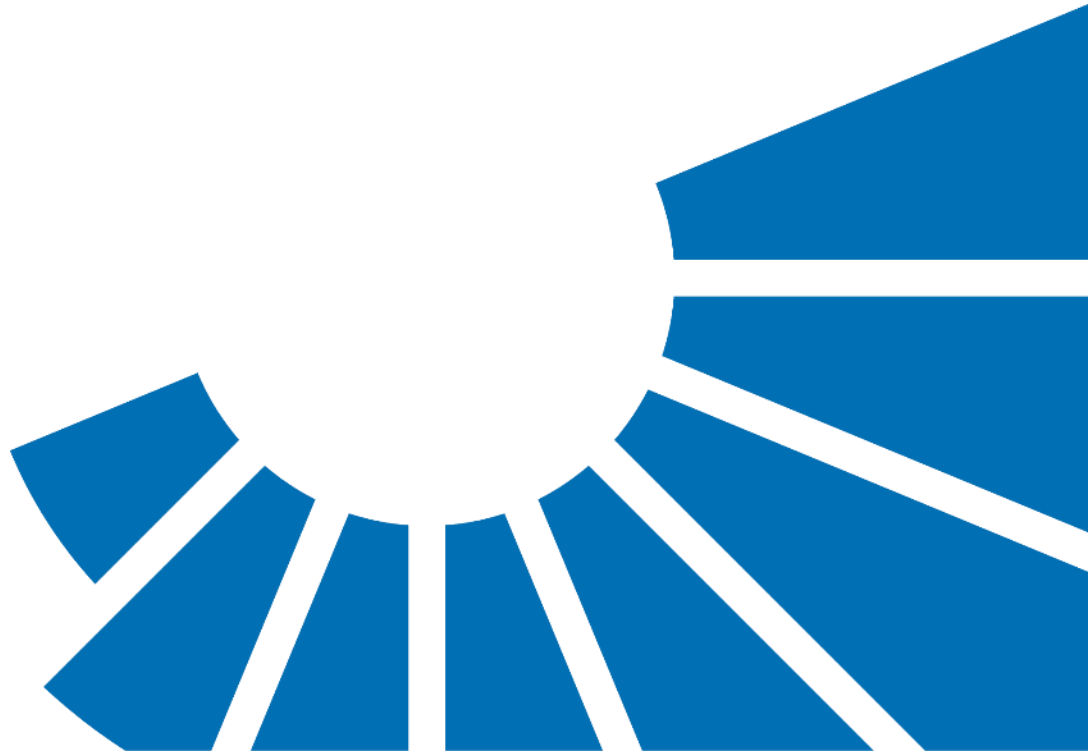
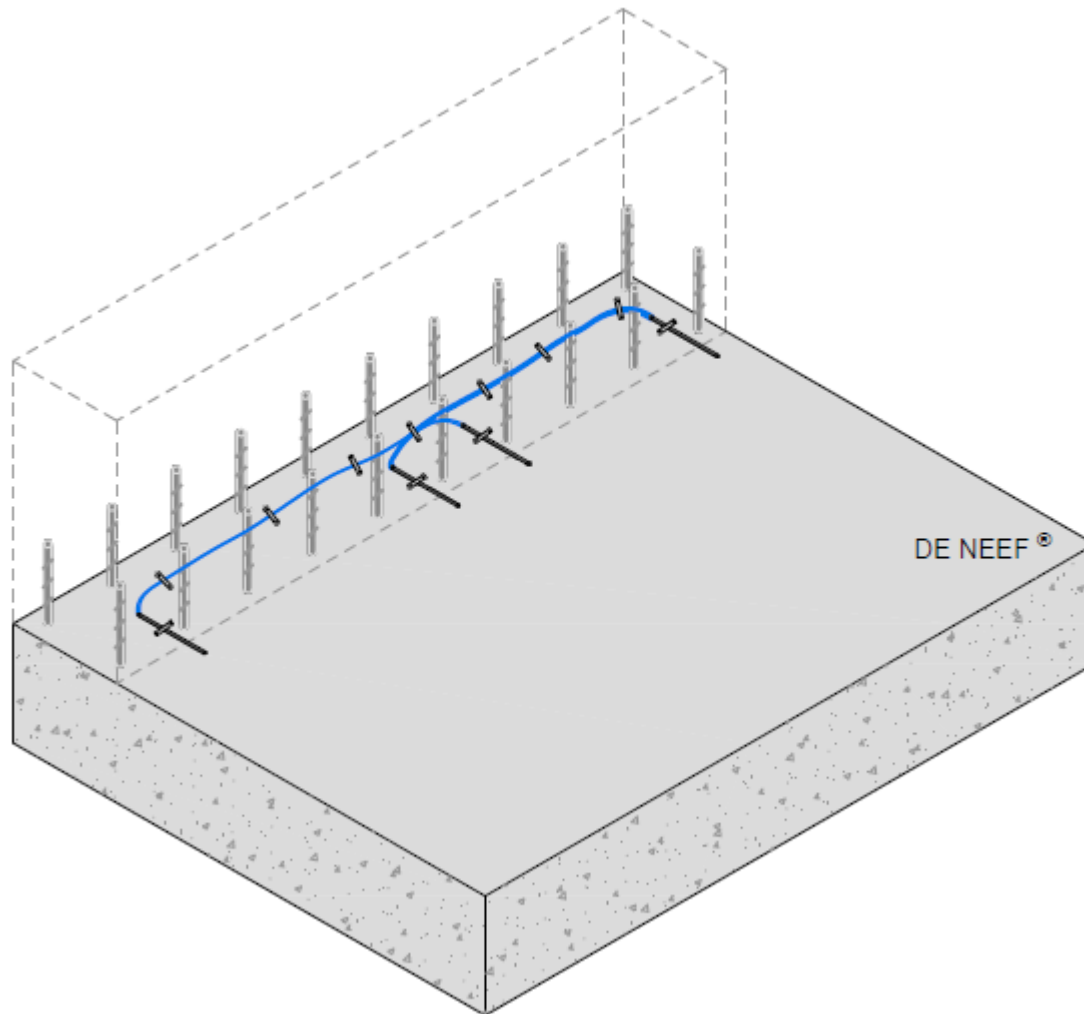


