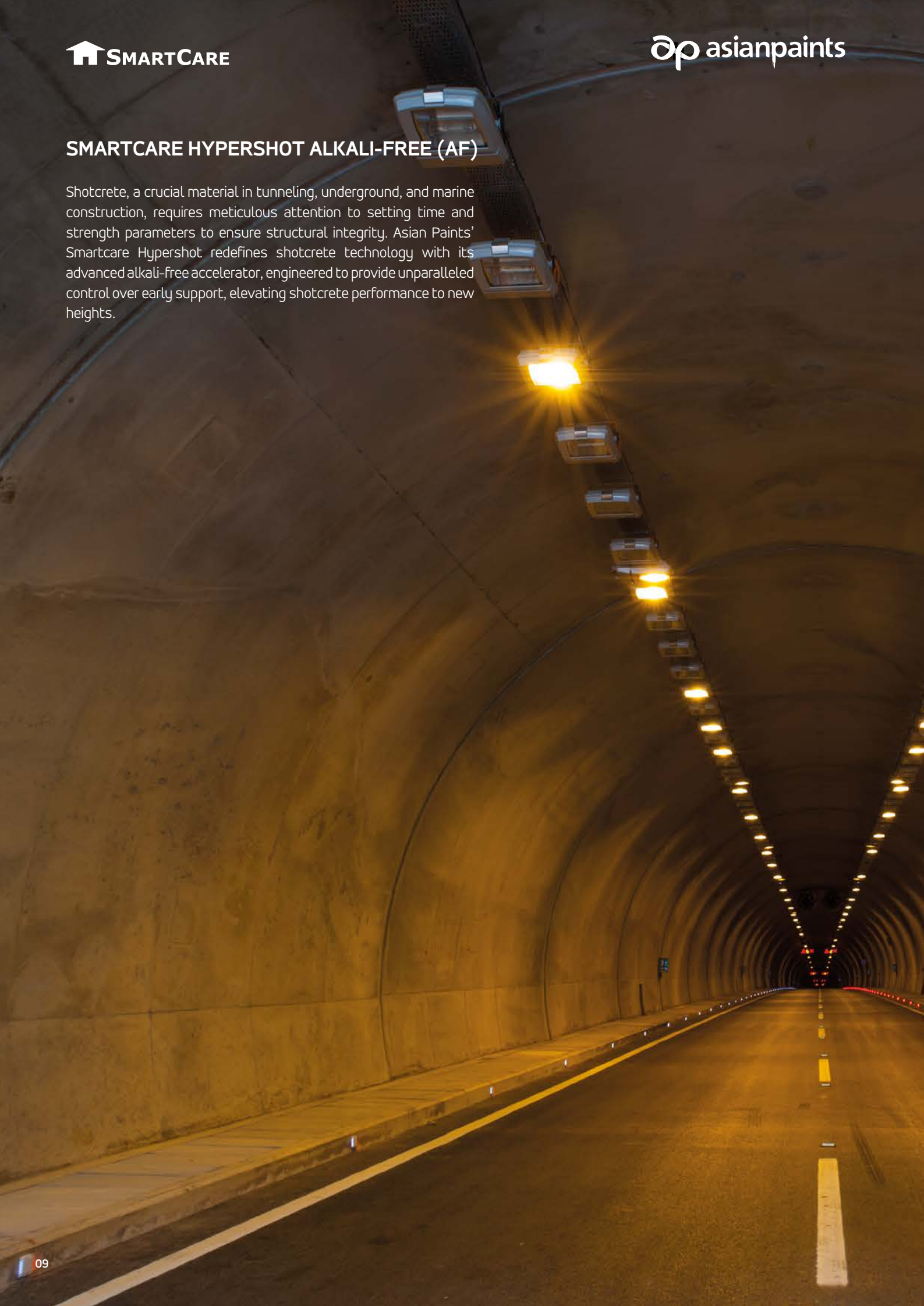
SMARTCARE HYPERSHOT ALKALI-FREE (AF)

Shotcrete, a crucial material in tunneling, underground, and marine construction, requires meticulous attention to setting time and strength parameters to ensure structural integrity. Asian Paints' Smartcare Hypershot redefines shotcrete technology with its advanced alkali-free accelerator, engineered to provide unparalleled control over early support, elevating shotcrete performance to new heights.



