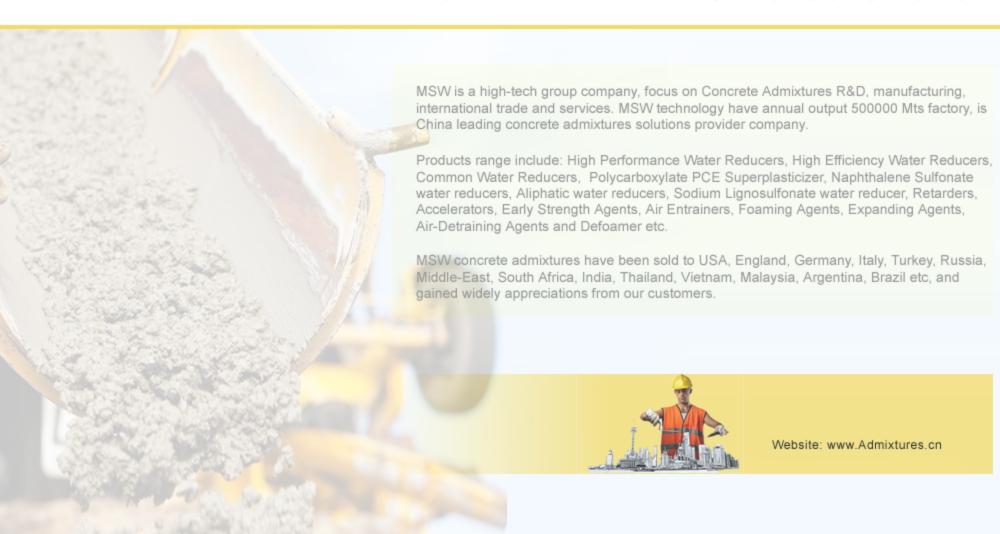




## **CONCRETE ADMIXTURES SOLUTIONS**



Concrete Admixtures Solutions

# **Concrete Admixtures Performance Guide**

By MSW TM

Superior Performance

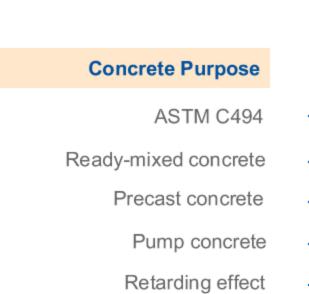
Better Performance

Good Performance

Applicative

This guide shows the relative performance and properties of various admixture products in comparison to a reference mixture.

Depending on the local concrete materials and mixture proportions used, the performance obtained may be different from the performance shown in this guide. Contact your local sales representative for additional information on the performance of Master Builders Solutions brand admixtures with concrete materials and mixture proportions in your area.





