

CIS CHEM FLOW -110

WATER REDUCING ADMIXTURE

PRODUCT CATEGORY: NAPHTHALENE BASED ADMIXTURE

PRODUCT DESCRIPTION

CIS CHEM FLOW 110 is a brown liquid ready to use concrete Super plasticizer for high range water reducing concrete.

Confirming to the specification of ASTM C-494 type G and IS 9103-1999 (Amendment 2003)

USES

CIS CHEM FLOW 110 facilitates excellent water reduction, with optimum cohesion and workability as required, just by adjusting the dosage. It is used mainly to the following types of concrete:

- Precast concrete structures in general
- Precast concrete tunnel segments
- Pre-stressed concrete elements
- Post-tensioned concrete bridge segments
- Piles, foundations, retaining walls etc.
- Concrete with high water reduction that requires high workability, slump retention along with high early strength development
- Blocks and Interlocks

CHARACTERISTICS / ADVANTAGES

CIS CHEM FLOW 110 acts by surface absorption on the cement particles producing satirical hindrance as well as electrostatic repulsion between cement particles which results in higher dispersion, flow and retention. CIS CHEM FLOW 110 provides the following beneficial properties:

- Increased working time Early strength development resulting in economic stripping time for pre-cast and in cast-situe concrete
- High water reduction resulting in high density, high strength and reduced water permeability
- Excellent plasticizing effect giving improved flowability, placing and compaction behavior
- Improved surface finish
- Better shrinkage and creep behaviour
- Low risk of segregation Reduces energy costs for steam cured pre-cast elements
- Does not contain chlorides or other steel corrosion promoting ingredient to produce pumpable concrete
- Better Slump Retention, to achieve pumpable concrete. Compatible with all types of cement.



CIS CHEM FLOW -110

WATER REDUCING ADMIXTURE

PRODUCT CATEGORY: NAPHTHALENE BASED ADMIXTURE

PRODUCT INFORMATION

Composition	Modified Naphthalene Formaldehyde Sulphonate
Packaging	220 KG
Appearance / Colour	Light brown to brown liquid
Shelf life	12 months from date of production if stored properly
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5 °C and +45 °C. Protect from direct sunlight and frost
Density	1.20 ± 0.05 kg/l at 30 °C
Total chloride ion content	Nil (EN 934-2)
Concreting guidance	The standard rules of good concreting practice for production and placing must be observed when using CIS CHEM FLOW 110 in concrete. Refer to relevant standards. Fresh concrete must be cured properly especially at high temperatures in order to prevent plastic and drying

APPLICATION INFORMATION

Recommended dosage	0.4 - 2.0 % by weight of binder Higher dosages by weight of binder can be used depending on the mix design, raw materials, climatic conditions and concrete requirements. Trial mixes must be performed to establish the exact dosage rate required.
Compatibility	CIS CHEM FLOW 110 may be combined with all types of Portland cement. We recommend to perform trial mixes to establish the required performance when combined with the above products. Please consult our CIS Technical Department.

HEALTH AND SAFETY

CIS CHEM FLOW 110 should not be swallowed or allowed to come into contact with skin and eyes. Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with eyes it shall be rinsed immediately with plenty of water and medical advice sought immediately. If swallowed, medical attention shall be sought immediately. Vomiting should not be used.

CIS CHEM FLOW -112

HIGH WATER REDUCING ADMIXTURE

PRODUCT CATEGORY: NAPHTHALENE BASED ADMIXTURE

PRODUCT DESCRIPTION

CIS CHEM FLOW 112 IS SNF based super plasticizing admixture having water reduction capacity up to 20% for structural concrete PQC

Great effect in dispersion even in mixes with high fines high workability for longer periods lower pumping pressure resistance to sagrigation even at high workability extended setting with longer workability reduces water content for a given workability can be achieve 26 – 28% water reduction with optimum dosage of admixture reduce rate of workability loss normally associated with super plasticizer reduces shrinking cracking because of lower water content ratio makes the concrete water imermable higher ultimate strength increased ease in finishing concrete