DE NEEF®

Leak sealing injections

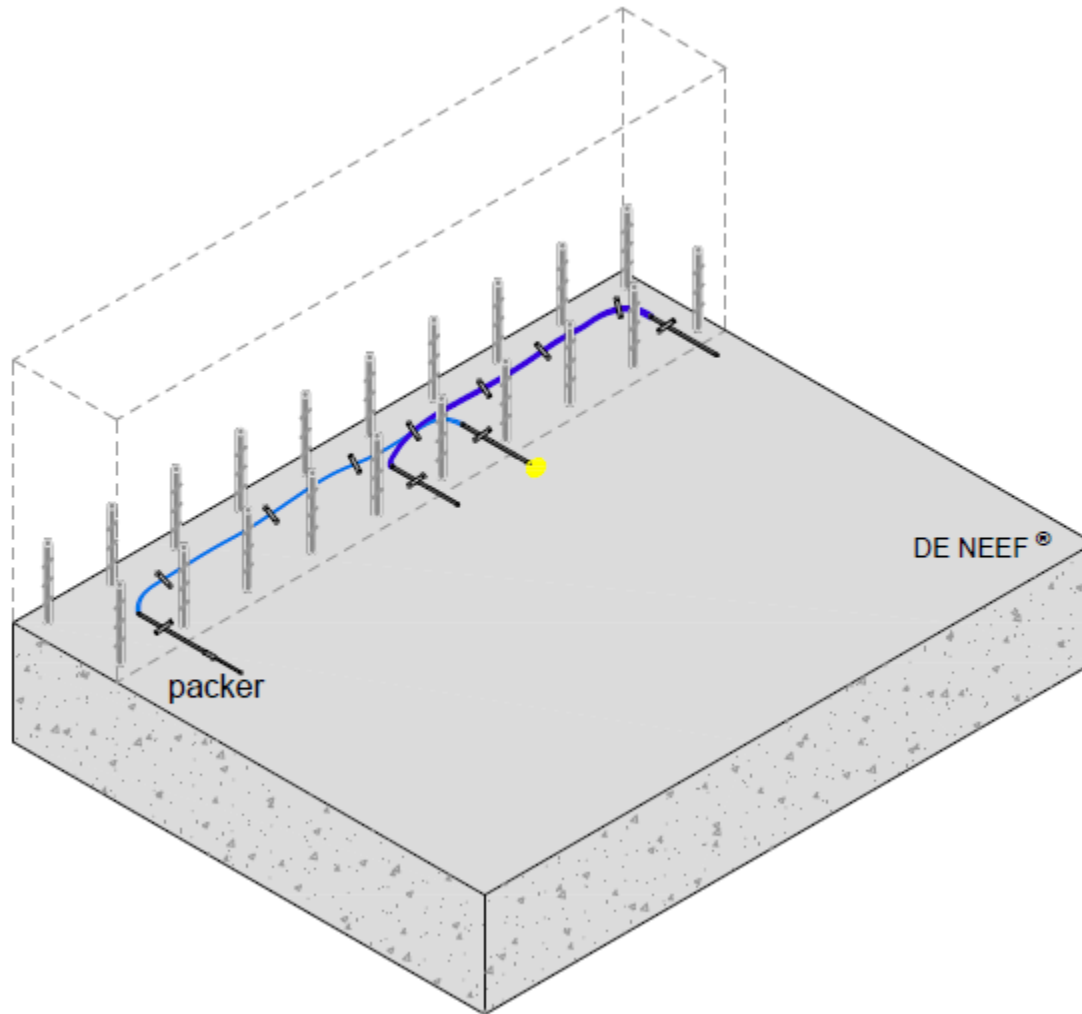


Injection hose



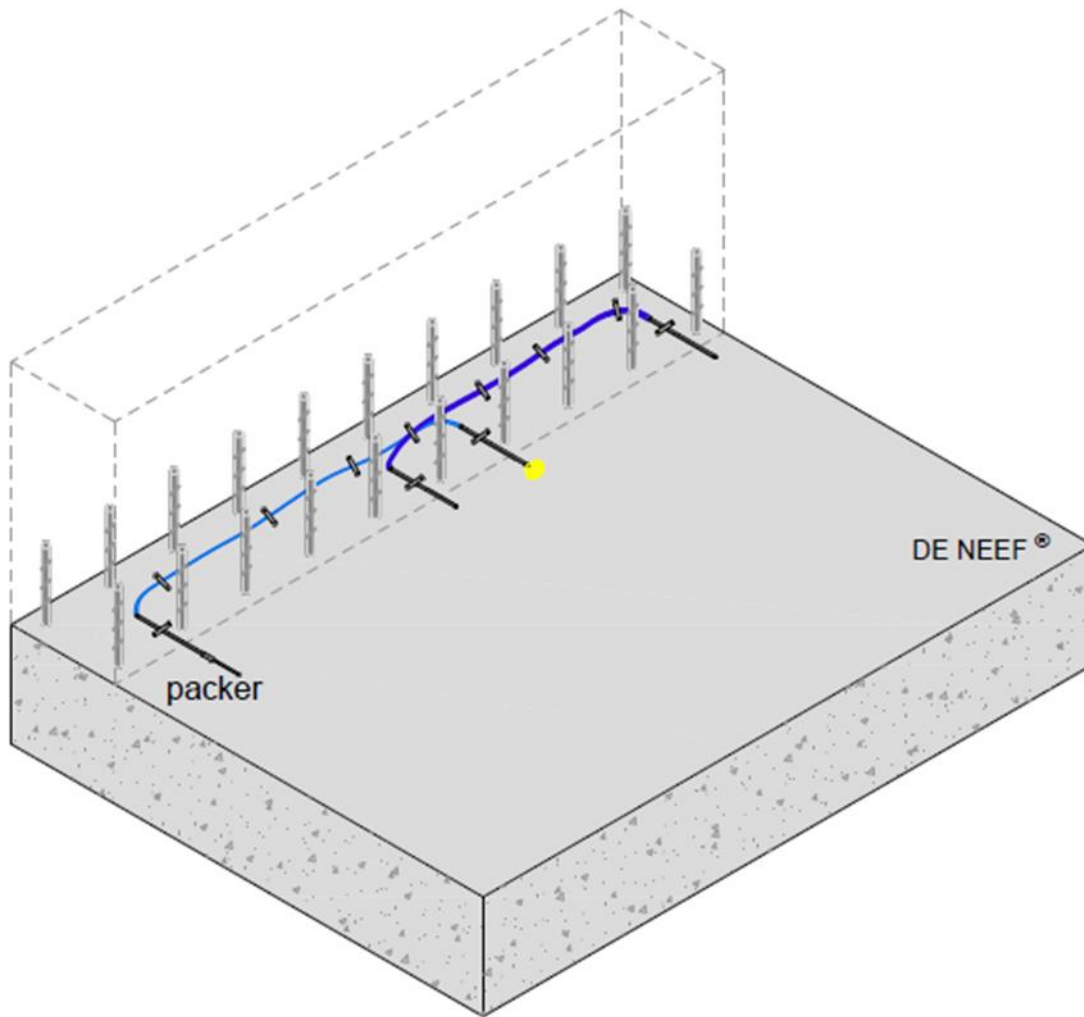
- Injection hoses are pre applied, and are used as a post injection system
- Only PU resin is used to inject the injection hoses
- Injection hose are only used when there is water seen coming out of the construction joint.
- A traditional injection hose can be used only once
- The injection hose itself has no waterproofing properties.
- When there is water the injection hose is used as a delivery method for the resin without drilling into the concrete.

