

AFRISAM READYMIX



www.afrisam.com

Creating Concrete Possibilities





With over 30 years in the concrete industry, AfriSam's Readymix division has long been established as a leading supplier of concrete to the building and construction industry and is proud to be associated with the development of our continent.

Over the years, we have developed expertise in choosing and proportioning suitable and compliant raw materials for concrete and have mastered computerised weigh-batching and the art of pumping concrete. Our technical knowledge and quality assurance processes give our customers a competitive edge in the market.

From our over 40 Readymix operations in Gauteng, Mpumalanga, North West, KwaZulu-Natal and Western Cape we have the capacity to produce over 1,8 million tons of concrete annually. Our fleet of over 300 mixer trucks and pumps ensure that concrete is delivered, discharged and placed on site, on time and as close to its final position as possible.

Driven by one of our values, 'Planet', we employ environmentally-responsible production processes and continuously conduct environmental impact studies in order to improve. We are committed to sustainable development and therefore strive towards the optimal use of natural resources.

AfriSam Readymix is well positioned to save our customers the troubles associated with site batching and allow them to concentrate on the job at hand.

The advantages of AfriSam Readymix versus site batching:

- With our resources and technical expertise, we can provide a wide range of mixes and match the right mix design to the right application.
- We are able to meet changes to construction programmes within 48 hours.
- Our concrete can be supplied to several positions in one delivery.
- The speed of discharge of our concrete offers advantages over site batched concrete.
- AfriSam Readymix is a cost-effective solution as it is not as labour intensive as site batching.
- We take responsibility for quality control of concrete production.

Our offering:

- We cater for projects ranging in size from the smallest DIY home application to the largest construction projects.
- We are committed to producing quality products and continually test for adherence to specifications.
- Our staff are well trained to assist you in choosing the ideal concrete mix for your application.
- We have a wide geographic footprint with over 40 Readymix plants across South Africa.
- We have a range of pumps with some of the longest boom reaches in the country to cater for all your pumping requirements.
- All our premises are ISO 9001 compliant and our products adhere to their respective specifications.
- We have a comprehensive research and development laboratory to ensure continuous development of products.

Application Brands

AfriSam application brands offer concrete mix solutions designed for specific uses and to comply to SANS 878. They offer optimal performance in terms of workability and rate of strength gain, and include Starmix, Foundation Mix, Suspended Slab Mix, Retainer Mix, Surfacebed Mix and Post Tension Mix.

As a green alternative, all our fit-for-purpose branded products can be designed to have a low carbon footprint without compromising strength requirements.

Starmix

What is Starmix?

Starmix is a concrete made specifically for residential building and is suitable for a number of applications. It is made in accordance with SANS 878 and National Home Builders Registration Council (NHBC) specifications.

Benefits of Starmix:

- Convenient delivery of concrete at the time and place you specify.
- Delivered in quantities from as small as 1m³ to suit your requirements.
- One brand for all residential applications - you specify the strength you require.
- More efficient use of your labour force.

Applications:

Starmix is suitable for the following applications:

- Unreinforced foundations (10 to 15MPa)
- Reinforced foundations (20 to 25MPa)
- Non-wearing driveways (20 to 25MPa)
- Suspended slabs (25MPa)

Use in other applications:

While AfriSam Starmix is fit-for-purpose, in the unlikely event that there is concrete left over, depending on the strength, it can be used for other residential applications such as garden, pathways and DIY projects.



Foundation Mix

What is Foundation Mix?

Foundation Mix is a branded product with high strength gain and workability and is designed specifically for foundations. It has a target strength of between 15 and 35MPa and a slump of either 75mm or 100mm.

Features of Foundation Mix:

- Flows easily into difficult areas and shapes.
- Easy to compact.
- Offers increased resistance in aggressive environments due to the use of slagment and/or fly-ash in the mix. It is a cost-effective solution.

Benefits of Foundation Mix:

- Does not take long to place.
- Is a durable concrete with less likelihood of concrete deterioration.