USES

CIS CHEM FLOW 112 facilitates excellent water reduction, with optimum cohesion and workability as required, just by adjusting the dosage. It is used mainly to the following types of concrete:

- Precast concrete structures in general
- Precast concrete tunnel segments
- Pre-stressed concrete elements
- Post-tensioned concrete bridge segments
- Piles, foundations, retaining walls etc.
- Concrete with high water reduction that requires high workability, slump retention along with high early strength development
- Blocks and Interlocks

CHARACTERISTICS / ADVANTAGES

CIS CHEMFLOW 112 SNF based super plasticizer admixture having water retention capacity uo to 20%

. CIS CHEM FLOW 112 provides the following beneficial properties:

- Increased working time Early strength development resulting in economic stripping time for pre-cast and in cast-situe concrete
- High water reduction resulting in high density, high strength and reduced water permeability
- Excellent plasticizing effect giving improved flowability, placing and compaction behavior
- Improved surface finish
- Better shrinkage and creep behaviour
- Low risk of segregation Reduces energy costs for steam cured pre-cast elements
- Does not contain chlorides or other steel corrosion promoting ingredient
- to produce pumpable concrete
- Better Slump Retention, to achieve pumpable concrete. Compatible with all types of cement.



CIS CHEM FLOW -112

HIGH WATER REDUCING ADMIXTURE

PRODUCT CATEGORY: NAPHTHALENE BASED ADMIXTURE

PRODUCT INFORMATION

Composition	Modified Naphthalene Formaldehyde Sulphonate
Packaging	250 KG
Appearance / Colour	Light brown to brown liquid
Shelf life	12 months from date of production if stored properly
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5 °C and +45 °C. Protect from direct sunlight and frost
Density	1.22 ± 0.05 kg/l at 30 °C
Total chloride ion content	Nil (EN 934-2)
Concreting guidance	The standard rules of good concreting practice for production and placing must be observed when using CIS CHEM FLOW 112 in concrete. Refer to relevant standards. Fresh concrete must be cured properly especially at high temperatures in order to prevent plastic and drying

APPLICATION INFORMATION

Recommended dosage	0.4 - 2.0 % by weight of binder Higher dosages by weight of binder can be used depending on the mix design, raw materials, climatic conditions and concrete requirements. Trial mixes must be performed to establish the exact dosage rate required.
Compatibility	CIS CHEM FLOW 112 may be combined with all types of Portland cement We recommend to perform trial mixes to establish the required performance when combined with the above products. Please consult our CIS Technical Department.

HEALTH AND SAFETY

CISCHEM FLOW 112 should not be swallowed or allowed to come into contact with skin and eyes. Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with eyes it shall be rinsed immediately with plenty of water and medical advice sought immediately. If swallowed, medical attention shall be sought immediately. Vomiting should not be used.

CIS CHEM LPC -120

POLYCARBOXYLIC BASED ADMIXTURE FOR CONCRETE

PRODUCT CATEGORY: POLYCARBOXYLIC ETHER BASED ADMIXTURE

PRODUCT DESCRIPTION

CIS LPC – 120 Is Polycarboxylic Ether Based Plasticizer
CIS LPC – 120 Is Brown /Yellowish Coloured Polycarboxylic Ether Based New Generation Hyper Plasticizer Conforming To EN Specification ,Development For Specific Application In High Performance Concrete . The Hyper Dispersion Effect PRODUCT By CIS LPC – 120 Exhibits Better Durability And Performance In Concrete. CIS LPC – 120 Is Compatible With All Portland Cements And Pozzolonic Materials Conforming To International Standards.