Injection hose



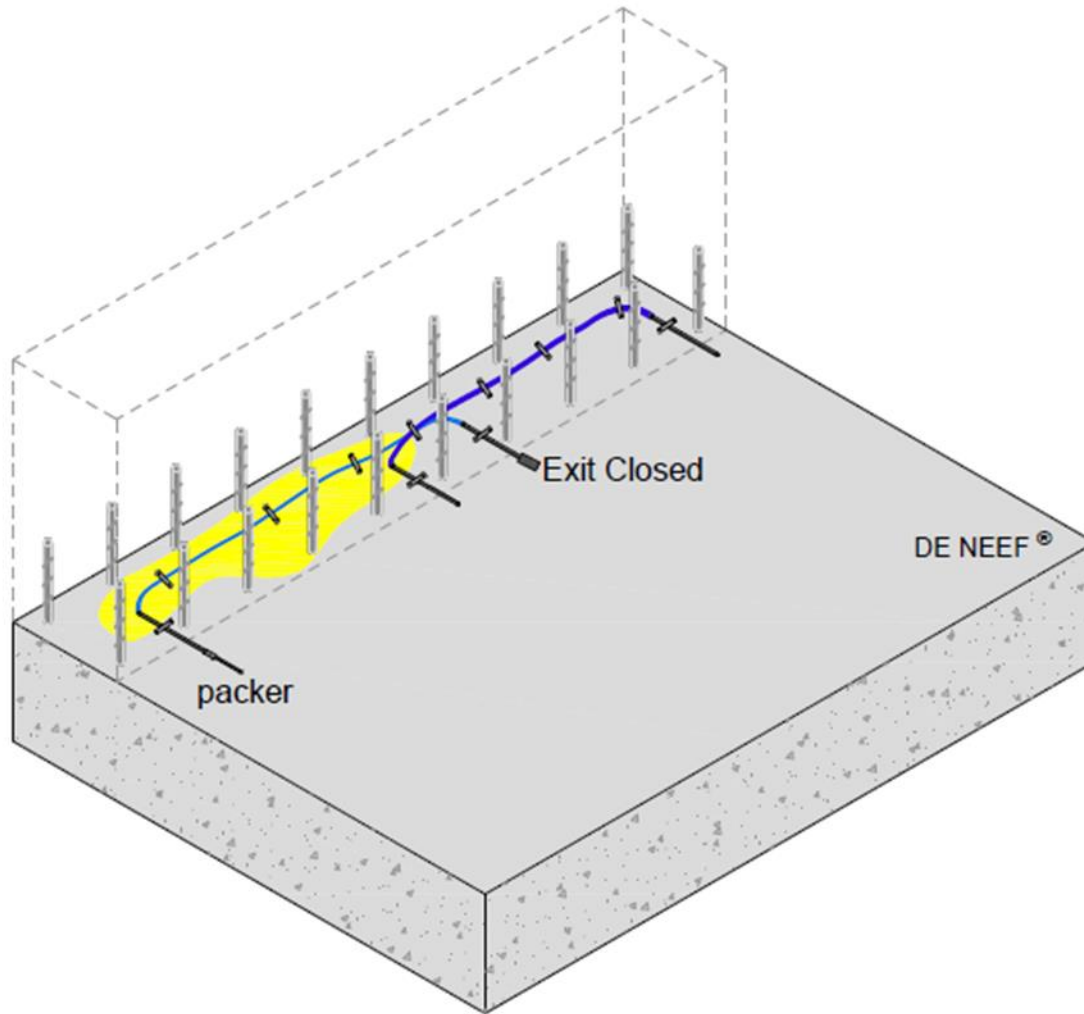
- Remove the closing cap from the tubes coming out from the concrete and insert a packer in the entry port open the exit point left or right.
- Before the actual injection Washing agent ECO, Separation oil or pure resin without catalyst is injected to make sure the right injection hose is used and there is no blockage of the hose.
- Connect the pump onto the packer and inject at the lowest possible pressure till Washing agent, Separation oil or pure resin is coming out of the exit point, if this is the case there is no blockage and the right hose will be injected.

