

TECHNICAL DATA SHEET

COLD-BOX PROCESS



Member of HAI Group

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Sigmacure 118 UCB P1

Sigmacure 118 urethane cold box part 1 in conjunction with Silcure 310 UCB P2 have been designed to improve the foundry environment by significantly reducing smoke and odor from the coremaking and casting process. Both Sigmacure 118 UCB P1 and Silcure 310 UCB P2 exhibit a lower overall volatile organic compound (VOC) and hazardous air pollutant (HAP) footprint during the casting process. Sigmacure 118 UCB P1 contains no reportable formaldehyde and can be used with several different part 2 Isocyanate components chosen, depending upon particular performance features. Sigmacure 118 UCB P1 / Silcure 310 UCB P2 is also compatible with all refractory coatings.

FIELD OF APPLICATION

Sigmacure 118 UCB P1 is suitable for both ferrous and non-ferrous applications and offers a number of distinct features and advantages. These features include:

- Excellent tensile strength development
- Good bench life properties of mixed sand
- Good hot strength
- Good humidity resistance
- Low viscosity resin
- Low odor and smoke

PRODUCT CHARACTERISTICS

Relative Density	1.10	Flash Point, F ^o , TCC	>156.2
Viscosity, cps	100	Refractive Index	1.5440

PROCESSING / NOTES ON USE

Sigmacure 118 UCB P1 is a phenolic resin used in conjunction with an MDI-type isocyanate resin, such as Silcure 310 UCB P2. Both the Part 1 and Part 2 resin components are mixed with a new silica or lake sand, or a reclaimed sand, in ratios ranging from 50/50 to 60/40, at a total resin content in the range of 0.8% to 2.0% based on the weight of the sand. The resulting sand mix is then blown into a core box and subsequently cross linked by passage of a vaporized tertiary amine catalyst such as Dimethylethylamine (DMEA), Dimethylisopropylamine (DMIPA) or Dimethylpropylamine (DMPA), to produce a urethane bond.

TRANSPORT AND STORAGE

The shelf life for Sigmacure 118 UCB P1 is approximately 12 months. Recommended storage temperature is between 60 °F –90 °F. At lower temperatures, viscosity will increase, making pumping and mixing more difficult. Freezing temperatures should be avoided. At high temperatures solvent loss can occur. Drum storage should be in a dry area, out of direct sunlight. Partially used drums should be tightly closed to prevent contamination, primarily from water, which can adversely affect performance.

Attention! The use of a desiccant such as a silica gel filter is recommended. It is recommended to store all products under cover and protected from the excessive effects of temperature and humidity. The recommended storage temperature is between 60-90°F. HAI does not guarantee a definitive expiration date, as the functional life of many products depends strongly on storage conditions. HAI recommends the application of FIFO (First In First Out) practices and inventory strategy for all HAI foundry resins. HAI advises keeping all foundry resins segregated by type and classification.

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PACKAGING

Pail	Drum	IBC (Tote)	Bulk Tank
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ENVIRONMENTAL PROPERTIES

Sigmacure 118 UCB P1 together with Silcure 310 UCB P2 resins system exhibit one of the lowest smoke and odor footprint in the PUCB segment. Silcure 310 UCB P2 is part of HA International's EcoMission platform. Sigmacure 118 UCB P1 / Silcure 310 UCB P2 system minimizes the foundry environmental impact while improving performance and value.



CORRESPONDING PRODUCTS

Silcure 310 UCB P2

SAFE HANDLING

Chemically resistant gloves and eye protection should be used when handling or using chemical binders. Material Safety Data Sheets are available for all products. Drum labels also contain handling information. Part 1 will react with the Part 2 component, without catalyst, in an exothermic reaction, to give a solid polymer. Do not mix Part 1 and Part 2 except on sand during use. Please refer to the Material Safety Data Sheet for additional information.

**FOR EMERGENCY MEDICAL ASSISTANCE PLEASE CALL: Health and Safety Information Services
1-866-595-5738**

TECHNICAL SERVICE

Let HA International be "The Best Total Solution" for your foundry by providing innovative products, in-depth technical assistance, and a diverse product line specially formulated for any foundry application. Both our in-house and field experts are available to assist you with your most challenging foundry applications. Please contact your sales representative for additional technical information.

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