SMARTCARE HYPERSHOT AF: REVOLUTIONIZING SHOTCRETE TECHNOLOGY

Smartcare Hypershot, characterized by its acidic nature, offers a multifaceted solution for shotcrete applications. By incorporating Smartcare Hypershot into shotcrete formulations, several benefits emerge, including enhanced strength and sealing properties, mitigated risks associated with alkali-aggregate reaction, and reduced hazards of alkali corrosion for construction workers. Smartcare Hypershot facilitates reaction with Ca_2+ and SO_4^{2-} ions, resulting in the formation of Aft—a dense spatial network structure that fosters solidification and bolsters the early strength of cement-based materials. Moreover, as an accelerator, Smartcare Hypershot expedites the hydration reaction and reduces the setting time of cement, while simultaneously enhancing shotcrete cohesion, promoting adhesion between shotcrete and surrounding rock, and curbing rebound—a comprehensive approach to optimizing shotcrete performance and durability.

KEY TECHNICAL FEATURES:

1. **Non-Caustic, Non-Silicate Formulation:**
   - Ensures environmental safety and compliance with health regulations
   - Facilitates safer handling and application, minimizing health risks for workers
2. **Rapid Setting Capabilities:**
   - Enables the construction of thick sections and accelerates project timelines
   - Enhances productivity by reducing curing periods and facilitating faster project completion
3. **Minimal Strength Loss:**
   - Preserves the structural integrity of shotcrete, even at accelerated setting times
   - Ensures long-term durability and performance of the constructed infrastructure
4. **Rebound Loss Reduction:**
   - Minimizes material wastage during application, optimizing resource utilization and cost-effectiveness
   - Improves operational efficiency by reducing cleanup efforts and enhancing job site cleanliness
5. **Enhanced Bond Strength:**
   - Facilitates superior adhesion to substrates, including rock, concrete, and other construction materials.
   - Enhances structural stability and performance, particularly in challenging environmental conditions.
6. **Chloride-Free Composition:**
   - Eliminates the risk of corrosion to steel reinforcement and fibers, ensuring long-term structural integrity
   - Offers enhanced durability and longevity for infrastructure projects, reducing maintenance requirements
7. **Alkali Containment:**
   - Prevents leaching of alkalis into groundwater, mitigating environmental impact and ensuring sustainability
   - Supports eco-friendly construction practices, aligning with global environmental standards and regulations

KEY APPLICATIONS:

1. **Tunnel Construction:**
   - Securing rock formations and providing structural reinforcement in tunnel linings
   - Enhancing early support to facilitate safe and efficient excavation processes
2. **Slope Stabilization:**
   - Strengthening embankments and rocky terrain to mitigate the risk of slope instability
   - Ensuring the stability of infrastructure in challenging geological conditions
3. **General Construction Shotcrete:**
   - Accelerating setting time and achieving rapid strength gain for various construction applications
   - Providing early support in a wide range of construction projects

With its comprehensive suite of technical features and versatile application scenarios, Smartcare Hypershot emerges as a pioneer in shotcrete technology. It sets a new standard for excellence, delivering unparalleled performance, reliability, and sustainability across construction projects globally.

SmartCare HYPERSHOT AF 100

Asian Paints SmartCare HyperShot AF 100 is an innovative alkali-free accelerator that empowers concrete mixes to achieve rapid early strength without compromising long-term durability.

PRODUCT DESCRIPTION

Hypershot AF 100 alkali free accelerator is used for wet mix sprayed concrete processes in the tunneling and mining industry. The product is applied where initial ground support is needed or where a permanent lining has been designed (such as for single shell tunnel lining).Hypershot AF 100 is a liquid high performance set accelerator for sprayed concrete applications. Hypershot AF 100 has been developed primarily to be used in sprayed concrete mixes containing pure OPC mix. However, it can also be used with OPC & Fly Ash mix. By adjusting the dosage, the setting times and rebound can be reduced providing efficient working environment.