Injection hose



- Prepare the PU resin HA Flex LV/SLV AF and HA Flex Cat AF. 2 - 5% of catalyst can be used.
- Don't mix more resin than what will be used within 4 hours
- Connect the pump onto the packer and start the injection with the lowest possible pressure.
- Continue with injection till resin is coming out of the exit point of the injection hose.

Injection hose



- When the resin HA Flex LV/SLV AF is coming out close the PVC tube with the closing cap and/or with a clamping tool.
- Increase the pressure of the pump slightly until there is consumption of the resin.
- Continue the injection till the complete joint is filled with resin.
- When unreacted resin is coming out of the construction joint, wait a few moments. “depending on reaction time”. And continue with the injection when polymerization of the resin is about to start.

Adapt the amount of catalyst if needed, depending on the circumstances

Hose injection

Temperature	HA Flex Cat AF %F	Start reaction	End reaction	Expansion
At 5°C	1%	Approx. 3'30"	Approx. 17'00"	Approx. 12V
	2%	Approx. 2'15"	Approx. 8'30"	Approx. 14V
	5%	Approx. 55"	Approx. 4'00"	Approx. 16V
At 15°C	1%	Approx. 2'10"	Approx. 10'50"	Approx. 14V
	2%	Approx. 1'25"	Approx. 7'00"	Approx. 14V
	5%	Approx. 40"	Approx. 3'05"	Approx. 16V
At 25°C	1%	Approx. 1'30"	Approx. 9'00"	Approx. 14V
	2%	Approx. 1'05"	Approx. 5'35"	Approx. 17V
	5%	Approx. 35"	Approx. 2'10"	Approx. 17V
At 30°C	1%	Approx. 1'05"	Approx. 7'30"	Approx. 14V
	2%	Approx. 45"	Approx. 4'40"	Approx. 16V
	5%	Approx. 25"	Approx. 1'45"	Approx. 17V
At 35°C	1%	Approx. 55"	Approx. 6'45"	Approx. 15V
	2%	Approx. 40"	Approx. 4'00"	Approx. 17V
	5%	Approx. 20"	Approx. 1'35"	Approx. 18V