USES

CIS LPC – 120 Facilitates Excellent Water Reduction, With Optimum Cohesion And Workability As Required, Just By Adjusting The Dosage. It Is Used Mainly To The Following Types Of Concrete:

- Precast Concrete Structures In General
- Precast Concrete Tunnel Segments
- Pre-Stressed Concrete Elements
- Post-Tensioned Concrete Bridge Segments
- Piles, Foundations, Retaining Walls Etc.
- Concrete With High Water Reduction That Requires High Workability, Slump Retention Along With High Early Strength Development
- Blocks And Interlocks

CHARACTERISTICS / ADVANTAGES

CIS LPC – 120 Is Generally Dosed In The Range Of 0.3% To 1% By Weight Of Cement The Dosage Can Be Enhanced To Further 3% As Per Requirement.

But It Is Always Advisory To Go For Trial Mix To Determine The Optimum Dosage .

The Requisite Of CIS LPC – 120 should Be Added After Addition Of Minimum 50 To 70% Of Gauging Water Before Mixing With Wet Cement Aggregate System



CIS CHEM LPC -120

POLYCARBOXYLIC BASED ADMIXTURE FOR CONCRETE

PRODUCT CATEGORY: POLYCARBOXYLIC ETHER BASED ADMIXTURE

PRODUCT INFORMATION

Composition	Modified Polycarboxylic Ether
Packaging	220 Kg
Appearance / Colour	Light Brown /Pale Yellow
Shelf life	12 Months From Date Of Production If Stored Properly
Storage conditions	Store In Undamaged, Unopened, Original Sealed Packaging In Dry Conditions At Temperatures Between +5 °C And +45 °C. Protect From Direct Sunlight And Frost
Density	1.08 ± 0.05 gm/l At 30 °C
Total chloride ion content	Nil (EN 934-2)
Concreting guidance	The Standard Rules Of Good Concreting Practice For Production And Placing Must Be Observed When Using CIS CHEM LPC 120 In Concrete. Refer To Relevant Standards. Fresh Concrete Must Be Cured Properly Especially At High Temperatures In Order To Prevent Plastic And Drying

APPLICATION INFORMATION

Recommended dosage	0.4 - 2.0 % By Weight Of Binder Higher Dosages By Weight Of Binder Can Be Used Depending On The Mix Design, Raw Materials, Climatic Conditions And Concrete Requirements. Trial Mixes Must Be Performed To Establish The Exact Dosage Rate Required.
Compatibility	CIS LPC – 120 May Be Combined With All Types Of Portland Cement We Recommend To Perform Trial Mixes To Establish The Required Performance When Combined With The Above Products. Please consult our CIS Technical Department.

HEALTH AND SAFETY

CIS LPC – 120 Should Not Be Swallowed Or Allowed To Come Into Contact With Skin And Eyes. Suitable Protective Gloves And Goggles Should Be Worn. Splashes On The Skin Should Be Removed With Water. In Case Of Contact With Eyes It Shall Be Rinsed Immediately With Plenty Of Water And Medical Advice Sought Immediately. If Swallowed, Medical Attention Shall Be Sought Immediately. Vomiting Should Not Be Used.

CIS CHEM MPC 121

WATER REDUCING AND RETARDING ADMIXTURE

PRODUCT CATEGORY: POLYCARBOXYLIC ETHER BASED ADMIXTURE

PRODUCT DESCRIPTION

CIS MPC 121 Is moderate to high range of water reducing agent for concrete CIS MPC 121 is a polycarboxylate ether based superplasticizer and a new type high range water reducing admixture for concrete grades from M- 20 to M- 60. CIS MPC 121 is designed to provide good work ability without segregation conforming to ASTM C-494 type G ,C-1017 and IS 9103:2003.

