

# RESI-FLAKE® 383G60 Foundry Binder

## PRODUCT INFORMATION

### INTRODUCTION

RESI-FLAKE® 383G60 is a phenol-formaldehyde resin supplied in flake form. It has been developed for use in the production of resin-coated molding sand using the hot sand process. Its lower free phenol content allows the production of coated sands with lower levels of phenol and phenol emissions.

### APPLICATIONS

RESI-FLAKE 383G60 resin is recommended for use in the hot sand process to produce resin-coated molding sands for shells and cores. The resin has been specifically formulated to give excellent flowability, cure speed and tensile strength along with reduced phenol emissions.

Since novolac resins are two-step resins, a crosslinking agent is needed for curing. Use of RESI-FLAKE 383G60 resin requires the addition of hexamethylenetetramine (hexa) as the cross-linking agent. The amount of hexa in relation to the solid flake will generally be in the 10% to 15% weight range but the end user should determine the proper amount for their application.

### STORAGE AND HANDLING

RESI-FLAKE 383G60 resin should be stored at temperatures below 77°F (25°C). Storage at temperatures above 100°F (37.7°C) may cause sintering of the flakes over time so product monitoring and turn over should be practiced. It should be used in areas with good exhaust ventilation. The resin may darken over time but the change in color is cosmetic only and will not affect coated sand bonding strength.

Although packages of RESI-FLAKE 383G60 resin have a moisture resistant barrier, care should be taken to store the material in a dry place (RH 50%) to avoid moisture pickup which can also lead to sintering.

Additional information on the safe handling and storage of RESI-FLAKE 383G60 resin is in the Safety Data Sheet available from Georgia-Pacific Chemicals.

Georgia-Pacific Chemicals supplies RESI-FLAKE 383G60 resins in 1,000 lb. fiber board disposable cartons. The Department of Transportation (DOT) does not regulate shipments of this resin in these packages. However, the generation and accumulation of resin dust should be avoided as the suspended resin dust could be combustible under the right conditions, especially in an enclosed space with oxygen and an ignition source.

#### Typical Properties

Product Composition	Phenol-formaldehyde novolac
Appearance/Form	Tan flake
Viscosity, cps@150°C (300°F)	1,200 – 2,000
Free Phenol, %	1 maximum
Wax, %	3.0 – 4.5

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