Performance-based product offering:

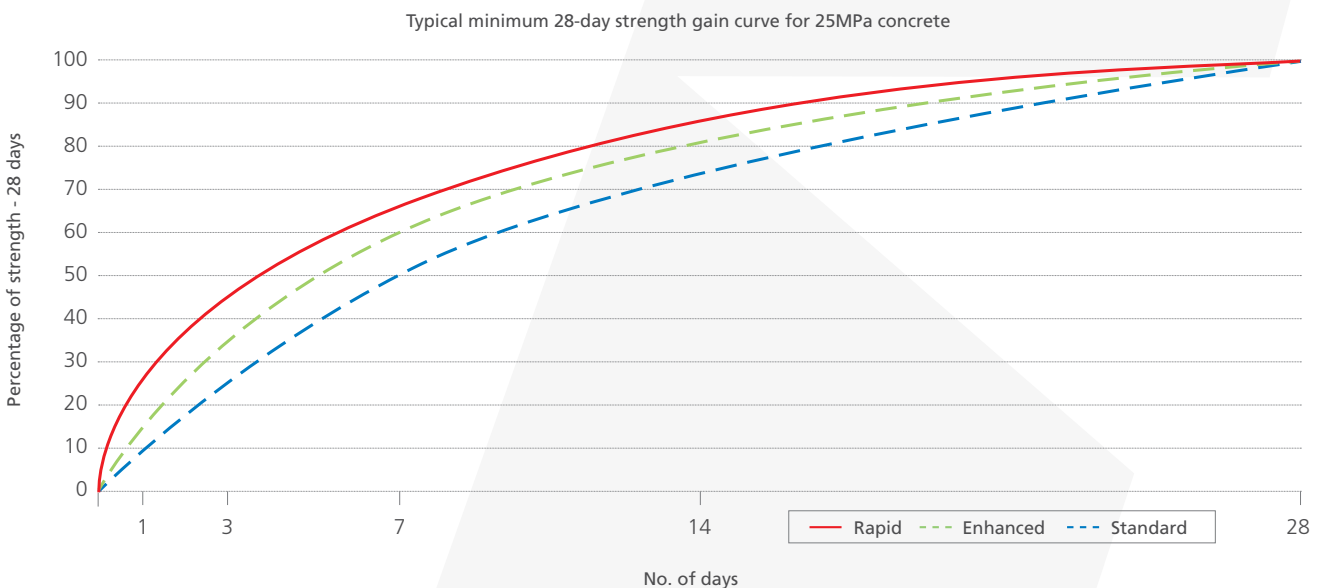
AfriSam produces high-quality, best-cost concrete solutions. This is achieved by ensuring that the concrete gains strength at a suitable rate for the specific application.

Below is a typical 25MPa concrete strength gain curve depicting three AfriSam differential strength gain options which provide the basis for strength gain solutions.

Foundation Mix requires a standard strength gain.

Use in other applications

While the AfriSam Foundation Mix is fit-for-purpose, in the unlikely event that there is leftover concrete, it can be used for retainer walls, however good vibrating practices would be required.



Notes:

- The curves serve as a guide and may vary.
- The following results are attained under standard testing and curing conditions.
- Actual performance on site may vary due to adverse climatic conditions.
- Detailed strength gain curves by project may be requested from technical services.



Suspended Slab Mix

Suspended Slab Mix is a Readymix branded product designed for high early strength and workability in applications such as slabs above the ground, high-rise buildings, parkades and hollow block systems. It achieves a target strength of between 20 and 40MPa and a slump of either 100mm or 125mm.

Features of Suspended Slab Mix:

- Pumpable due to high workability.
- It is easy to place.
- Makes for easy compaction.
- A good surface finish is easily achieved.

Benefits of Suspended Slab Mix:

- Allows for more efficient use of labour as a result of easier placing, compacting and finishing.
- Improved cohesion results in a better off-shutter finish.

Performance-based product offering:

AfriSam produces high-quality, best-cost concrete solutions. This is achieved by ensuring that the concrete gains strength at a suitable rate for the specific application.

Below is a typical 25MPa concrete strength gain curve depicting three AfriSam differential strength gain options.

