Starting Formulation

SF 2802

Red Powder Coating for Pipe and Rebar Application
EPON™ Resin 2024 / EPIKURE™ Curing Agent P-104

Features
- Very good general purpose powder coating
- Good film appearance
- Extra rapid cure speed
- Very good storage stability

Formula	Material	Supplier	Pounds
	Formulation		
	EPON Resin 2024	Hexion	832.0
	EPIKURE Curing Agent P-104	Hexion	33.0
	Red iron oxide		15.0
	Barytes		120.0
		Total Formulation	1,000.0

Mixing Instructions		Pounds
	Total Formulation	1,000.0

Powder coatings are generally manufactured by the melt mix technique. All the components are dry blended, usually in a high intensity mixer. This homogeneous blend is processed through an appropriate single or twinscrew extruder and cooled to a friable solid. The dispersedextrudate is then pulverized to yield a suitable particle size distribution and sieved to eliminate coarse particles which could detract from the appearance of the coating.

Typical Handling Properties

Powder coatings can be applied by electrostatic spray, fluidized bed, electrostatic fluidized bed, and flocking gun methods. Thick (5-10 mil) film can be applied by fluidized bed, and insulative coatings are often applied in this way. Powder coating (10-20 mil thick) for underground pipe is usually applied by passing the hot (450-480 °F) pipe through a cylindrical chamber with several electrostatic spray guns positioned inside the chamber to coat the pipe as it passes through. The coating cures rapidly due to residual heat. After a water quench, the pipe slides on rubber rollers to an electrical holiday detector. The holidays may be coated with 2-component epoxy coating to complete the operation.

The application methods for the EPON™ Resin 2024/EPI-CURE™ Curing Agent P-104 powder coating involve electrostatic spray, fluidized bed, electrostatic fludized bed and flocking gun. This system requires the incorporation of a bake cycle to cure the formulation.

This coating will cure in 1.5 to 2.0 minutes at 450 °F to 475 °F.

The formulations suggested in this bulletin may have broad application in the field of surface coatings. If any of your proposed uses are concerned with food contact, it will be

necessary to consult with Resolution Performance Products LLC and the other raw material suppliers regarding FDA status of the materials involved.

Typical Formulation Properties

Table 1 / Formulation Properties

	Units	Value
Bake schedule	Min./°F	2/450
Flexibility, 12 mil film at 0 °F		
Elongation	%	Pass 5
Degrees per pipe diameter length		Pass 6
Pencil hardness, ASTM D3363-74		5H
MIBK resistance	min.	30
Cathodic disbanding, average radius of disbonded area	mm.	2-3

General Information

These are starting formulations and are not proven in the user's particular application but are simply meant to demonstrate the efficacy of the products and to assist in the development of the user's own formulation. It is the user's responsibility to fully-test and qualify the formulation, along with the ingredients, methods, applications or equipment identified herein ("Information"), by the user's knowledgeable formulator or scientist, and to determine the appropriate use conditions and legal restrictions, prior to use of any Information.

Safety, Storage & Handling

Please refer to the MSDS for the most current Safety and Handling information.

Exposure to these materials should be minimized and avoided, if feasible, through the observance of proper precautions, use of appropriate engineering controls and proper personal protective clothing and equipment, and adherence to proper handling procedures. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheet (MSDS) for these and all other products being used are understood by all persons who will work with them. Questions and requests for information on Hexion Inc. ("Hexion") products should be directed to your Hexion sales representative, or the nearest Hexion sales office. Information and MSDSs on non-Hexion products should be obtained from the respective manufacturer.

Contact Information

For product prices, availability, or order placement, please contact customer service:

www.hexion.com/Contacts/

For literature and technical assistance, visit our website atwww.hexion.com

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