Hardener HSC 9221
(Cycloaliphatic amine adduct)

Product Description

HSC 9221 is liquid cycloaliphatic amine adduct curing agent; it is used in combination with unmodified/modified liquid epoxy resins for self-levelling top coat applications. It offers medium pot life, good wetting ability and high gloss coatings.

Features

- Low color and color stability, High gloss in coatings.
- Low viscosity and good wettability.

Applications

- Suitable for formulating self-levelling top coats with various choice of resins.

Product Specifications

Properties	Units	Reference standard	Value
Appearance	Visual	HTP-1	Clear Liquid
Color	Gardener	ASTM D1544	Max 1
Viscosity @ 25˚C	mPas	ASTM D2196	350 - 400
Amine Value	mg KOH/g	HTP-9	250 - 300
Density	g/cc	ASTM D1475	1.02 - 1.04
AHEW	g/eq	NA	109

Product Performance Data

Mix Properties	Units	Reference standard	Value
Mix ratio with Epoxy Resin of EEW~185	Pbw	NA	100:60
Mix viscosity @ 25°C	mPas	ASTM D2196	~2400
Pot life (150g) @ 25°C	min	ASTM D2471	30 - 40
Peak Exothermic Temperature 100g @ 25°C	°C	ASTM D2471	~130
Tack free dry of thin film	Hours	ASTM D5895	2 - 3
Through dry of thin film	Hours	ASTM D5895	5 - 6

Mechanical & Thermal Properties*

Hardness	Shore D	HTP-22	~75
Tensile Strength	MPa	ASTM D638	~55

Tensile Modulus	MPa	ASTM D638	~2560
Tensile Elongation	%	ASTM D638	~5.6
Flexural Strength	MPa	ASTM D790	~72
Flexural Modulus	MPa	ASTM D790	~2284
Glass Transition Temperature	°C	DSC	~62
Compressive Strength	MPa	ASTM D695	~63
Compressive Modulus	MPa	ASTM D695	~1750

HTP: HSCL Testing Procedure, NA: Not Applicable

*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**

Mix 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	Damaged
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_2SO_4	%	HTP-53	Damaged	-	-
70% H_2SO_4	%	HTP-53	0.31	0.32	0.36
50% NaOH	%	HTP-53	-0.06	-0.16	-0.22

**1cc 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 9221 available in bulk packing of drums and container in packing size of 200 kg and 30 kg.

Safety & Handling

Following instructions needs to be followed strictly.

Keep working conditions clean. Allow fresh air in, if possible, provide ventilator.

Avoid contact with human body directly, wear gloves and other personal protective equipment especially dust masks or respirators.

Wash hands carefully with soap. If possible, wash with acetone and alcohol first, then soap and water.

	In case of eye contact, wash with running water for 15 minutes and then seek medical treatment. Refer MSDS for better instruction on Safety & Handling.
Storage Conditions	HSC 9221 should be stored at room temperature free of moisture, in the original containers kept tightly closed at temperatures between 5-35˚C. Container once opened should be tightly closed to avoid contamination by foreign materials. The shelf life is 12 months for all components.
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.

Registered Office:

Hindusthan Speciality Chemicals Limited
(A Subsidiary of DCM Shriram Ltd.)
2nd Floor (West Wing), World Mark 1,
Aerocity, New Delhi 110037, INDIA
Tel: +91 9117020202
E-mail: saleshscl@dcmshriram.com

Factory:

Hindusthan Speciality Chemicals Limited
(A Subsidiary of DCM Shriram Ltd.)
Plot No.:830, GIDC, Jhagadia Industrial Estate,
Jhagadia, Bharuch District,
Gujarat - 393110, INDIA
Website: https://dcmshriramchemicals.hindusthanspeciality.com/