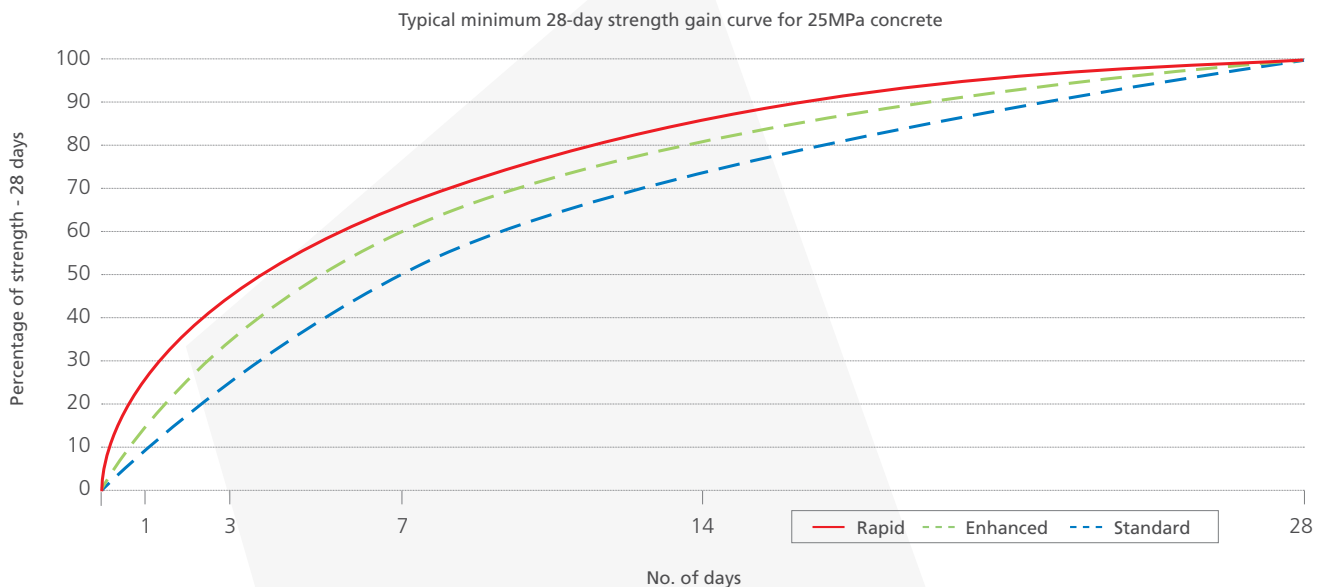
Suspended Slab Mix requires an enhanced strength gain to facilitate formwork stripping. Enhanced concrete is versatile and suitable for all applications where the combined benefits of durability and early strength gain are required.

Stripping of formwork:

As a guide only, the table below gives an indication of how long formwork should remain in place to provide the required finish.

Use in other applications:

While the AfriSam Suspended Slab Mix is fit-for-purpose, in the unlikely event that there is leftover concrete, this product can be used for retainer walls and foundations.



Notes:

- The curves serve as a guide and may vary.
- The following results are attained under standard testing and curing conditions.
- Actual performance on site may vary due to varying climatic conditions.
- Detailed strength gain curves by project may be requested from technical services.

Retainer Mix

Retainer Mix is a Readymix branded product with high strength gain and workability, designed for external concrete wall applications. It achieves a target strength of between 20 and 45MPa and a slump of 125mm.

Features of Retainer Mix:

- Suitable for direct, crane or skip discharge.
- Flows easily and can be discharged faster due to high workability.
- Provides an excellent off-shutter finish.
- Offers increased resistance to aggressive environments due to the use of slag and/or fly ash in the mix.

Benefits of Retainer Mix:

- Improved off-shutter finish requires less remedial work.
- Allows for more durable concrete with less likelihood of concrete deterioration.
- Minimal vibration required.