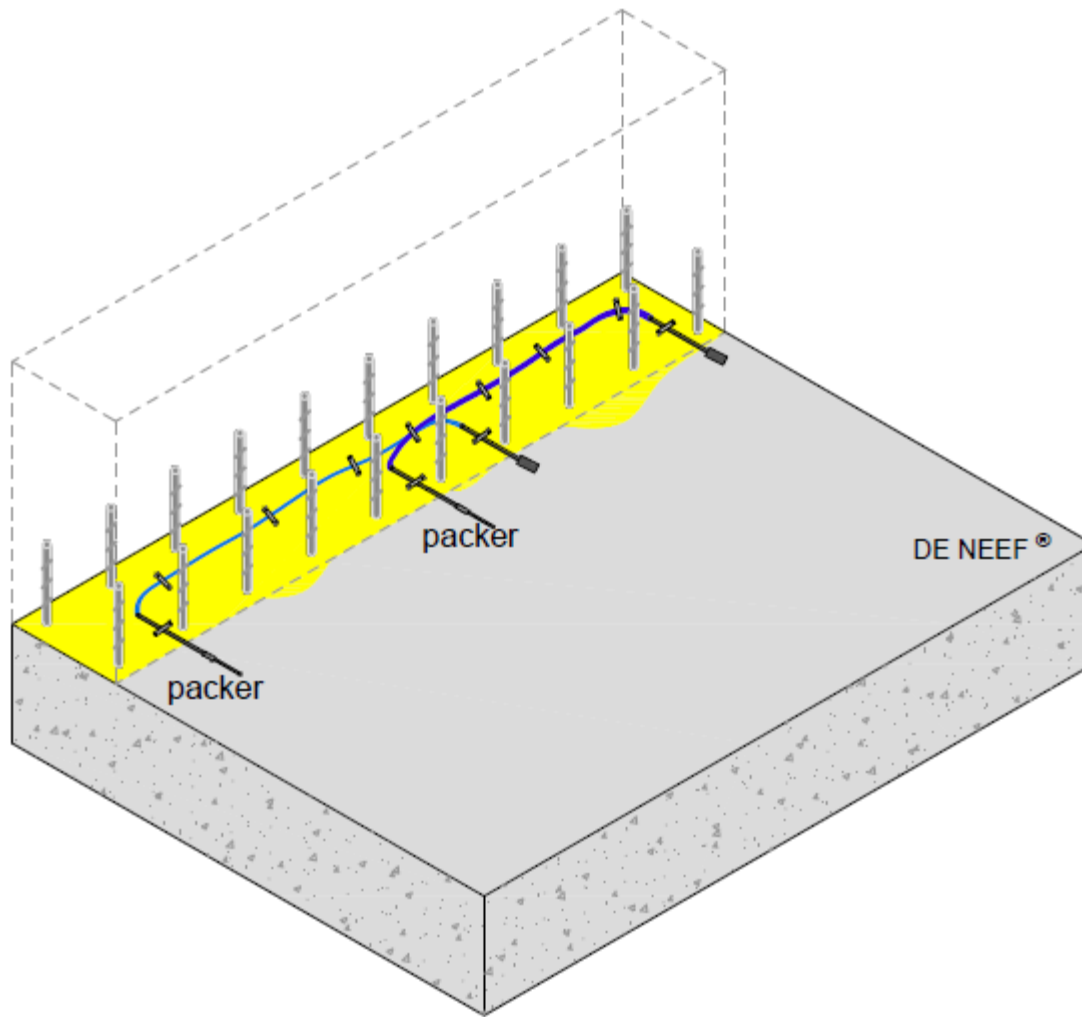
<https://gcpat.uk/en-gb/solutions/products/de-neef-waterproofing-injection-solutions/de-neef-ha-flex-lv-af>

Temperature	HA Flex Cat AF %	Start reaction	End reaction	Expansion
At 5°C	2	Approx. 1'30"	Approx. 6'30"	Approx. 14V
	5	Approx. 50"	Approx. 3'25"	Approx. 16V
At 15°C	2	Approx. 1'10"	Approx. 5'10"	Approx. 16V
	5	Approx. 35"	Approx. 2'35"	Approx. 16V
At 25°C	2	Approx. 1'00"	Approx. 4'30"	Approx. 16V
	5	Approx. 35"	Approx. 2'20"	Approx. 17V
At 30°C	2	Approx. 50"	Approx. 4'20"	Approx. 16V
	5	Approx. 30"	Approx. 2'00"	Approx. 17V
At 35°C	2	Approx. 50"	Approx. 3'35"	Approx. 17V
	5	Approx. 25"	Approx. 1'45"	Approx. 18V

<https://gcpat.uk/en-gb/solutions/products/de-neef-waterproofing-injection-solutions/de-neef-ha-flex-slv-af>