USES

- High strength concrete
- High slump concrete
- Flowing concrete
- Self consolidating concrete and also for better specific requirements go for our admixture CIS MPC 121

CHARACTERISTICS / ADVANTAGES

- CIS MPC -121 can be used with all types portland cement and other mixed cements include fly ash, ground granulated blast – furnace slag, silica fume and so on
- CIS MPC -121 has higher water reducing ability, and the water reducing rate can be easily controlled by changing the dosage
- CIS MPC 121 provides good slump retaining ability
- CIS MPC 121 provides suitable viscosity for concrete and eliminate excessive bleeding and segregation
- CIS MPC 121 provides good slump retaining ability. CIS MPC 121 is an appropriate method to produce high durable concrete with high water reducing ability



CIS CHEM MPC 121

WATER REDUCING AND RETARDING ADMIXTURE

PRODUCT CATEGORY: POLYCARBOXYLIC ETHER BASED ADMIXTURE

PRODUCT INFORMATION

Composition	Aqueous solution of modified polycarboxylates, co-polymers
Packaging	200 KG
Appearance / Colour	Light yellow liquid
Shelf life	12 months from date of production if stored properly
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5 °C and +45 °C. Protect from direct sunlight and frost
Density	~1.12 GM/ML (25 °C)
Total chloride ion content	Nil (EN 934-2)
Concreting guidance	The standard rules of good concreting practice for production and placing must be observed when using CIS MPC- 121 in concrete. Refer to relevant standards. Fresh concrete must be cured properly especially at high temperatures in order to prevent plastic and drying

APPLICATION INFORMATION

Recommended dosage	0.4 - 2.0 % by weight of binder Higher dosages by weight of binder can be used depending on the mix design, raw materials, climatic conditions and concrete requirements. Trial mixes must be performed to establish the exact dosage rate required.
Compatibility	CIS MPC -121 may be combined with all types of Portland cement We recommend to perform trial mixes to establish the required performance when combined with the above products. Please consult our CIS Technical Department.

HEALTH AND SAFETY

CIS MPC -121 is added to the gauging water or simultaneously poured with it into the concrete mixer at the batching plant. Do not add CIS MPC -121 directly to the dry mix. For optimum utilization of its high water reduction property we recommend thorough mixing at a minimal wet mixing time of 60 seconds. The addition of the remaining gauging water (to fine tune concrete consistency) may only be started after two-thirds of the wet mixing time to avoid surplus water in the concrete.

CIS CHEM HPC 124

WATER REDUCING ADMIXTURE

PRODUCT CATEGORY: POLYCARBOXYLIC ETHER BASED ADMIXTURE

PRODUCT DESCRIPTION

CIS CHEM HPC 124 Is moderate to high range of water reducing agent for concrete CIS CHEM HPC 124 is a polycarboxylate ether based superplasticizer and a new type high range water reducing admixture for concrete grades from M- 20 to M- 60. CIS CHEM HPC 124 is designed to provide good work ability without sagration conforming to ASTM C-494 type G ,C-1017 and IS 9103:2003.

USES

- High strength concrete
- High slump concrete
- Flowing concrete
- Self consolidating concrete and also for better specific requirements go for our admixture CIS CHEM HPC 124

CHARACTERISTICS / ADVANTAGES

- CIS CHEM HPC 124 can be used with all types portland cement and other mixed cements include fly ash, ground granulated blast – furnace slag ,silica fume and so on
- CIS CHEM HPC 124 has higher water reducing ability ,and the water reducing rate can be easily controlled by changing the dosage
- CIS CHEM HPC 124 provides good slump retaining ability
- CIS CHEM HPC 124 provides suitable viscosity for concrete and eliminate excessive bleeding and sagration
- CIS CHEM HPC 124 provides good slump retaining ability.CIS CHEM HPC 124 is an appropriate method to produce high durable concrete with high water reducing ability