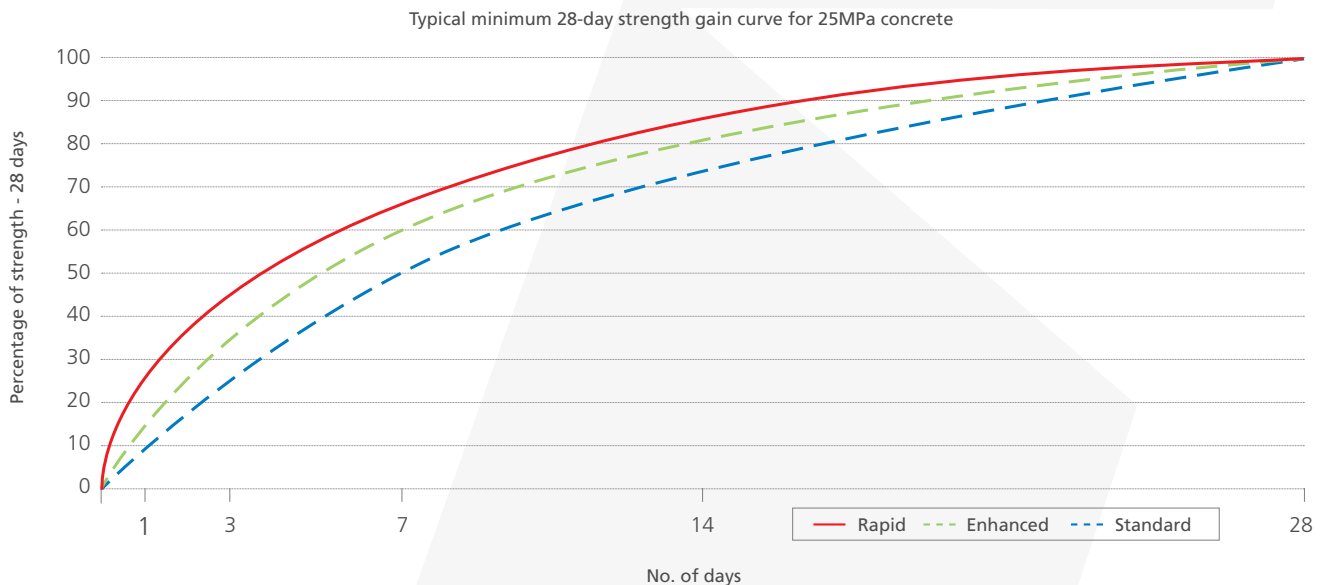
Performance-based product offering:

AfriSam produces high-quality, best-cost concrete solutions. This is achieved by ensuring that the concrete gains strength at a suitable rate for the specific application.

Below is a typical 25MPa concrete strength time gain curve depicting three AfriSam differential strength gain options. Retainer Mix requires a standard strength gain as there is no need for quick stripping times.

Use in other applications:

While the AfriSam Retainer Mix is fit-for-purpose, in the unlikely event of having leftover concrete, this product can be used for foundations.



Notes:

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- Actual performance on site may vary due to adverse climatic conditions.
- Detailed strength gain curves by project may be requested from technical services.



Surfacebed Mix

Surfacebed Mix is a Readymix branded product designed for high strength gain, finishing and workability in applications such as slabs on the ground, in factories, shopping centres, distribution centres and parking areas, as well as paving elements such as culverts and drains. It has a target strength of between 20 and 40MPa and a target slump of 100mm.

Features of Surfacebed Mix:

- It can be easily compacted, floated and finished.
- It allows for optimal cutting time.

Benefits of Surfacebed Mix:

- Because of its optimal cutting time, it improves productivity on site.

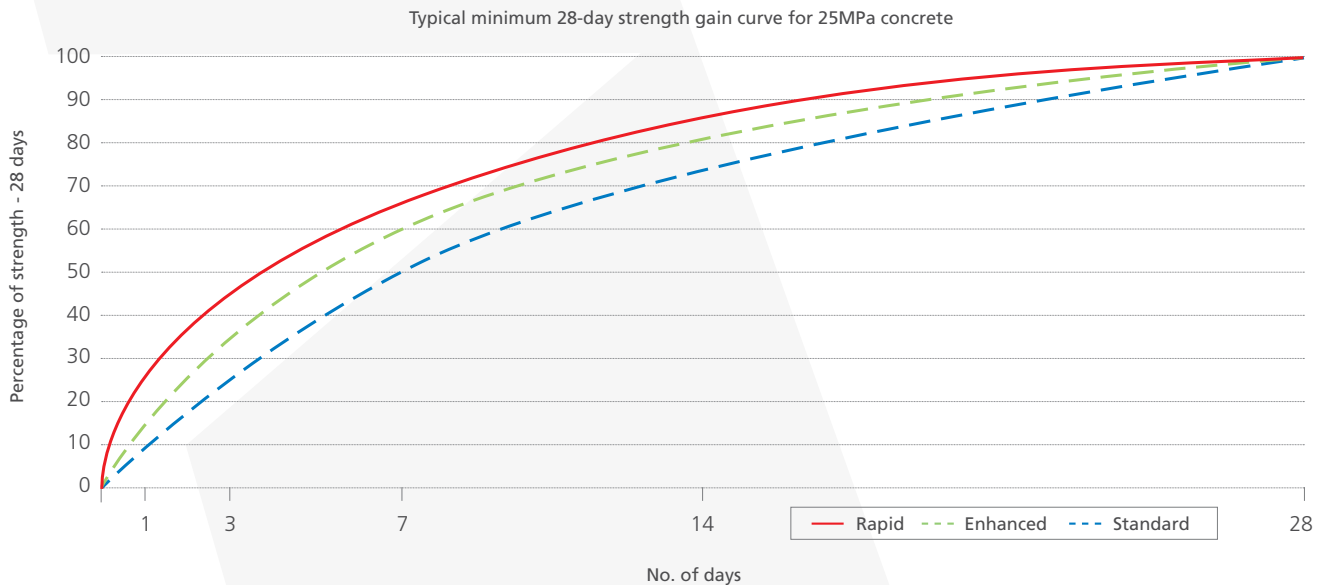
Performance-based product offering:

AfriSam produces high-quality, best-cost concrete solutions. This is achieved by ensuring that the concrete gains strength at a suitable rate for the specific application.

Below is a typical 25MPa concrete strength gain curve depicting three AfriSam differential strength gain options. Surfacebed Mix requires a rapid strength gain as the product needs to stiffen and gain strength quickly for power-floating and cutting.

Use in other applications:

While the AfriSam Surfacebed Mix is fit-for-purpose, in the unlikely event of having leftover concrete, this product can be used for foundations, retaining walls and suspended slabs.



Notes:

- The curves serve as a guide and may vary.
- The following results are attained under standard testing and curing conditions.
- Actual performance on site may vary due to adverse climatic conditions.
- Detailed strength gain curves by project may be requested from technical services.



Post Tension Mix

Post Tension Mix is a Readymix branded product suitable for all post-tension applications or areas where early strength gain is a requirement. It offers a target strength of no less than 30MPa at 28 days and a guaranteed 18MPa at three days (72 hours after completion of the pour).

Features of Post Tension Mix:

- It is pumpable due to its high workability.
- It can be placed easily.
- It makes for easy compaction.
- It is easily finished.
- It can be power-floated.

Benefits of Post Tension Mix:

- It has a guaranteed early strength performance.
- It allows for more efficient use of labour as it is easy to place, compact and finish.
- It gives better off-shutter finishes because of its improved cohesion.

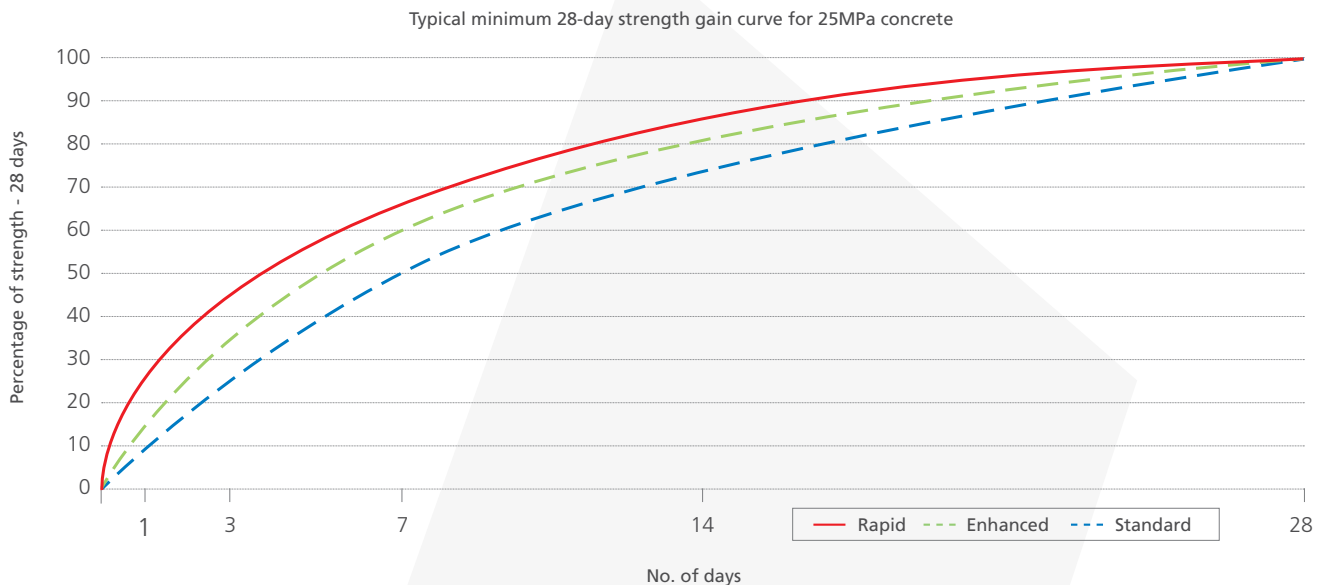
Performance-based product offering:

AfriSam produces high-quality, best-cost concrete solutions. This is achieved by ensuring that the concrete gains strength at a suitable rate for the specific application.