Early strength effect

Save Cement

Water reduction

Compressive strength

Air entraining content

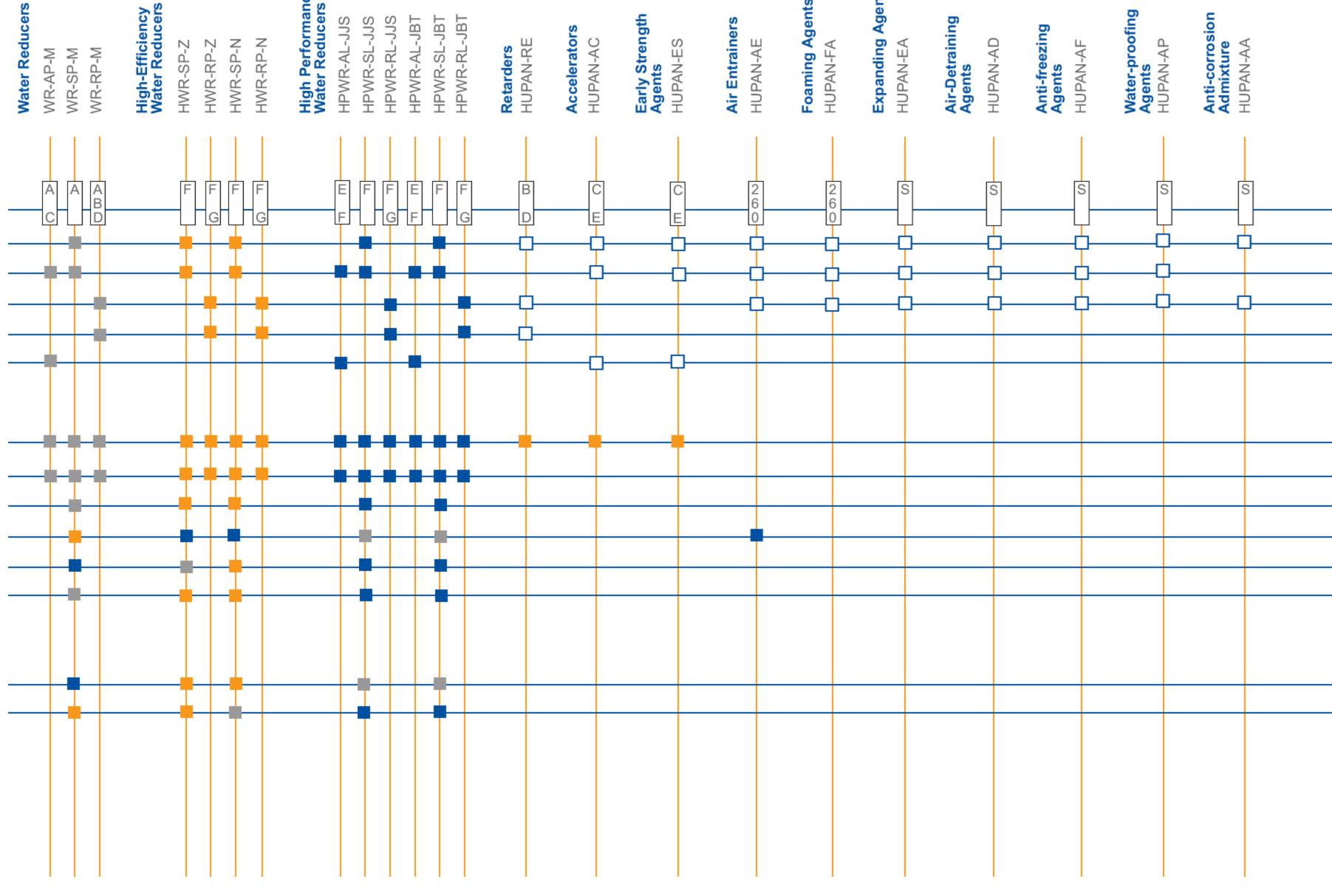
Bleeding rate

slump constant

## **Cost Performance**

Price

Dosage









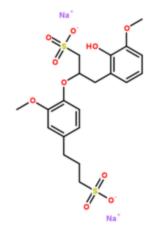


#### SP-M RP-M AP-M

## WATER REDUCERS

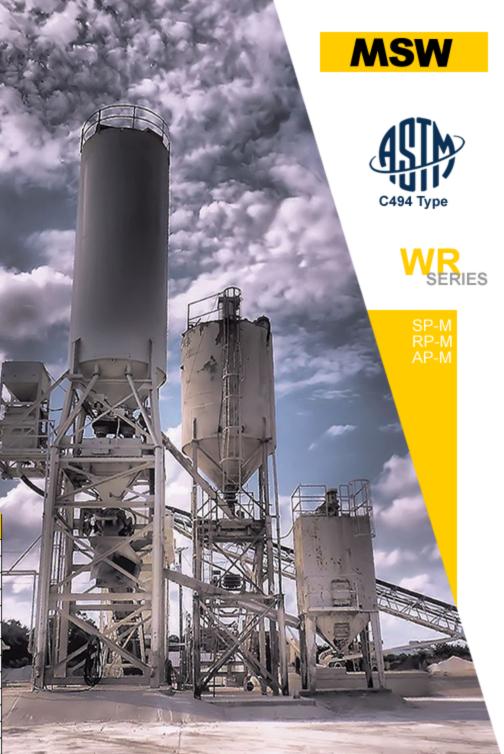
water-reducing rate up to 10%

Solid Content	50%
Reduzate	<8%
Water Insoluble	<1.5%
Ph	7 -9
Water Content	<5%
Fineness	120目
Residue On Sieve	≤4%