CIS CHEM HPC 124

WATER REDUCING ADMIXTURE

PRODUCT CATEGORY: POLYCARBOXYLIC ETHER BASED ADMIXTURE

PRODUCT INFORMATION

Composition	Aqueous solution of modified polycarboxylates, co-polymers
Packaging	200 KG
Appearance / Colour	Light yellow liquid
Shelf life	12 months from date of production if stored properly
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5 °C and +45 °C. Protect from direct sunlight and frost
Density	~1.11 +/- 0.10 GM/ML (25 °C)
Total chloride ion content	Nil (EN 934-2)
Concreting guidance	<p>The standard rules of good concreting practice for production and placing must be observed when using CIS CHEM HPC 124 in concrete. Refer to relevant standards.</p> <p>Fresh concrete must be cured properly especially at high temperatures in order to prevent plastic and drying</p>

APPLICATION INFORMATION

Recommended dosage	<p>0.4 - 2.0 % by weight of binder Higher dosages by weight of binder can be used depending on the mix design, raw materials, climatic conditions and concrete requirements.</p> <p>Trial mixes must be performed to establish the exact dosage rate required.</p>
Compatibility	<p>CIS CHEM HPC 124 may be combined with all types of Portland cement We recommend to perform trial mixes to establish the required performance when combined with the above products.</p> <p>Please consult our CIS Technical Department.</p>

HEALTH AND SAFETY

CIS CHEM HPC 124 is added to the gauging water or simultaneously poured with it into the concrete mixer at the batching plant. Do not add CIS CHEM HPC 124 directly to the dry mix. For optimum utilization of its high water reduction property we recommend thorough mixing at a minimal wet mixing time of 60 seconds. The addition of the remaining gauging water (to fine tune concrete consistency) may only be started after two-thirds of the wet mixing time to avoid surplus water in the concrete.

CIS CHEM HSR-135

WATER REDUCING AND RETARDING ADMIXTURE

PRODUCT CATEGORY: POLYCARBOXYLIC ETHER BASED ADMIXTURE

PRODUCT DESCRIPTION

CIS CHEM HSR 135 is a new generation superplasticizer based on polycarboxylic ether along with advanced technology. It allows concrete to achieve stable workability for long duration is especially for concrete big job site area where require high workability retention without affecting early and long term strength

USES

CIS CHEM HSR 135 facilitates good water reduction, with optimum cohesion and workability as required, just by adjusting the dosage. It is used mainly to the following types of concrete:

- Precast concrete structures in general
- Precast concrete tunnel segments
- Pre-stressed concrete elements
- Post-tensioned concrete bridge segments
- Piles, foundations, retaining walls etc.
- Concrete with high water reduction that requires high workability, slump retention along with high early strength development
- Blocks and Interlocks

CHARACTERISTICS / ADVANTAGES

CIS CHEM HSR 135 acts by surface absorption on the cement particles producing sterical hindrance as well as electrostatic repulsion between cement particles which results in higher dispersion, flow and retention. CIS CHEM HSR 135 provides the following beneficial properties:

- Increased working time Early strength development resulting in economic stripping time for pre- cast and in cast-situe concrete
- High water reduction resulting in high density, high strength and reduced water permeability ▪ Excellent plasticizing effect giving improved flowability, placing and compaction behavior
- Improved surface finish
- Better shrinkage and creep behaviour
- Low risk of segregation Reduces energy costs for steam cured pre-cast elements
- Does not contain chlorides or other steel corrosion promoting ingredient



CIS CHEM HSR-135

WATER REDUCING AND RETARDING ADMIXTURE

PRODUCT CATEGORY: POLYCARBOXYLIC ETHER BASED ADMIXTURE

PRODUCT INFORMATION

Composition	Aqueous solution of modified polycarboxylates, co-polymers
Packaging	250 KG
Appearance / Colour	Light brown to brown liquid
Shelf life	12 months from date of production if stored properly
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5 °C and +45 °C. Protect from direct sunlight and frost
Density	~1.12 GM/ML (25 °C)
Total chloride ion content	Nil (EN 934-2)
Concreting guidance	The standard rules of good concreting practice for production and placing must be observed when using CIS CHEM HSR 135 in concrete. Refer to relevant standards. Fresh concrete must be cured properly especially at high temperatures in order to prevent plastic and drying

APPLICATION INFORMATION

Recommended dosage	0.4 - 2.0 % by weight of binder Higher dosages by weight of binder can be used depending on the mix design, raw materials, climatic conditions and concrete requirements. Trial mixes must be performed to establish the exact dosage rate required.
Compatibility	CIS CHEM HSR 135 may be combined with all types of Portland cement We recommend to perform trial mixes to establish the required performance when combined with the above products. Please consult our CIS Technical Department.

