

Technical Data Sheet

Resin HSC 7400 / Hardener HSC 9221 (Civil Application)

Product Description HSC 7400 is unmodified epoxy resin for various civil applications. HSC 9221 is liquid cycloaliphatic amine adduct curing agent. The system offers medium pot life, good wetting ability and high gloss coatings.

- Features**
- The convenient mixing ratios and low mix viscosity of system permits good filler loading and exhibit great mechanical properties.
 - The system gives low color and color stability, High gloss in coatings, Low viscosity and good wettability.

- Applications**
- Suitable for formulating self-levelling top coats.

Product Specifications

Properties	Units	Reference standard	Value	
			Resin HSC 7400	Hardener HSC 9221
Appearance	Visual	HTP-1	Clear Liquid	Clear Liquid
Colour	Gardener	ASTM D1544	Max 1	Max 1
Viscosity @ 25°C	mPas	ASTM D2196	11000 - 14000	350 - 400
EEW	g/eq	ASTM D1652	180 - 190	NA
Amine Value	mg KOH/g	HTP-9	NA	250 - 300

Product Performance Data

Properties	Units	Reference standard	Value
Mixing Ratio	Pbw	NA	100:60
Mix Viscosity @ 25°C	mPas	ASTM D2196	2000 - 3000
Pot life 100g @ 25°C	min	ASTM D2471	30 - 40
Dry time @ 25°C	h	ASTM D5895	8 - 10

Mechanical & Thermal Properties*

Properties	Units	Reference standard	Value
Hardness	Shore D	HTP-22	75
Tensile Strength	MPa	ASTM D638	55
Tensile Modulus	MPa	ASTM D638	2560

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Tensile Elongation	%	ASTM D638	5.6
Flexural Strength	MPa	ASTM D790	72
Flexural Modulus	MPa	ASTM D790	2284
Glass Transition Temperature	°C	DSC	62

*The neat cast were prepared as per respective standard and cured at Room Temperature for 7 days and then subjected to testing.

Chemical Resistance Properties*¹

Properties	Units	Reference Standard	3 days	7 days	28 days
Water	%	HTP-53	0.1	0.1	0.2
Methyl Ethyl Ketone	%	HTP-53	9.75	15.02	Destroyed
Xylene	%	HTP-53	0.04	0.06	0.13
DI Water	%	HTP-53	0.32	0.54	0.96
10% Acetic Acid	%	HTP-53	1.22	2.12	3.41
98% H ₂ SO ₄	%	HTP-53	Destroyed	-	-
70% H ₂ SO ₄	%	HTP-53	0.31	0.32	0.36
50% NaOH	%	HTP-53	-0.06	-0.16	-0.22

HTP: HSCL Testing Procedure,
NA: Not Applicable

*¹1cc of cast was prepared, cured for 7 days at Room Temperature, immersed in respective chemical and % weight change was recorded

Processing and Storage

Packaging	HSC 7400 is available in 110 kg and 30 HDPE carboys, 5 kg can, 1 kg bottles. HSC 9221 are available in 66 kg HDPE carboys, 18 kg can, 3 kg and 0.6 kg bottles.
Application Procedure	Prolonged storage of Part A along with fillers causes precipitation. Hence it is advisable to mix fillers before preparation. Materials to be thoroughly mixed prior usage including bottom of the container. Uneven mixing will affect the final cured properties.
Precautions	Once Part A and Part B is mixed, colour change occurs after a set period of time. This is a normal phenomenon and does not affect the cured product properties. Part A and B should be mixed gently otherwise bubble formation will occur. Low temperature leads to long curing schedule and hence heat curing is advisable.

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Storage Conditions Part A & B should be stored away from light & heat. Partly emptied containers should be tightly closed immediately after use to avoid exposure to light. For information on waste disposal and hazardous products of decomposition in the event of a fire, refer to the Material Safety Data Sheets (MSDS) for these particular products. The shelf life is 24 months for HSC 7400 and 12 months for HSC 9221.

Disclaimer All recommendations for use of our products, whether given by us in writing, verbally or to be implied from results of tests carried out by us are based on the current state of our knowledge. Notwithstanding any such recommendations the Buyer shall remain responsible for satisfying himself that the products as supplied by us are suitable for his intended process or purpose. Since we cannot control the application, use or processing of the products, we cannot accept responsibility. Therefore, the Buyer shall ensure that the intended use of the products will not infringe any third party's intellectual property rights. We warrant that our products are free from defects in accordance with and subject to our general conditions of supply.

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