FEATURES AND BENEFITS

- High build enables faster coverage with minimized slump.
- Compatible with most of the superplasticizers
- Can be applied up to 100mm in one application to vertical surfaces including overheads based on volume/weight of aggregate
- Non caustic leads to safer handling / operating conditions Low rebound - controlled set allows new material to be embedded in applied mortar
- Chloride free liquid
- 28 days strength not adversely affected
- Minimal dust production during application

PRODUCT DETAILS

STANDARD COMPLIANCE:

Hypershot AF 100 meets the requirements of EN 934-5 "Admixtures for sprayed concrete", ASTM C1141/C1141M "| Standards Specifications for Admixtures for Shotcrete"

PERFORMANCE TEST DATA:

Appearance	A Turbid Suspension
Specific Gravity	1.43
ph	2.6
Chloride Content	Nil
[Na2O] eqv.(%bw)	<1%
Thermal Stability	5 °C to 35 °C
Viscosity	>400 mPa.s

APPLICATION METHOD

Mechanism:
The optimum dosage for Hypershot AF 100 to meet specific requirements should always be determined by trials using the materials and conditions that will be experienced in use. This allows the optimization of admixture dosage and mix design and provides a complete assessment of the concrete mix. However, for optimum performance, the w/c ratio should be designed below 0.45. This ensures rapid setting and lower dosages.

Dosagest:
Typically, 5 to 10% (w/w of cementitious) dosage is suitable for spraying layers of 100 mm in a single pass.
A pumpable mix design is required to produce a high workability mix without risk of bleeding and segregation of aggregates. The correct quantity of Hypershot AF 100 is directly added to the concrete at the time of shotcreting
Note: Dosing of Hypershot AF 100 may increase in case of seepage or running water areas.

Technical Support:
Asian Paints provides a technical advisory service for on-site assistance and advice on mix design, admixture selection, evaluation trials and dispensing equipment.

Over Dosing:
An overdose of double the intended amount of Hypershot AF 100 will result in increased setting of the mix before it reaches the surface to be sprayed. It will also result in a loss of strength

Pack Size:
Available in Bulk pack/tanker

Shelf Life:
12 months from date of manufacturing when stored at recommended conditions in unopened drum.

SAFETY INSTRUCTIONS

- Store the container with the lid tightly closed in an upright position, in a cool, dry place.
- Keep out of reach of children and away from eatables.
- The pails/drums should not be used for storing food items.
- May be harmful if swallowed. In case of ingestion, seek immediate medical attention.
- In case of skin contact immediately wash skin with soap and plenty of water. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice if irritation develops or persists.
- Do not breathe vapor or spray. It is recommended to wear proper personal protective equipment during material handling & wear a suitable nose pad during sanding and surface preparation to avoid dust inhalation.
- Left-over drums/pails should not be disposed of in soil/drains. Consumers should consult an authorized local recycling agency for the disposal of pails.



Research and Technology

At Asian Paints, our Research and Technology division stands as a beacon of innovation in the space of construction chemicals. Comprising a team of qualified scientists and dedicated doctors, this exceptional group is driven by a collective passion for advancing the field. Within our state-of-the-art Separate Development, Testing, and Application Laboratory, these professionals harness their expertise to pioneer ground-breaking solutions.

This dynamic team has successfully developed an extensive range of construction chemical products and systems, each tailored for specific segments within the construction industry. From enhancing structural integrity to addressing unique challenges in different applications, our research and technology team continuously strives for excellence.

Among our noteworthy innovations is a series of cutting-edge admixtures, a testament to our commitment to pushing the boundaries of construction technology. These unique admixtures are a result of meticulous research, experimentation, and a dedication to providing our clients with solutions that not only meet but exceed industry standards. In every formulation, we ensure that our products contribute to the advancement and sustainability of the construction sector. With Asian Paints, innovation meets reliability, creating a foundation for the future of construction.

Supply Chain

Embarking on a continuous journey of optimizations and innovations, Asian Paints is reshaping the dynamics of its supply chain to ensure unparalleled efficiency and on-time delivery. Our dedicated team of supply chain professionals operates at the forefront of industry standards, employing cutting-edge logistic strategies to stay ahead of the curve.

Flexibility is at the heart of our approach at Asian Paints, as we strive to cater to the diverse needs of our customers. This adaptability is further demonstrated through our on-site support and material servicing, featuring a reduced lead time. This capability allows us to precisely tailor our services to meet specific project requirements, ensuring a seamless flow of our products and providing clients with the assurance of a responsive and dynamic supply chain infrastructure.

Our commitment to excellence in supply chain management goes beyond traditional logistics, placing a strong emphasis on innovation and adaptability as we navigate the ever-evolving landscape of on-time deliveries. With Asian Paints, you can expect a supply chain that not only meets expectations but consistently surpasses them, establishing a robust foundation for success in every project.

MADE IN NEPAL FOR NEPAL