CIS CHEM SUPERPLAST -120

HIGH WATER REDUCING AND WORKABILITY SUPERPLASTICIZER

PRODUCT CATEGORY: POLYCARBOXYLIC ETHER BASED ADMIXTURE

PRODUCT DESCRIPTION

CIS SUPERPLAST 120 is a superplasticiser for concrete. It contains state of the art polycarboxylate ether polymers and is specially formulated to give exceptionally high water reduction and enhances workability for sprayed concrete mix designs. It is a non-chloride liquid admixture, which complies with the requirements of EN 934-2, as a high range water reducer / superplasticising admixture for concrete. It is compatible with all cements meeting recognised international standards. It requires a lower dosage compared to conventional superplasticisers but provides extreme workability characteristics for high slump, flowable concrete with greatly reduced water demand.



USES

- High performance concrete
- Improving mixing efficiency during large pour
- Highly flowable concrete
- Highly durable concrete
- High strength concrete
- Ready-mix concrete
- Mass concrete
- Pumped concrete and wet sprayed concrete

CHARACTERISTICS / ADVANTAGES

High water reduction which provides high early and ultimate strengths, low permeability and high durability of the concrete.

- High flow ability provides easy placement and compaction.
- Excellent cohesion, zero segregation and minimal bleed water with extremely high levels of concrete
- Exceptional slump retention and easier placement and delivery control especially under warm climatic conditions.
- High elastic modulus, low shrinkage and creep are achievable using graded coarse and fine aggregates.
- Superior finishes with reduced honeycombing

CIS CHEM SUPERPLAST -120

HIGH WATER REDUCING AND WORKABILITY SUPERPLASTICIZER

PRODUCT CATEGORY: POLYCARBOXYLIC ETHER BASED ADMIXTURE

PRODUCT INFORMATION

Composition	Aqueous solution of modified polycarboxylates, co-polymers
Packaging	250 KG
Appearance / Colour	Light brown to brown liquid
Shelf life	12 months from date of production if stored properly
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5 °C and +45 °C. Protect from direct sunlight and frost
Density	~1.12 GM/ML (25 °C)
Total chloride ion content	Nil (EN 934-2)
Concreting guidance	The standard rules of good concreting practice for production and placing must be observed when using CIS SUPERPLAST 120 In concrete. Refer to relevant standards. Fresh concrete must be cured properly especially at high temperatures in order to prevent plastic and drying

APPLICATION INFORMATION

Recommended dosage	0.4 - 2.0 % by weight of binder Higher dosages by weight of binder can be used depending on the mix design, raw materials, climatic conditions and concrete requirements. Trial mixes must be performed to establish the exact dosage rate required.
Compatibility	CIS SUPERPLAST 120 may be combined with all types of Portland cement We recommend to perform trial mixes to establish the required performance when combined with the above products. Please consult our CIS Technical Department.

HEALTH AND SAFETY

CIS SUPERPLAST 120 is added to the gauging water or simultaneously poured with it into the concrete mixer at the batching plant. Do not add CIS SUPERPLAST 120 directly to the dry mix. For optimum utilization of its high water reduction property we recommend thorough mixing at a minimal wet mixing time of 60 seconds. The addition of the remaining gauging water (to fine tune concrete consistency) may only be started after two-thirds of the wet mixing time to avoid surplus water in the concrete.