- 1.SP for the minimum temperature greater than 5  $\,^{\circlearrowright}\!$  . Strength grade less than C40 concrete
- 2. AP for room temperature greater than -5 °C. In the hot environment should not use early strength
- RP for mass concrete, RCC, large area pouring concrete, hot weather conditions can be used

				VO Lat
Items		WR-AP-M	WR-SP-M	WR-RP-M
water Reducing Rat	te %	> 8	> 8	> 8
bleeding Rate %	5	< 95	<100	< 100
air Content %		< 4.0	< 4.0	< 5.5
setting time/min	initial set	(-90 to +120)	(-90 to +120)	> +90
setting diffe/fillin	final set	(-90 to +120)	(-90 to +120)	
after 1 hour	slumps/mm	-	-	-
alter i flour	air content/%	-	-	-
	1 d	> 135		
compressive	3 d	> 130	> 115	
strength rate/%	7 d	> 110	> 115	> 110
	28 d	> 100	> 100	> 110
ratio of shrinkage/%	28 d	< 135	< 135	< 135
relative survivals(200ti	mes)/%	-	-	-



## **HWR-N**Naphthalene Sulfonate

SP-N RP-N

## Water Reducers / Superplasticizer

water-reducing rate up to 25%

Appearance	Powder
Color	Light Brown
Solid Content(%)	> 92
Content of Chloride(%)	< 0.3
PH value	7-9
Net Starch Fluidity(mm)	>250
Surfance Tension(N/m)	(70±1) X 10-3N/M

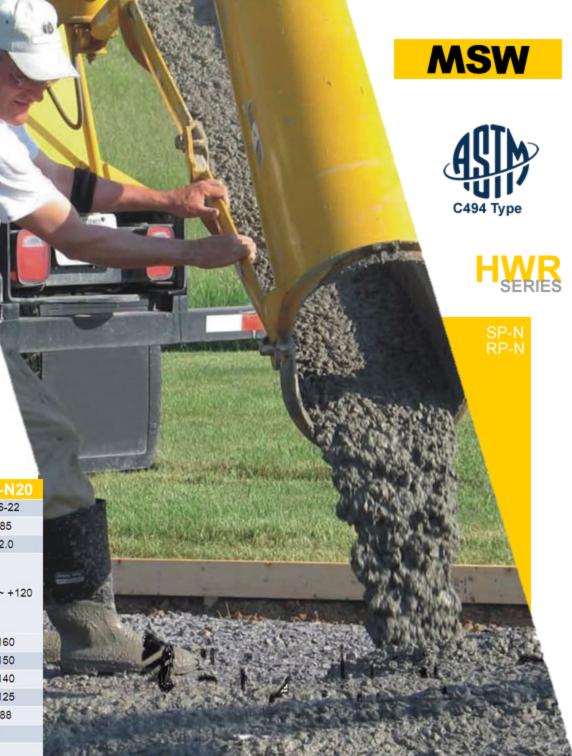
1.Suitable for preparation of early-strength, high-strength, high-anti-filtration and self-sealing & pumpable concrete

Widely used in pre-cast & ready-mixed concrete, armored concrete and pre-stressed reinforced concrete in key construction projects

 Compatible with Portland cement, normal Portland cement, Portland slag cement, fly-ash cement and Portland pozzolanic cement etc.