Below is a typical 30MPa Post Tension Mix strength gain curve depicting the MPa achieved over a 28-day cycle. A rapid strength gain is required in order for Post Tension Mix to achieve the three-day target strength and allow for tensioning of the slab.

Use in other applications:

While the AfriSam Post Tension Mix is fit-for-purpose, in the unlikely event of having leftover concrete, this product can be used for foundations, suspended slabs, surface beds and retaining walls.



Notes:

- The curves serve as a guide and may vary.
- The following results are attained under standard testing and curing conditions.
- Actual performance on site may vary due to adverse climatic conditions.
- Detailed strength gain curves by project may be requested from technical services.



Speciality Brands

In response to the constantly changing industry requirements, we have used our technical expertise to design concretes with special properties to cater for more complex needs. The use of new generation admixtures in these brands allows for a reduction in water content, thereby improving durability and compressive strength characteristics.

Speciality brands include products such as Flowcrete, Trenchcrete, Hydrafil and Poolmix.

Flowcrete:

Flowcrete is a specially modified, highly workable and cohesive concrete designed to meet specific placement and performance requirements. It is made from specially selected raw materials and registered admixtures which are exclusively available to AfriSam. This gives the concrete an enhanced fluidity without the segregation normally found in highly fluid mixes.

Flowcrete is designed for strengths from 15MPa upward for normal placing and pumping. Once placed, it is self-compacting and self-levelling, with no segregation and minimal bleeding. Its rate of strength gain, attainment of the specified 28-day compressive strength and shrinkage characteristics are the same as that of normal concrete.

Features and benefits of Flowcrete:

- It offers excellent workability.
- No segregation – workability is achieved without compromising cohesion.
- It is highly fluid and therefore flows through narrow and irregular spaces.
- It is faster to discharge than normal concrete.
- It is easy to place with less placement equipment required on site.
- It offers increased free fall limits and deeper lifts without segregation.
- It offers improved level tolerance of floors and slabs.
- It allows for greater productivity as there is more flexibility and efficient use of labour.
- It offers high-quality off-shutter finishes.

Applications:

- Raft foundations, foundations, surfacebeds and suspended slabs.
- Areas with complex shapes.
- Areas of congested reinforced elements.
- Intricate architectural applications.



Speciality Brands

Trenchcrete

Trenchcrete is a highly workable blend of aggregate, water, cement and an air-entrapping agent, specifically designed to be used as a trench and void filler where early strength is not a requirement. It is an economic alternative to placing and compacting soil or granular material in applications requiring a highly fluid mixture such as thin or irregular sections and pipe filling.

Features and benefits of Trenchcrete:

- It is self-compacting and therefore does not require internal vibration or surface compaction.
- It flows easily into voids beneath pipes and around obstructions.
- It may be placed under all weather conditions.
- It hardens with very little settlement and does not require overfilling.
- Its high flowability allows for pumping into inaccessible or restricted areas.
- Significant cost savings can be achieved because of time saved, efficient use of labour and low excavation costs.

Product specification:

Properties of fresh concrete	
Modified flow	>500mm
Air content	>13%
Settlement	<1%
Properties of hardened concrete	
4-day compressive strength	0,4-0,5MPa
28-day compressive strength	1,5-2,5MPa
28-day indirect tensile strength	>250KPa
28-day California bearing ratio	>200
DCP at 29 days	<5mm / blow
Abrasion after 5000 repetitions	<5mm
Trafficable after 24 - 36 hours	



Hydrafil

Hydrafil is a highly stable backfill material used primarily for regular trenches and larger voids where early trafficking is essential. Once placed into the void or trench, the water in the Hydrafil bleeds away freely, causing a mechanical interlock of the sand and stone particles. This results in a highly stable backfill material.

