

TECHNICAL DATA SHEET**SC275**

1. Identification: **SC275** Paint Type: **Single Change Irreversible**
2. Initial Colour: **Blue**
3. A colour change from blue to fawn (beige) can be first observed after 10 minutes heating at 275°C. See full calibration data below.
4. Vehicle Type: Solvent based acrylic and silicon.
Solids: 40.6%
VOC: 600 g/l
Flash Point: 29°C
Initial Viscosity: Approximately 60 seconds B4 Cup (brushing viscosity).
5. Application:

Always follow handling recommendations on the safety data sheet.

Apply to blast cleaned and degreased surface. No primer is necessary. Apply even coating to give good opacity, spraying is preferred method.

Paint may be thinned if required by addition of PMA or similar solvents. For spraying addition of solvent to reduce solids to 33% should give approximately 30 seconds on a B4 Cup. The amount of solvent required is 18.5% of the weight of paint being adjusted.

Dry paint can be removed using solvents or if the painted area has been heated above 300°C abrasives may be required.

Always follow handling recommendations on the safety data sheet.

Coverage.

Typically a dry coating thickness of 25u should be aimed for. With SC275 at brush formula solids and viscosity this would mean applying around 62 micron wet, which equates to a theoretical coverage of 16.2 square meters per litre.

With SC275 applied at spray formula solids and viscosity this would mean applying around 74 micron wet, which equates to a theoretical coverage of 11.4 square meters per litre.

These are theoretical values based on volumes and solid contents and in practice allowances should be made for waste, over spray and possible effects of different substrates.

6. Calibration.

This calibration was carried out using nimonon butterfly test rig. The colour change temperatures quoted are based on a 10 minute heating period.

It should be noted that thermal paint is time – temperature dependant and consequently different values can be obtained for the different colour changes if longer or shorter heating

periods are used. A colour change requiring 10 minutes heating at 275°C can also be obtained after 5 minutes if a higher temperature is employed – 289°C.

The paint to be tested was sprayed onto a nimonic steel plate giving approximately 20-25u dry film. The plate is shaped to create a restriction between bus bars through which a low voltage high amperage current is passed. It acts as a resistance heater and the temperature generated is controlled by thermocouple sensors to a regulator.

The recorded temperature is that necessary for a full colour change to occur. There are areas of intermediate colour between bands and the area where a distinct colour has been generated is used for calibration.

Colours are from photographs of the test plates and may vary from those seen in real life. Care has been taken to obtain a true a likeness as possible.

Initial Colour : Blue

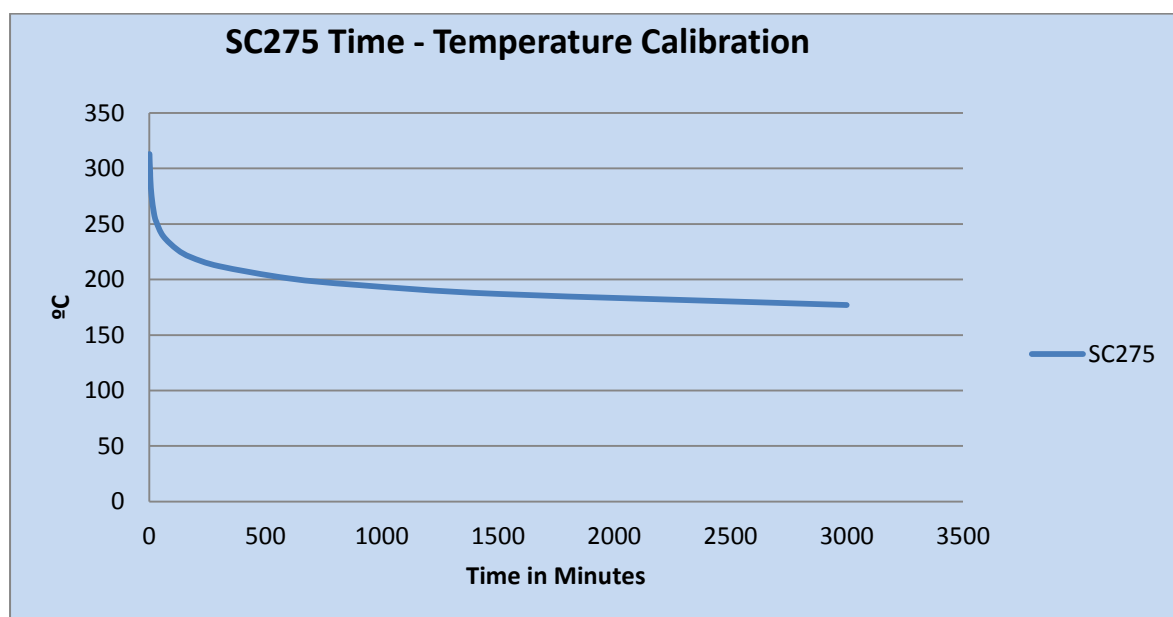


Change Colour : Fawn



Time and Temperature Calibration Values

Time in Minutes	1	2	4	5	10	20	30	60	120	180	300	600	900	1500	3000
Temperature °C	313	305	296	289	275	260	252	239	227	220	212	201	195	187	177



Long term heating tests.

This involved heating the paint for 150 hours at the temperatures indicated below. Pictures are of actual test coupons used in an oven. Actual colour in real life may vary slightly from those reproduced. As can be seen after 150 hours at 200°C there is a partial change. 150 hours at 250°C give a full change – we know that this would actually have occurred after about 30 minutes from previous data on short term calibration.

SC275

INITIAL

150°C

200 °C

250 °C

300 °C



Information in this Product Data Sheet is compiled from our general experience and data obtained from various technical publications. While we believe that the information provided herein is accurate at the date hereof, no responsibility for its completeness or accuracy can be assumed. Tests at TMC are carried out under controlled laboratory conditions. The user should test and verify the paint works in their particular application. Information is given in good faith, but without commitment as conditions vary in every case. The information is provided solely for consideration, investigation and verification by the user. TMC do not except any liability for any loss, damage or injury resulting from its use (except as required by law). Please refer to the Material Safety Data Sheet before using products to ensure safe handling.