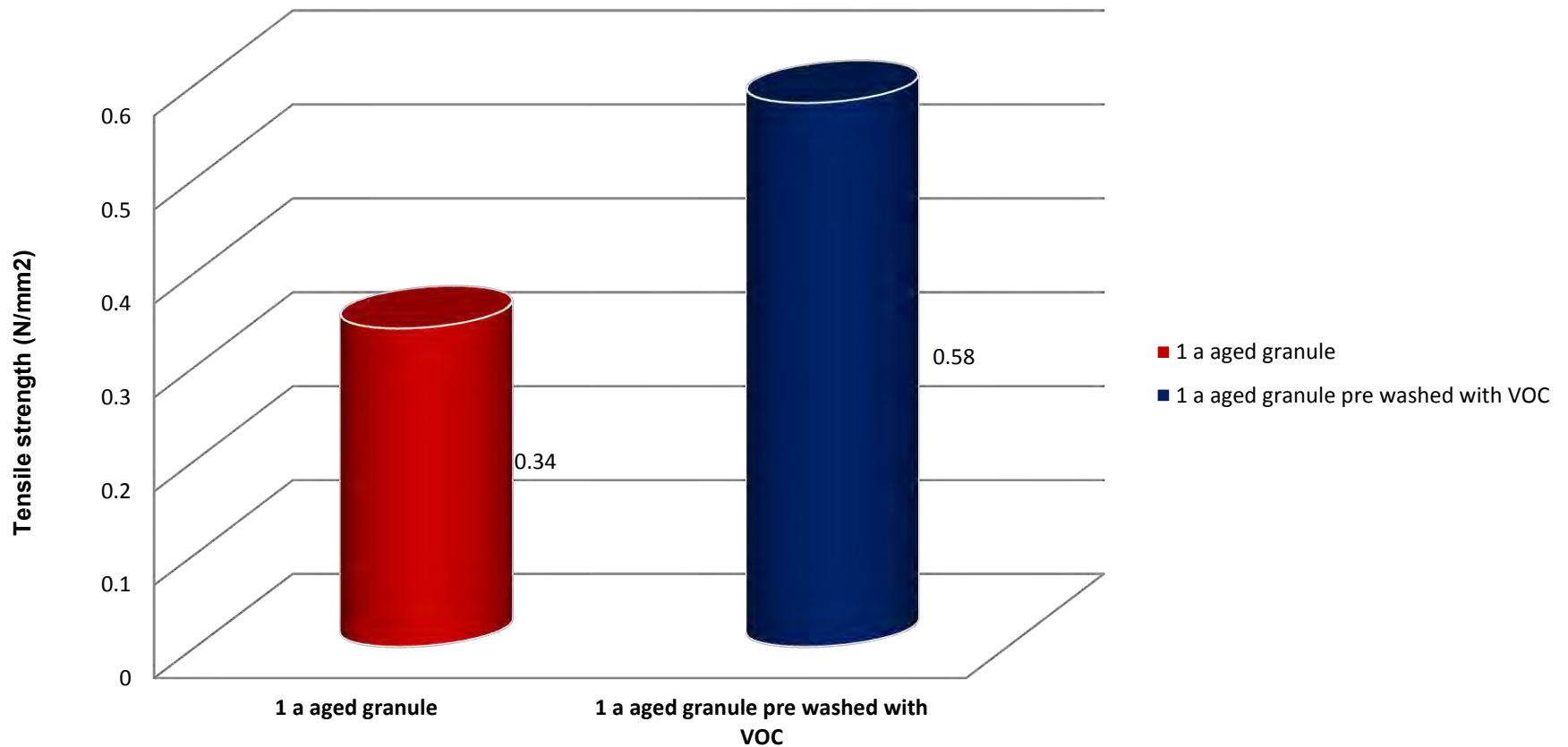


Solvent after washing the aged granule

Mechanical Properties

II. Pre-Conditioning of aged granule with solvent (VOC)

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Mechanical Properties

III. Pre-Conditioning of aged granule sanded with Quarz

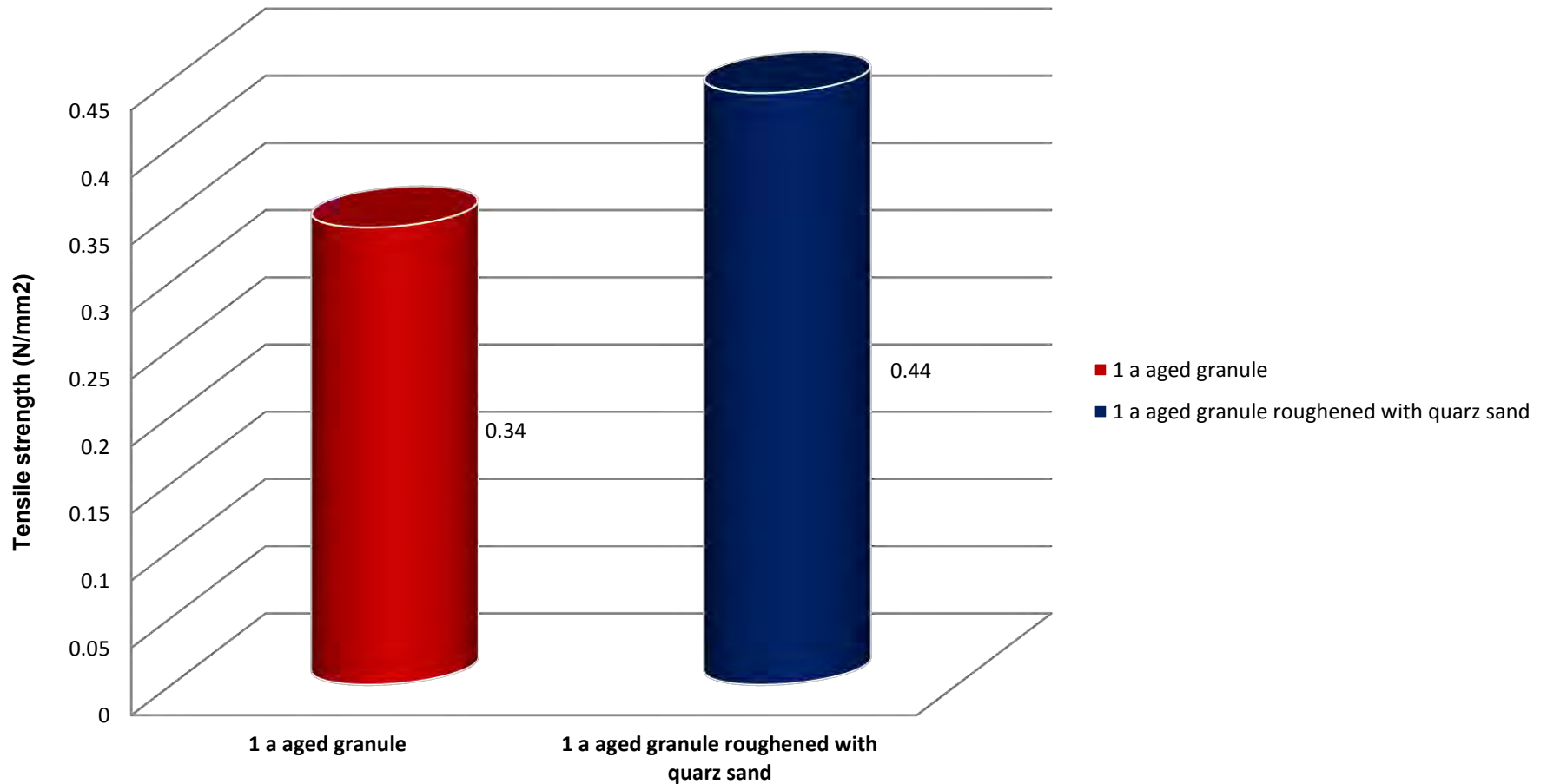


