



Protecting and improving concrete since 1974

7240 State Road, Philadelphia, PA 19135
215-332-7709 or 888-839-2661
Fax: 215-332-9997

vexcon.com

STARSEAL® TRIPLE SET NC

MEETS ASTM C 494 TYPE C&E ADMIXTURE

Non-Chloride Accelerating Agent for use in Cold Weather

DESCRIPTION

STARSEAL TRIPLE SET NC is an accelerating admixture for use in concrete, Portland Cement and mortar. StarSeal Triple Set NC is a ready to use liquid, added directly to the gauging water to allow for cold weather placement of concrete, Portland cement, mortar and pre-cast members. It decreases critical cold weather setting times; leading to early high and ultimate increased strength and improved wear resistance properties. In addition, it reduces bleeding and segregation and improves workability. StarSeal Triple Set NC contains no added chloride ions ensuring that the product does not contribute to the corrosion of reinforcing steel.

BENEFITS

- Improves workability
- Reduces set time in cold weather applications
- Reduces mix water requirements
- Increases the high early and ultimate strength of concrete and mortar
- Significant improvement in early stiffening and setting characteristics
- Assists in cold weather concrete scheduling
- Reduces efflorescence
- Does not contribute to the corrosion of reinforcing steel
- Meets VOC regulations

SPECIAL NOTES

- When temperature are below 25° F (-4° C) for long periods where cementitious products are being placed, supplemental heat is required as per the recommendations of the American Concrete Institute.

MASONRY APPLICATION:

- When working with mortars limed in equal proportions to the cement, double the amount of StarSeal Triple Set NC required. For different mix ratios contact Vexcon directly before usage.
- Check StarSeal Triple Set NC on a small amount of specialty mortars before use.

CONCRETE APPLICATION

- When using on concrete mixed on the job site from bags, calculate the ratio based on anticipated yield of mix in cubic yards. For example, if mixing 1/2 cubic yard of Concrete above 25° F., 50-68 ounces of StarSeal Triple Set NC should be added to the gauging water. The gauging water should be reduced 10-15% to achieve desired slump.

APPLICATION

MASONRY: StarSeal Triple Set NC reduces water requirements to achieve desired slump by as much as 15%. StarSeal Triple Set NC will enhance the effect of air ENTRAINING agents. Add StarSeal Triple Set NC directly to the gauging water, NEVER TO THE DRY MIX.

LOWEST ANTICIPATED TEMPERATURE FOR 24 HRS.

Above 50° F

50-32° F

32-25° F

Below 25° F

instructions in the SPECIAL NOTES "MASONRY APPLICATION" section of this bulletin

STARSEAL TRIPLE SET NC DOSAGE PER BAG OF MORTAR

Monitor application rate to desired acceleration.

8-16 oz per bag

16 ounces per bag

24-32 ounces per bag and follow

instructions in the SPECIAL NOTES "MASONRY APPLICATION" section of this bulletin

CONCRETE: Add StarSeal Triple Set NC with water and agitation to ready mix concrete, do not dispense directly onto dry cement. When air temperatures are expected to fall below 50° F (10° C) follow Recommended Practice For Cold Weather Concreting" of the American Concrete Institute. StarSeal Triple Set NC reduces water requirements to achieve desired slump by as much as 15%. Air entrained concrete mixes containing StarSeal Triple Set NC display improved efficiency. When using air entrained cement, a patch test is required to determine reduced levels of entraining agent required to achieve required or desired air entrainment.

LOWEST ANTICIPATED TEMPERATURE FOR 24 HRS.

Above 50° F

50-25° F

Below 25° F

STARSEAL TRIPLE SET NC DOSAGE PER YARD OF CEMENT

90 ounces per cu. yard

135 ounces per cu. yard

Contact Vexcon directly and follow instructions in the SPECIAL NOTES "CONCRETE APPLICATION" section Of this bulletin.

SPECIFICATIONS

- Meets USEPA AIM and OTC VOC regulations
- Meets all requirements of ASTM C 494 for Type C & E admixtures
- VOC Content: 0 gr./liter
- CSI reference: 03 31 00

PACKAGING

StarSeal Triple Set NC is available in 55-gallon drums, 5-gallon pails and 1-gallon units. Also available in totes, bulk containers and bulk shipments. Contact Vexcon directly to discuss your customized packaging requirements.

HEALTH AND SAFETY

- CAUTION: May irritate mucous membranes
- Long term overexposure may cause damage to skin and/or respiratory tract.
- Use only with adequate ventilation
- Use of gloves, goggles and other protective clothing is advised when using this product.
- If swallowed, do not induce vomiting.

Vexcon MSDS #AB106 is an integral part of the safety and application of our product. A short synopsis is provided in this product data sheet. Before using product, it is advisable to obtain a copy of the MSDS from your distributor or by contacting Vexcon Chemicals.

SHELF LIFE

If properly stored in its original sealed container, three years from date of manufacture. Rotate your stock

CONTACT US @

Additional product information, technical assistance and customer service is available by contacting Vexcon Chemicals directly or our distributors. .

- vexcon.com
- technicalservice@vexcon.com
- customerservice@vexcon.com
- sales@vexcon.com
- Voice: 888.839.2661
- Fax: 215.332.9997

LABORATORY TEST REPORT

Agency: Shimel & Sor Testing Labs, Inc.
Material: STARSEAL TRIPLE SET NC
Date Submitted: October 19, 1993

MATERIALS (*) (**) MIX NO. (CONTROL)

<u>MIX NO 2</u>		
Type I Cement,Lbs	564	564
Sand, Lbs.	1306	1306
Stone, Lbs.	1800	1800
water, Lbs.	267	250
Slump, inc.	4.0	4.0
W/C Ratio, lbs/lb.	0.47	0.44
	5.0	5.0

Admixtures, oz:

Air mix	4.23	4.23
StarSeal Triple Set NC	None	90.24

* Amounts of ingredients are per cubic yard of concrete.

** The admixture contains 67 mb/l. chloride (Cl-) ion.

SETTING TIME:

<u>SETTING</u>	<u>MIX NO.</u>	<u>MIX NO 2</u>
	<u>(CONTROL)</u>	

STARSEAL TRIPLE SET NC

Initial	5 hrs. 20 min.	4 hrs. 05 min.
Final	6 hrs. 50 min.	5 hrs. 15 min.
ASTM C494		
Requirement	1 hr. Minimum	(Initial Set)

COMPRESSIVE STRENGTH

<u>Age of concrete</u>	<u>Mix No.</u> (Control)	<u>ASTM-C494</u>		Requirements
		<u>Mix No. 2</u> (StarSeal Triple Set NC)	<u>Type E</u>	
1 Day	1650	2390 (144%)	-	
3 Day	2740	3510 (128%)		125% min.
7 Day	3615	4120 (114%)		110% min.
28 Day	5020	5615 (112%)		110% min.

CONCLUSIONS: The admixture STARSEAL TRIPLE SET NC meets ASTM C494 requirements for type C and type E accelerating admixtures for the parameters tested.