

**Product Data Sheet**  
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 Sigunit® L53 MY

# Sigunit® L53 MY

## Alkali Free Liquid Shotcrete Accelerator For Wet or Dry Shotcrete Process

<b>Description</b>	Sigunit L53 MY is a high performance, liquid, alkali-free shotcrete accelerator.
<b>Uses</b>	<p>Sigunit L53 MY is suitable set accelerator for dry –process as well as for wet process shotcreting.</p> <p>The main fields of applications are.</p> <ul style="list-style-type: none"> <li>■ Securing of rock in tunnel and mine construction (preliminary support).</li> <li>■ Rock and slope stabilization.</li> <li>■ Dewatering work by dry process.</li> <li>■ High quality shotcrete for permanent support by shotcrete.</li> </ul>
<b>Advantages</b>	<p>Sigunit L53 MY provides the following benefits</p> <ul style="list-style-type: none"> <li>■ Alkali free (non-caustic) and classified as non-toxic product.</li> <li>■ Fast to very fast setting of shotcrete mixes according to dosage used</li> <li>■ No strength loss of the accelerated concrete if used correctly.</li> <li>■ No additional contamination of mountain and ground water due to washed out alkalis.</li> <li>■ Large reduction in rebound as long as the spraying is performed according to the state of the art.</li> <li>■ Improves bond of shotcrete to rock and concrete, making overhead spray easier</li> <li>■ Free of chlorides, no danger to steel reinforcement and steel fibers.</li> </ul>
<b>Product Data</b>	
<b>Base</b>	Special inorganic substances in liquid form
<b>Form/ Colour</b>	Yellowish liquid
<b>Packaging</b>	200 litres/drums/ 1000 litres/tank (returnable)
<b>Storage condition/Shelf life</b>	3 months from date of production when stored in original unopened packaging in a cool ,dry place. Protected from the sunlight.



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## Technical Data

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Specific gravity 1.41+/-0.05

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PH ~ 3.0

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## Application details

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### Dosage

Accelerator dosage depends on many factors and actually should be adjusted as per the site conditions met.

**It should not be fixed for one time at all!**

The **dosage of the accelerator** would vary according to the scope of work. Typically if the reduction of the rebound (without early strength) is required the dosage would be 2-4%. If early strength is required, dosage would be 4-6%. It would depend as well as on the type of application, vertical (benches) spraying or over-head spraying.

The **performance of the accelerator** would depend on the cement type, content, age and quality, the W/C of the mix, temperature of the mix, the substrate condition, etc.

As guide line, accelerator dosage – that need to be confirmed by site trial:

PROCESS	REQUIREMENT	DOSAGE
DRY	Rebound reduction or vertical application	~3% by weight of cement
	Early Strength or overhead application	4-6% by weight of cement
WET	Rebound reduction or vertical application	4-5% by weight of cement
	Early Strength or overhead application	5-6% by weight of cement

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### Application Temperature

Concrete temperature should not be lower than 15 deg.C(especially so for thick layers).Lower temperatures require higher dosages.

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## Application

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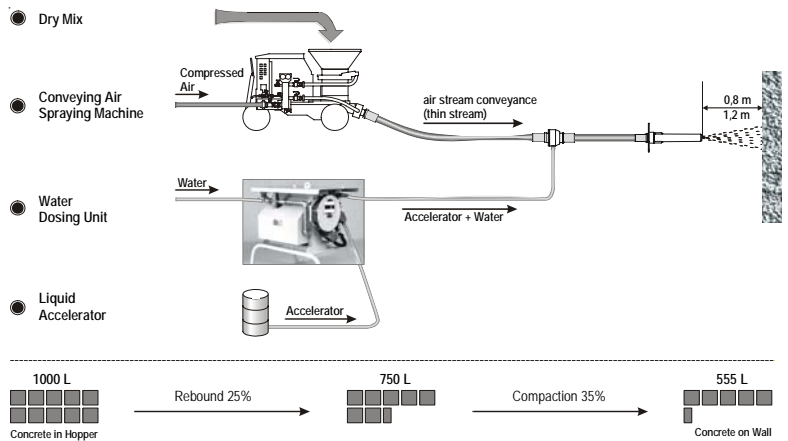
### Application instructions

Generally speaking, the accelerator will be added and mixed with the other concrete components as follows:

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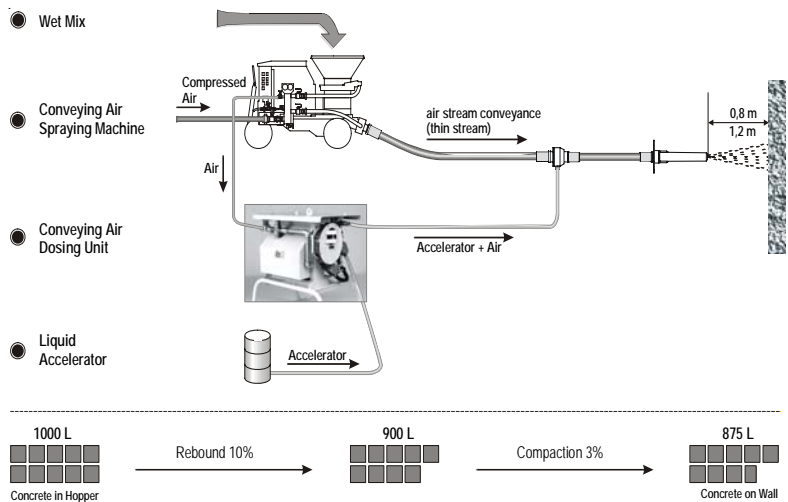
## Dry process

**Sigunit-L53 MY** is supplied from the liquid dosing unit to the mixing tube assembly by means of water under pressure (2-3 bars more than the conveying pressure). The mixing tube assembly being located ~ 2,5 meters behind the nozzle or at the nozzle directly.



## Wet process

**Sigunit-L53 MY** is supplied from the liquid dosing unit to the mixing tube assembly by means of air under pressure (2-3 bars more than the conveying pressure). The mixing tube assembly being located ~ 2,5 meters behind the nozzle or at the nozzle directly.



## Dispensing

**Sigunit-L53 MY** is added thanks to suitable liquid dosing unit such as Aliva AL 403.4 (24-240 lt/h) or AL 403.5 (30-700 lt/h).

Suitable dosing unit type is determined according to cement content, spraying out-put and the accelerator dosage.

## Notes on application /Limits

When using sulphate resistant cement, strength development may be slower.

- Sigunit L53 MY is not compatible with Sigunit L20/L62
- Accelerator hoses must be thoroughly cleaned before using Sigunit L53 MY
- Metal parts of the pump coming into contact with Sigunit L53 MY must be stainless steel.
- The set accelerating effect depends on cement content, cement age, cement type, temperature of shotcrete and substrate as well as on layer thickness and shotcreting method.

A further efficiency parameter of Sigunit L 53 MY is the W/C ratio of the concrete mix in wet process or the quantity of water added at the nozzle in dry process.

- Do not store under direct sunlight.

## Health & safety information

**Ecology** Do not dispose into water

**Disposal** According to local law

**Transportation** Non hazardous

**Important notes** Although classified as non-toxic, as is normed with most industrial chemicals, certain precautions should be taken when handling.

- Avoid contact with skin and eyes, wear protective gloves and eye protection.
- In case of skin contact wash thoroughly.
- In case of eye contact, flood with water for at least 15 minutes and consult a doctor.

## Disclaimer

*The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.*



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