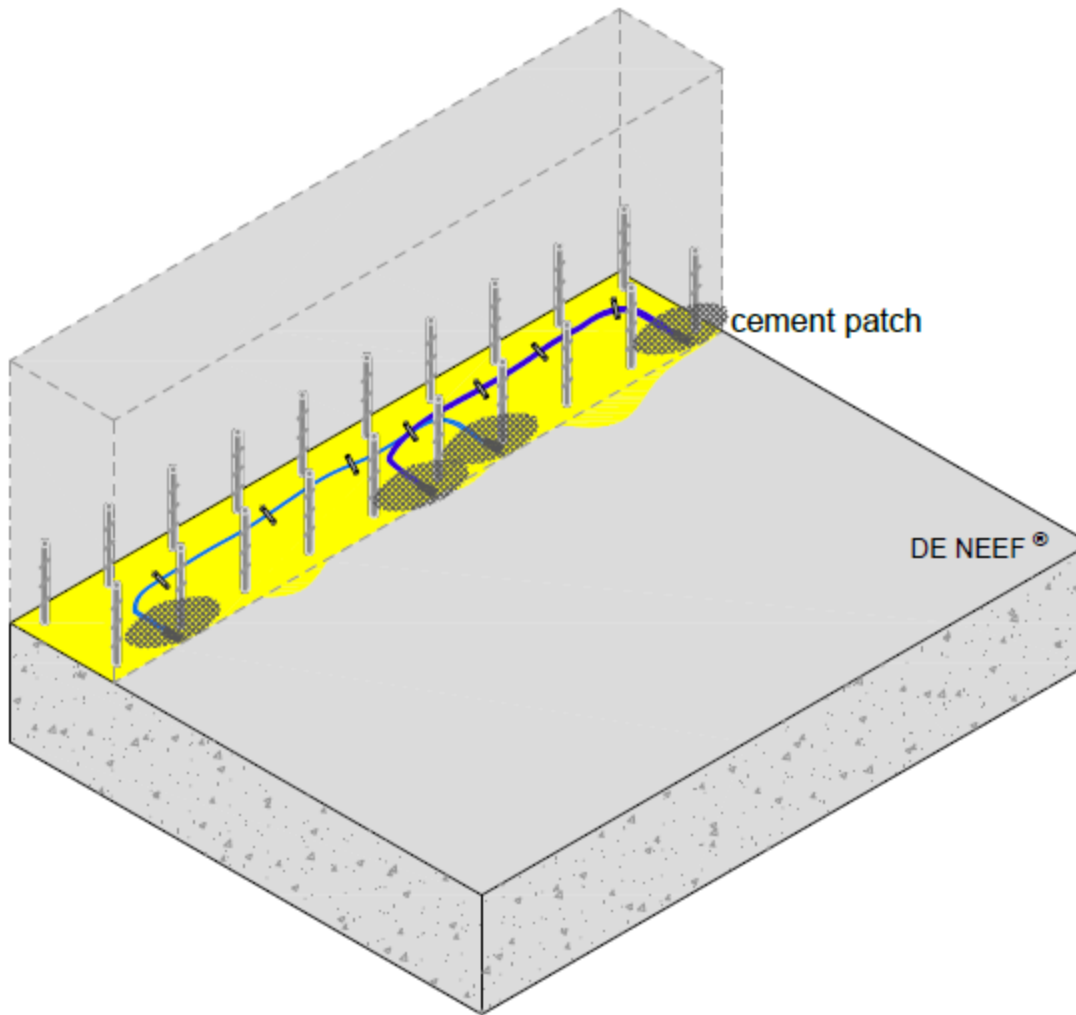
- Prepare the pump and the resin HA Flex LV/SLV AF with HA Flex CAT AF.
- Share HA Flex Cat AF before adding
- The catalyst dosage and reaction time depends on the application and temperature
- Perform a cup test before the injection to have an idea about the reaction time.
- Don't mix more resin than needed within 4 hrs.

Screen injection



- Inject all the hoses using the same application method described previously.
- When an injection hose is blocked due to debris the construction joint is injected by drilling and positioning packers.
- Try to inject a small amount of water after the injection to let all the resin react completely, using a separate pump for the water

Screen injection



- When the injection is finished removed the packers.
- Cut off the plastic tubes coming out of the concrete.
- Apply a repair mortar as a patch.
- Injection hoses are only used once.
- It is recommended to use the injection hose as a post injection system only when water is infiltrating.