CIS CHEM AR-114

CORROSION INHIBITING ADMIXTURE

PRODUCT CATEGORY: POLYCARBOXYLIC ETHER BASED ADMIXTURE

PRODUCT DESCRIPTION

CIS CHEM AR 114 is NON BIOPOLAR nitrite, migrating corrosion inhibiting admixture that protects rebars from corrosion induced by chloride ions as well as due to carbonation of concrete.

USES

Steel reinforced concrete in marine zones

- Piers, piles, and concrete dock structures
- RCC structures exposed to corrosive environments
- Bridges, highways, chlorinating plants, sewerage systems
- Adds corrosion inhibition properties to cementitious grouts

CHARACTERISTICS / ADVANTAGES

Simultaneous cathodic and anodic protection of steel

- High penetrating power resulting in total protection of rebars or PT tendons
- No adverse effect on properties of hardened concrete or grout
- Effective even in presence of high amount of chlorides
- Eco-friendly, nitrite and chromate free
- High alkalinity offers additional protection to steel A



CIS CHEM AR-114

CORROSION INHIBITING ADMIXTURE

PRODUCT CATEGORY: POLYCARBOXYLIC ETHER BASED ADMIXTURE

PRODUCT INFORMATION

Composition	Aqueous solution of modified polycarboxylates, co-polymers
Packaging	250 KG
Appearance / Colour	Light YWL
Shelf life	12 months from date of production if stored properly
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5 °C and +45 °C. Protect from direct sunlight and frost
Density	~1.12 GM/ML (25 °C)
Total chloride ion content	Nil (EN 934-2)
Concreting guidance	The standard rules of good concreting practice for production and placing must be observed when using CIS CHEM AR 114 In concrete. Refer to relevant standards. Fresh concrete must be cured properly especially at high temperatures in order to prevent plastic and drying

APPLICATION INFORMATION

Recommended dosage	0.4 - 2.0 % by weight of binder Higher dosages by weight of binder can be used depending on the mix design, raw materials, climatic conditions and concrete requirements. Trial mixes must be performed to establish the exact dosage rate required.
Compatibility	CIS CHEM AR 114 may be combined with all types of Portland cement We recommend to perform trial mixes to establish the required performance when combined with the above products. Please consult our CIS Technical Department.

HEALTH AND SAFETY

CIS CHEM AR 114 is added to the gauging water or simultaneously poured with it into the concrete mixer at the batching plant. Do not add CIS CHEM AR 114 directly to the dry mix. For optimum utilization of its high water reduction property we recommend thorough mixing at a minimal wet mixing time of 60 seconds. The addition of the remaining gauging water (to fine tune concrete consistency) may only be started after two-thirds of the wet mixing time to avoid surplus water in the concrete.

CIS CHEM QG -138

RAPID HARDENING ADMIXTURE FOR CEMENT CONCRETE

PRODUCT CATEGORY: HARDENER ADMIXTURE

PRODUCT DESCRIPTION

CIS CHEM QG 138 is quick setting and rapid hardening admixture for plain cement concrete and mortars. Also used in pavement block CIS CHEM QG 138 underwater concrete admixture is a chloride free blend of selected polymers supplied as a fine brown powder.

When added to concrete, CIS CHEM QG 138 produces a gel in the water phase which surrounds the cement particles and other fine components of the concrete mix and protects them from excessive washout both during placement and once the concrete is finally in position. Unlike other anti-washout materials, CIS CHEM QG 138 also contains plasticising agents which counteract the effects of the increased cohesion necessary to minimise washout and allow normal workability levels to be maintained without the addition of extra water.

CIS CHEM QG 138 provides a degree of acceleration to the concrete mix, allows low journey times from batching



USES

Dosages outside the typical range suggested above may be used if necessary and suitable to meet particular mix requirements, provided that adequate supervision is available. Compliance with requirements must be assessed through trial mixes. Contact the CIS technical team for advice in these cases.

