



# TECHNICAL DATA SHEET

## STOKES EPOXY\POLYESTER NYLON MODIFIED POWDER COATING

<b>Reference</b> SPEPNM	<b>Revision No</b> 1	<b>Revision Date</b> 17 February 2005	<b>Printed</b> 15 January 2008	<b>Page 1 of 2</b>
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**WWW.RJSTOKES.CO.UK MANUFACTURERS OF INDUSTRIAL, DECORATIVE & POWDER COATINGS Est 1899**

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### Properties and Uses

#### PROPERTIES

Powder coatings from this range are specially formulated using Nylon modification to improve hardeness and durability of the coating. One coat finishing system for metal. Formulated to produce good flexibility, excellent adhesion, resistance to mechanical damage, good colour retention and heat resistance. Coatings also possess good resistance to corrosion and high humidity conditions.

Typical coating features are :-

Gloss at 60° Levels between 20 - 95% can be supplied.

Flexibility. Passes 6 mm (BS3900 Part E1).

Impact Resistance. Passes 160 inch lbs test. (BS3900 Part 3).

Scratch Resistance. Passes 3 Kilo (BS3900 Part E2).

Cross Hatch Adhesion. Passes Grade (BS3900 Part E6).

Surface Hardness. Passes H pencil hardness (ASTM 3363).

Boiling Water. Resistant.

Salt Spray. Passes 1,000 hours (BS3900 Part F4).

Humidity. Passes 1,000 hours (BS3900 Part F2).

Chemical Resistance. Good resistance to acids and oils but may be effected by ketones and chlorinated solve. Not recommended for use with alkalis.

#### USES

Light metal fabrications, i.e. light fittings, wirework, domestic equipment, metal cabinets. Can also be applied to castings, tools and other heavy gauge metal articles.

### Technical Data

#### TYPE

Epoxy/Polyester resin system. Carefully selected light and heat stable pigments, resins and extenders etc, used to achieve the desired colour and finish.

#### CURING TIMES AND TEMPERATURES

Standard Cure :- 10 minutes at 180°C (Metal Temperature).

Low Bake Cure :- 10 at 160°C ( ).

Fast Cure :- 6 at 180°C ( ).

The total curing time of the film is dependant on several factors.

1. The material substrate.
2. The gauge or mass of material.
3. The shape of the material; i.e. sheet, wire, tube, hollow objects.
4. The oven in use i.e. box, conveyerised convection or infra red etc.

The effective curing time commences when the object has reached the required temperature. The process time allows for the powder to flow out and curing reaction to take place which is necessary to achieve the correct film properties.

#### HEAT STABILITY

Satisfactory up to 140°C for intermittent periods and for continuous conditions up to 100°C.

#### LEAD CONTENT

Normally powders will be applied using lead free materials. Under certain conditions to meet customers specific requirements low soluble lead pigments might be used. Whenever this occurs the boxes of powder will be marked accordingly with appropriate hazard warning labels. Powders can be prepared to meet the requirements of the Safety of Toys Regulations by special request.

#### COLOUR RANGE

Colours made to suit customers requirements.

### Stock Container Sizes

20 Kg boxes (other sizes by special request).

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<b>Processes</b>	<p><b>PREPARATION</b> It is essential that any surface to be coated is clean and free from any contamination i.e. grease, millscale, rust or other surface defects.</p> <p><b>FINISHING</b> Steel It is advisable to carry out a phosphate pre-treatment in order to obtain superior protection against corrosion.</p> <p>Aluminium. Before powder coating apply either a twin etch primer such as Stokes IP053 or apply a chromate conversion coating.</p> <p>Galvanising. Same as aluminium but it is recommended to heat the metal surface to 5 - 10°C above the curing temperature of the powder coating to carry out the degassing of the galvanising.</p>
<b>Application</b>	<p>Our range of powders are specially formulated to be applied by electrostatic powder spray equipment. It is essential that the source of compressed air to fluidise and propel the powder must be free of oil or water which could cause contamination of the powder coating. Preheating of the article to be coated i.e. castings etc., will greatly increase the capability of producing thick films and coatings of the order of 200 microns have been achieved by this method.</p> <p>The jigs from which the articles to be coated are hung should be kept clean especially the contact point so that a good earth potential is obtained.</p> <p>The excess powder (overspray) not attracted to the article being sprayed can be recovered by means of a suitable powder recovery plant, and after sieving to remove any foreign bodies can be incorporated into fresh powder for re-use. To avoid contamination when using different colours it is essential that thorough cleaning of the plant must be carried out between changes of colour or types of powder.</p>
<b>Storage</b>	<p>Use within 12 months of delivery. Keep in original containers until required for use. Partly used containers should be re-sealed securely and stored according to the recommended manner. (See section 7 of Stokes Material Safety Data Sheet Ref.POW).</p>
<b>Health and Safety</b>	<p>THIS MATERIAL IS NON-FLAMMABLE. REFER TO STOKES MATERIAL SAFETY DATA SHEETS REF. POW OR POWLB FOR FULL DETAILS OF FIRST AID, FIRE FIGHTING, ACCIDENTAL RELEASE, HANDLING, EXPOSURE CONTROLS / PERSONAL PROTECTION AND DISPOSAL.</p>
<b>Disclaimer</b>	<p>The above information is for guidance only. It is given in good faith but without warranty. Users should first carry out their own trials to ascertain the suitability of the product for their intended purpose.</p> <p>This Data Sheet supercedes all previous Data Sheets supplied to you relating to this product. It contains important information which must be communicated to the user. The user must satisfy himself of the suitability of the product for the intended application and surface, as surface and application conditions are beyond the control of R.J.Stokes &amp; Co Ltd. The user must also satisfy himself of the suitability of the product in circumstances other than those set out in this data sheet. The user should also maintain appropriate control procedures. Should further information be required, please contact our Technical Department.</p> <p>R.J.Stokes &amp; Co. Ltd. employ a policy of continuous development and the technical data could be revised as a result of experience or new information becoming available.</p>