

## PRODUCT DATA SHEET

### ECOSPRAY RS3030

ECOSPRAY RS3030 is a self-extinguishing rigid polyurethane spray system for the insulation of roofing, walling, vessels and tanks. The foam has a good surface finish with excellent cell structure and good inter-laminar adhesion. The system uses ECOMATE® as the blowing agent which has zero Ozone Depleting Potential, zero Global Warming Potential and is VOC compliant. It is ideally processed through high pressure impingement mixing, airless spray dispensing equipment such as Gusmer, Probler, Intergun, etc.

#### TYPICAL PHYSICAL PROPERTIES

|                             |                  |                     |
|-----------------------------|------------------|---------------------|
| <b>Resin (polyol blend)</b> | Appearance       | Brown Liquid        |
|                             | Density          | 1.15 g/ml           |
|                             | Viscosity @ 20°C | 700 ± 50 mPa.s      |
| <b>Isocyanate</b>           | Composition      | Technical Grade MDI |
|                             | Appearance       | Dark Brown Liquid   |
|                             | Density          | 1.22 - 1.23 g/ml    |
|                             | Viscosity        | 250 ± 50 mPa.s      |

#### FORMULATION

100 pbm ECOSPRAY RS3030  
107 pbm Resinate 200  
100 : 100 (v/v)

#### TYPICAL REACTION PROFILE

Hand Mix @ 1000 RPM. Reef Altitude; 20°C

|                                |  |
|--------------------------------|--|
| Cream Time                     | 2 - 4 seconds                            |
| Gel Time                       | 10 - 12 seconds                          |
| Rise Time                      | 24 - 26 seconds                          |
| Tack Free                      | 13 - 16 seconds                          |
| Free Rise Density (core)       | 24 - 26 (reef)                           |
|                                | 27 - 30 kg/m <sup>3</sup> (coastal)      |
| Typical Applied Density (core) | 30 - 35 kg/m <sup>3</sup> (reef)         |
|                                | 33 - 38 kg/m <sup>3</sup> (coastal)      |
| Typical Compressive strength   | > 200 kPa                                |
| Typical k Factor               | 0.025 w/m.K (@ mean temperature of 22°C) |

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Typical R Values:

| Thickness<br>(mm) | R-<br>Value<br>(Km <sup>2</sup> /W) |
|-------------------|-------------------------------------|
| 20                | 0,80                                |
| 25                | 1,00                                |
| 30                | 1,20                                |
| 40                | 1,60                                |
| 50                | 2,00                                |
| 60                | 2,40                                |
| 70                | 2,80                                |
| 80                | 3,20                                |
| 90                | 3,60                                |
| 100               | 4,00                                |
| 110               | 4,40                                |
| 120               | 4,80                                |

Ideal Component Temperature            30 – 35 °C

Minimum Substrate Temperature        15°C

The above processing characteristics would be expected using a low pressure machine without heating. Using a high pressure dispensing machine with primary and line heating would speed up the system. The overall applied density varies as a result of the ambient and substrate temperatures as well as the number of layers required to build up to the specified section thickness.

**APPLICATION GUIDELINES.**

**Material Preconditioning.**

The use of band heaters might be required to maintain the materials in the drum at optimum temperatures of 25 – 35°C. Should the spray equipment have short bypass recirculation facility then this facility can be used to warm the chemicals accordingly.

**Equipment Operation.**

Always consult equipment manufacturer’s instructions. Typical processing data are:

- Operating pressure 1500 – 2500 psi.

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- Primary heaters and hose heaters to operate at 40 – 50°C depending on ambient conditions.

### **Substrate Preparation.**

The substrate should be clean, dry and free of grease, oil, solvent or other contaminants which will interfere with proper adhesion and/or polyurethane insulation quality. In some cases such as when spraying onto porous surfaces a primer should be used to enhance the foam adhesion to the substrate. Spray foam insulation must not be applied to damp substrates. Do not apply spray foam in rain, snow, fog, mist or when the substrate temperature is less than 3°C above the dew point.

### **Application Temperatures.**

This product is suitable for spraying on substrates with temperatures in the range of 15 – 50°C.

### **Cure Time and Recoat.**

This product shall generally be applied in one or more passes at no less than 10mm and no more than 25mm thickness per pass.

Each pass should be allowed to cure for at least 5 minutes before the next pass is applied.

Feathering should be minimized by sharply lapping each pass.

Feathering of layer thickness of less than 10mm should be avoided on horizontal surface at edge termination or in levelling of ponded areas.

Externally applied insulation requires application of an appropriate membrane for protection of the foam from weathering. The first coat of membrane should be applied, weather permitting, no earlier than 1 hour and within 72 hours of insulation application. If more than 72 hours elapse between application of insulation and the membrane application, the insulation surface shall be inspected for ultra- violet light and/or oxidation degradation, which will be indicated by a dusting of the foam surface.

Should such degradation occur, the insulation surface shall be brushed with a stiff bristle broom or mechanically scarfed and either primed or treated with an additional pass of sprayfoam prior to membrane application.

### **STORAGE STABILITY**

The product must be stored out of direct sunlight and weather. The containers must be kept sealed against moisture at all times in storage. Ideal storage temperature is approximately 20°C. Under these conditions the product will remain stable for 6 months.

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## SAFETY PRECUATIONS DURING HANDLING

ECOSPRAY RS3030 Polyol is a blend of Polyether polyols and other components which include a small percentage of tertiary aliphatic amines.

Because of its alkaline character, ECOSPRAY RS3030 Polyol may cause slight to moderate irritation when it comes into contact with the skin, the eyes and the mucous membranes, particularly if this contact is prolonged.

Safety goggles and impermeable protective gloves should always be worn if there is a risk of direct exposure when handling ECOSPRAY RS3030 Polyol.

Splashes that come into contact with skin, must be wiped off immediately and the contaminated areas must be thoroughly washed with soap and water. Subsequently these areas should be treated with a good barrier cream.

To prevent further contact with the skin, contaminated clothing should be changed immediately and thoroughly cleaned before reuse.

The product must be kept away from foodstuffs.

Anyone involved in the spray application of the system must familiarize themselves with the safety precautions required of sprayed polyurethane foam.

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