CHARACTERISTICS / ADVANTAGES

- Increases internal cohesion of the concrete mix, reducing the tendency of cement and other particles to be washed out of the concrete mix during placement
- Facilitates the placement of concrete underwater by normal methods such as tremie pipe delivery
- Once placed, concrete is more resistant to the action of moving water
- Allows the production of higher quality and higher strength concrete underwater
- Contains workability and setting control agents to assist in providing the levels of workability and working life necessary to allow control of placing

CIS CHEM QG -138

RAPID HARDENING ADMIXTURE FOR CEMENT CONCRETE

PRODUCT CATEGORY: HARDENER ADMIXTURE

LIMITATIONS

CIS CHEM QG 138 will not provide protection against washout in situations where there is a large amount of water turbulence such as where concrete is poured directly into water from a ready-mix truck or where incorrect use of a tremie produces interrupted concrete flow. In such situations water is forcibly mixed with the concrete. Typical dosage the optimum dosage of CIS CHEM QG 138 to meet specific requirements must always be determined by trials using the materials and conditions that will be experienced in use. This allows the optimisation of admixture dosage and mix design and provides a complete assessment of the concrete mix. Such trials should start at a dosage of 1 lit / 100 kg of cement. After initial trials at this dosage, further trials at

STORAGE

CIS CHEM QG 138 has a minimum shelf life of 12 months provided the product is kept in a dry store in the original, unopened packaging.

PRECAUTIONS

Health and safety for further information consult the product safety data sheet available for this product.

PRODUCT INFORMATION

Composition	Modified hybrid pce
Packaging	250 KG
Appearance / Colour	Light yellow to brown liquid
Shelf life	12 months from date of production if stored properly
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5 °c and +45 °c. Protect from direct sunlight and frost
Density	1.22 ± 0.05 kg/l at 30 0c
Total chloride ion content	Nil (EN 934-2)
Concreting guidance	The standard rules of good concreting practice for production and placing must be observed when using CIS CHEM FLOW 110 in concrete. Refer to relevant standards. Fresh concrete must be cured properly especially at high temperatures in order to prevent plastic and drying

CIS CHEM SHORTCRETE -142

ALKALI FREE SHOTCRETE ACCELERATOR

PRODUCT CATEGORY: ACCELERATOR ADMIXTURE

PRODUCT DESCRIPTION

Approval /Standards= ASTM C 1141 Type I,II Grade 9 Class A. Appearance / Colour =Beige white coloured suspension type liquid Technical Data= Mineral based Relative Density= 1.42 ± 0.02 at 25°C pH = 2.5 ± 1.0

USES

- Rock and slope stabilization
- High quality shotcrete for general construction work
- Acceleration of cementitious grouts, such as used in TBM Tunnel linings
- Cement ground injections and back filling

USE AT OTHER DOSAGES

Dosages outside the typical range suggested above may be used if necessary and suitable to meet particular mix requirements, provided that adequate supervision is available. Compliance with requirements must be assessed through trial mixes. Contact the CIS technical team for advice in these cases.

STORAGE

CIS CHEM QG 138 has a minimum shelf life of 12 months provided the product is kept in a dry store in the original, unopened packaging.

PRECAUTIONS

Health and safety for further information consult the product safety data sheet available for this product.



CIS CHEM SHORTCRETE -142

ALKALI FREE SHOTCRETE ACCELERATOR

PRODUCT CATEGORY: ACCELERATOR ADMIXTURE

PRODUCT INFORMATION

Composition	Modified COPOLYMER PCE
Packaging	250 KG
Appearance / Colour	Light yellow to brown liquid
Shelf life	12 months from date of production if stored properly
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5 °C and +45 °C. Protect from direct sunlight and frost
Density	1.20 ± 0.05 kg/l at 30 °C
Total chloride ion content	Nil (EN 934-2)