Mixing SBR with Quarz sand

Mechanical Properties

III. Pre-Conditioning of aged granule sanded with Quarz

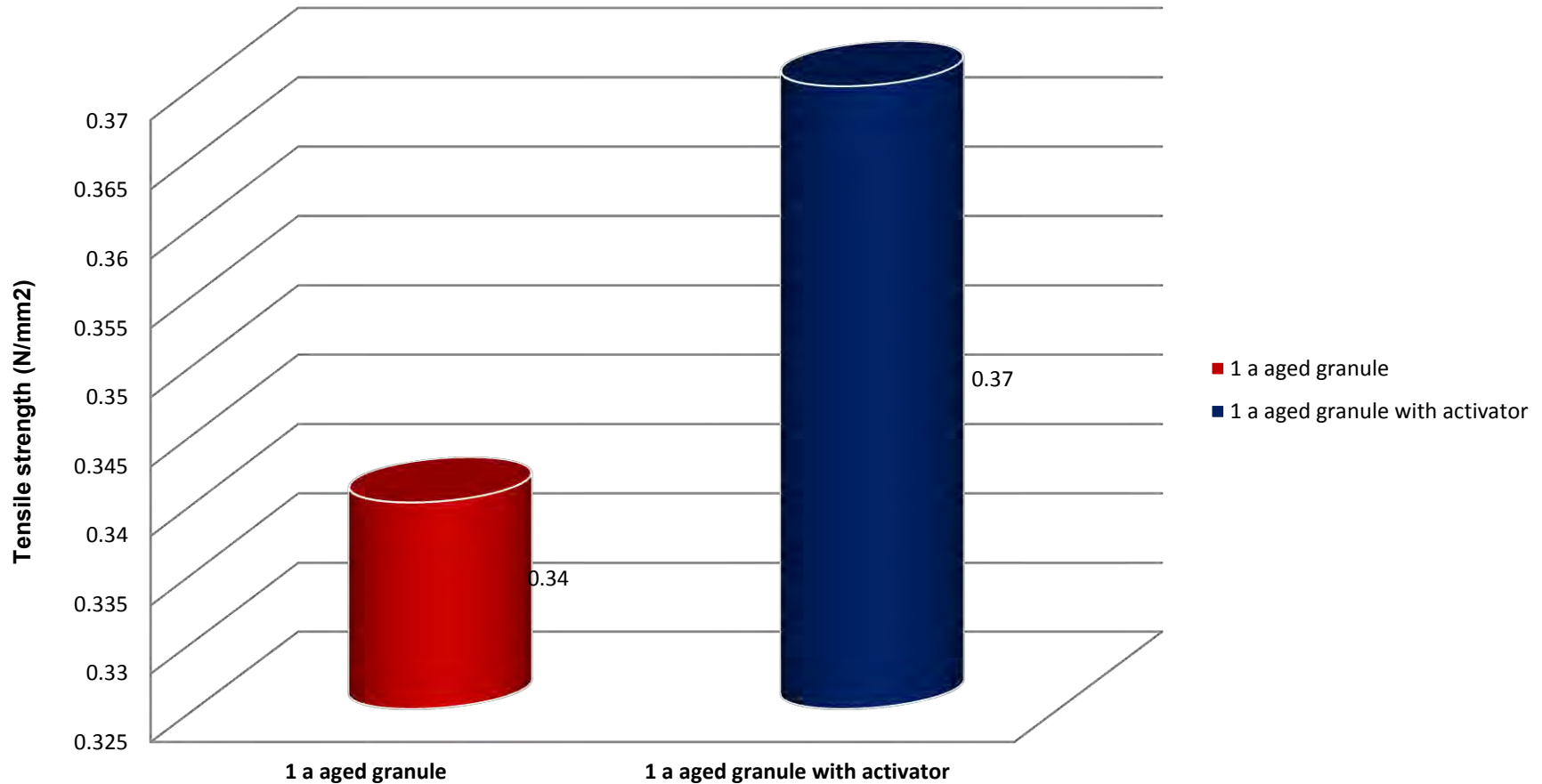
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Mechanical Properties

IV. Pre-Conditioning of aged granule with activator

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Summery

INSTALLER - use of:

- *consistant and tested granule quality*
- *consistant binder quality*
- *defined mixing ratio binder / granule*

Topics to ensure the quality of Tracks & Pitches for the END-USER based on given Standards/ rules

- *Pretesting compatibility of binder/ granule used*
- *On site testing regarding binder share*

**Thank you for your
attention**