

## TEKNIKUM® TRL Rubber Compounds for Mill Lining



Teknikum has its own rubber compound development and production unit in Kerava, Finland. At our laboratory our expert chemists develop special and, when requested, customized rubber compounds for mill lining applications.

Our strict quality control is based on ISO-9001 certified systems and EU regulations of Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and Restriction of Hazardous Substances (RoHS).

Accordingly, the Teknikum® TRL rubber mill lining compounds do not contain any RoHS 2 controlled substances or phthalates and they are compliant with REACH directive.

Furthermore, the compounds do not contain any substances named on the SVHC (Substances of Very High Concern) candidate list XIV of REACH.

Teknikum® TRL rubber compounds are awarded with the "Made in Finland" Key Flag symbol.

### ADVANTAGES

- Compounds are customized for specific grinding stages and process circumstances
- Compounds for high temperatures and dry grinding applications
- Continuous development of compound properties with modern R&D and manufacturing process

### TECHNICAL PROPERTIES

Described by product:

- TRL11
- TRL17
- TRL18
- TRL20
- TRL21

### TEKNIKUM TRL11

TRL11 rubber compound is specially developed for very heavy circumstances in primary and secondary mills, **where rubber must stand very sharp and severe hits** of the mineral and grinding media. This durability is due to good tear and tensile strength of this compound.

This compound contains 70% natural rubber. Natural rubber gives the compound very good tear resistance properties.

The rest 30% is synthetic rubber and it gives the compound good elasticity and other required properties.

Maximum operating temperature is +70°C. Oils are not recommended.

### TEKNIKUM TRL17

TRL17 rubber compound is specialty for pebble mills **without very sharp material**. It can take severe hits, if the media has relatively smooth surface. This durability is due to very wear resistance and elasticity of this compound.

TRL 17 contains 50% natural rubber. The portion of different rubbers gives it good wear resistance properties.

Hardness is about 60 ShA. The softness gives the rubber the ability to meet heavy but soft hits.

Maximum operating temperature is +70°C.  
Oils are not recommended.

## TEKNIKUM TRL18

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TRL18 rubber compound is specially developed for extremely heavy circumstances in primary and secondary mills, **where rubber must stand very sharp and severe hits** of the mineral and grinding media. This durability is due to the most optimal combination of a good tear strength and excellent abrasion resistance of this compound.

This compound contains 50 % natural rubber. Natural rubber gives the compound very good tear resistance properties.

The rest 50 % is synthetic rubber and it gives the compound good elasticity and wear resistance properties.

Maximum operating temperature is +70°C.  
Oils are not recommended.

## TEKNIKUM TRL20

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TRL20 rubber compound is specially developed for tertiary mills or other fine grinding or processing purposes. It lasts better **in fine grinding purposes** than with severe hits.

TRL20 compound is SBR based and hardness is about 65 ShA.

Higher hardness gives the rubber good wear resistance properties in case of fine grinding without too severe and sharp hits.

Maximum operating temperature is about +80°C. Oils are not recommended.

## TEKNIKUM TRL21

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TRL21 rubber compound is specially developed to stand **higher temperatures** than our other TRL rubbers.

Wear resistance properties of TRL21 are significantly better in high temperatures than with other compounds.

Maximum operating temperature is about +100 °C, but it can take even 120°C for short times.

This SBR based compound is especially good for hot dry grinding purposes.

## MANUFACTURER

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### Sales

Teknikum Group, Lining BU

### More information

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## PROPERTY & RECOMMENDATION CHART

Version	Hardness	Abrasive wear resistance (1-5)	Tear & impact wear resistance (1-5)	Grinding stage (primary,secondary tertiary)	Maxium operation temperature (°C)
<b>TRL11</b>	60 ± 5	4	4,5	primary / secondary	+70°C
<b>TRL17</b>	60 ± 5	4	4	secondary	+70°C
<b>TRL18</b>	60 ± 5	4	5	primary	+70°C
<b>TRL20</b>	65 ± 5	5	3	secondary / tertiary	+80°C
<b>TRL21</b>	60 ± 5	4	3	secondary / tertiary (dry grinding)	+100 °C (120 °C short terms)