HWR		SP-N5	SP-N10	SP-N20
Water Re	duction %	18-28	17-25	16-22
Water Per	netration %	79	80	85
Air Cor	ntent %	2.0	2.0	2.0
Temporal Distribution	Initial setting time	-90 ~ +120	-90 ~ +120	-90 ~ +120
for setting (min)	Terminal setting time			
	1 d	170	165	160
Compression	3 d	160	155	150
strength, %	7 d	145	140	140
	28 d	135	130	125
Shrinkage, %	28 d	82	85	88
Corrosion to steel bars		None	None	None

Note: Standard blend dosage: 0.75 % (as cement amount)





SP-Z RP-Z

## Water Reducers / Superplasticizer

water-reducing rate up to 20%

rown	Color
- 10	PH
90%	Active Matter Content
< 7%	Water Content
< 3%	Water Insoluble
5	vvater insoluble

Widely used in pre-cast & ready-mixed concrete, armored concrete and pre-stressed reinforced concrete in key construction projects

3.SP is usually used for temperatures greater than 0 ° C and can be used for steaming concrete

Items		HWR-SP-Z	HWR-RP-Z
water Reducing	Rate %	> 14	> 14
bleeding Ra	te %	<9	< 100
air Conten	t %	< 3.0	< 4.5
setting time/min	initial set	(-90 to +120)	> +90
setting time/min	final set	(-90 t0 +120)	
after 1 hour	slumps/mm	-	-
alter i flour	air content/%	-	
	1 d	> 140	
compressive	3 d	> 130	
strength rate/%	7 d	> 125	> 125
	28 d	> 120	> 120
ratio of shrinkage/%	28 d	< 135	< 135
relative survivals(2	00times)/%	-	-







#### HIGH SLUMP LOSS RESISTANT

Set Accelerating-type / Set Retarding-type

water-reducing rate large than 35%

Appearance	Liquid
Color	Brown
Solid Content(%)	40/45/50
Air Content(%)	2-4
Content of Chloride(%)	0
PH value	6-8
Total Alkali Content	< 0.1
Sodium Sulfate	< 0.5

- 1. High water reduction, low dosage, slump small, non-toxic pollution
- 2. Good applicability with high-grade cement
- 3. Used in ready-mixed concrete, pumping concrete, mass concrete

### **NOTICES**

PACK: 1000KG IBC tank

STORAGE: 5 - 35℃

**EXPIRATION DATE: 6 Month** 

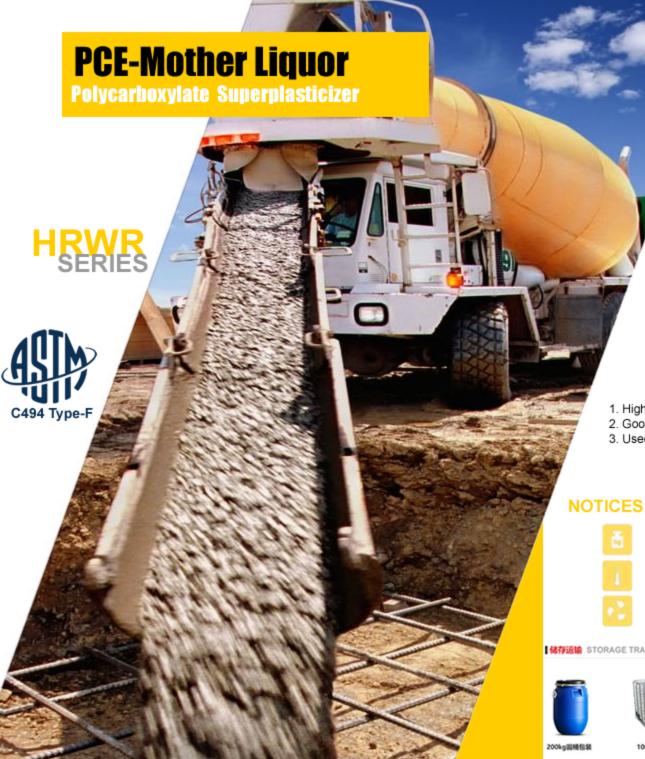
▮ 鐵存還輸 STORAGE TRANSPORT













## HIGH WATER REDUCTION

(Main Components: Macromonomer)

water-reducing rate large than 35%

Appearance	Liquid
Color	Light Yellow
Solid Content (%)	40/45
PH	6.5±1
Density(g/cm 3)	1.15±0.02