Features and benefits of Hydrafil:

- Significant cost reductions as a result of time saved and efficient use of labour.
- It is self-compacting and therefore does not require internal vibration or surface compaction.
- Narrow excavations can be filled with Hydrafil as no compaction is needed.

Product specification:

Properties of fresh concrete	
Settlement	<1%
Properties of hardened concrete	
4-day compressive strength	0,5-1,2MPa
28-day compressive strength	2,5-3,0MPa
28-day indirect tensile strength	>250KPa
28-day California bearing ratio	>300
DCP at 29 days	<2mm / blow
Abrasion after 5000 repetitions	<1,5mm
Trafficable after 24 - 36 hours	

Poolmix

Poolmix is a semi-dry readymix concrete specifically designed for hand-packing pools. The high cement and low water content in this concrete allows for early strength development. The mix facilitates hand-packing and complex shaping and is very cohesive, allowing the walls and floor to form a monolithic unit.

Features of Poolmix:

- No specialised equipment is needed.
- Noise and dust pollution are eliminated.
- Ideal for construction of swimming pools, water features, koi ponds and drainage channels in domestic and other environments.

Readymix Services

Pumping:

AfriSam Readymix can be placed using our range of dedicated pumps to suit your individual requirements. Pumping allows for the uniform placement of concrete into areas not easily accessible by other means. Pumped concrete is flowable and yet highly cohesive to allow for easy placing, compaction and finishing.

AfriSam pumps have some of the longest boom reaches in the country, with outputs varying from 18 to 70m³ per hour, depending on the speed of the placing team and length of the pipeline used.

Reasons to use pumps:

- The site or the element to be concreted may be difficult to reach.
- They offer high speed of placing.
- They are suitable for congested sites with limited space for transporting concrete.
- They are suitable for high-rise projects and allows for placing concrete at various levels.
- They can be a cost-effective solution in terms of reducing labour costs and saving time.
- They are a convenient option as concrete can be placed where it's needed, easily and efficiently.
- For residential applications, they eliminate the need to build ramps for wheelbarrows, to break down walls and to disturb established gardens.

Factors that need attention when deciding to pump:

- There needs to be close communication between the contractor and AfriSam.
- AfriSam needs to determine site accessibility for the truck-mounted pump and truck mixers.
- A washout area must be provided so that the truck chutes can be cleaned and the pump and pipeline segments washed out. NB: This water should not be allowed to drain into sewerage systems. If there is no place to dispose of the washout water, then prepare a sandbagged area.
- Safety aspects should be respected at all times as high pressures are used to force the concrete through the pipeline. Staff not directly involved should keep clear of the pumping area, including the area underneath the boom.
- The site needs to have finishing equipment for compacting and finishing. A rough guide is one vibrator for 10m³/hour of concrete placed.
- As far as possible, it is important for AfriSam to do a pre-pumping inspection as this allows us to check that all the requirements for pumping will be met.

Responsibilities of the pump operator during pumping:

- Looking after the pumping equipment and pipeline.
- Placing the concrete.
- Operating the pump - no one else may operate the pump.
- He/she has the right to terminate a pump job if it is felt that conditions are unsafe.
- He/she has the right to send back concrete that is felt to be unsuitable for pumping.
- He/she is responsible for locating and clearing any blockage that may occur.
- He/she needs to communicate delays on site to the dispatcher.

The pump operator is assisted by the placing crew who are responsible for the following:

- They handle the hose.
- They need to be in constant communication with the pump operator to make sure they are in sync.
- They need to ensure that concrete is placed as close as possible to the position it is needed. (If it is necessary to move the concrete by shovel, the labourers should move but not throw concrete nor prod it into place using poker vibrators.)
- They will "break back" pipes and empty concrete into the area to be concreted before washing the pipes and before the concrete hardens.

Last load:

To avoid delays, the contractor needs to estimate how much more concrete must still be ordered to complete the pour when the third last truck is discharging its load. The customer must then contact the Call Centre to confirm final quantities required.

Adding water:

AfriSam is not responsible for any water added by the contractor to achieve workability higher than ordered. The responsibility shifts to the contractor and must be signed for by the site representative.

OUR QUALITY PROMISE

AfriSam's commitment to superior performance gives customers the peace of mind that comes with guaranteed technical excellence, top quality products, sustainability and continuous innovation.



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Reducing our
Carbon Footprint

With the planet as one of our core values, we assess the carbon footprint of each and every one of our operations and products while actively striving to drive down our impact on the environment.