- 1. High water reduction, low dosage, slump small, non-toxic pollution
- 2. Good applicability with high-grade cement
- 3. Used in ready-mixed concrete, pumping concrete, mass concrete

PACK: 1000KG IBC tank

STORAGE: 5 - 35℃

**EXPIRATION DATE: 6 Month** 

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## **Reatarders for Concrete**

Color	White or Yellow
Content	99%
State	Powder
Sulfate	< 0.05%
Reduzate	< 0.5%
(C3H12O6)	< 0.5%
Chloride	< 0.07%
PH (10% water)	6.5-7.8
arsenic salt(As)	< 2%
mk/kg	~ 2 /0

- 1. The setting time of concrete is delayed significantly
- 2. Use for long distance carriage, self-compacting concrete, mass concrete

## **NOTICES**

**MSW-RE** 

**Sodium Gluconate** 

₩ PAC

PACK: 25kg paper bag

Î

STORAGE: Keep cool, dry and moisture resistant

**EXPIRATION DATE: 12 Month** 

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90,000,000





## **Early Strength Agents**

(State: Gray or Brown Powder)

<b>Item</b> s		HUPAN-ES
water Reducing	Rate %	-
bleeding Rat	te %	< 100
air Content	%	-
actting time/min	initial set	> +90
setting time/min	final set	> +90
after 1 hour	slumps/mm	-
air content/%		
	1 d	
compressive	3 d	
strength rate/%	7 d	> 100
	28 d	> 100
ratio of shrinkage/%	28 d	< 135
relative survivals(20	00times)/%	-

- 1. Use for steam-curing concrete,
- 2. Be applied to early-strength concrete construction projects
- 3. Not suitable for mass concrete, hot weather, the lowest temperature is less than -5 'C project.

#### **PACKAGING**

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25kg袋袋







## **Accelerators for Concrete**

State	Powder or Liquid
Color	Gray
Fineness	< 12.6
1D Compressive Strength	> 8Mpa
28D Compressive Strength	> 75Mpa
Initial set	2-3 min
Final set	8-10 min

- 1. Use for sprayed concrete, sprayed mortar
- 2. Powder for dry type, liquid for wet type construction

## **NOTICES**

**MSW-AC** 

C494 Type

**Aluminum Oxygen Chamotte** 

PACK: 1000KG IBC tank or Ton Bag

STORAGE: 5 - 35℃

EXPIRATION DATE: 12 Month

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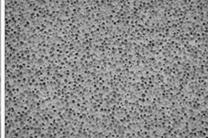


## **Foaming Agent**

## Applicable to Foam Concrete

- FA-Z: The foaming agent is resistant to storage, is not easily deteriorated, has excellent foaming energy, rich in foam, foam stability is moderate
- FA-D:The best performance, the most stable foam, the bubble can be issued for 24h





Туре	FA-Z	FA-D
Color:	Yellow	Brown
Components:	vegetable protein	animal protein
Dosage:	Standard	Large
Stomata States:	connected bubble	closed bubble
Soamability:	Better	Good
foaming stability:	Good	Better
Pour Thickness:	< 0.2 Meter	> 1.5 Meter
Thermal Insulation Properties:	Good	Better
Waterproof Properties:	Bad	Good
Compressive Strength:	Good	Better
Purpose:	Ground and Roof insulation	Foam brick Foam Insulation Board



TYPE	MSW-AE	MSW-EA	MSW-AD	MSW-AF	MSW-WP	MSW-AA
Name	Air Entrainers	Expanding Agents	Air-Detraining Agents	Anti-freezing Agents	Water-proofing Agents	Anti-corrosion Admixture
Application	antifreeze reduce segregation & bleeding	self waterproofing joint & fill projects	Improved strength Defoamer	winter construction	waterproofing anti-leakage structure	RC and prestressed concrete
State	Liquid / Powder	Powder	Liquid	Liquid / Powder	Powder	Liquid / Powder









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