

BLUESIL HI PRO CLEAR

Associated Product(s)

This datasheet gives details and instructions applicable to BLUESIL HI PRO CLEAR.

Description

BLUESIL™ CATA HI-PRO CLEAR is an organotin carboxylate with additives. It is a clear catalyst for most of the **BLUESIL™ V-1060** and **V-1080** series of moldmaking rubber compounds. **BLUESIL™ CATA HI-PRO CLEAR** provides deep section cure capability, fast hardness development and long library life to rubber.

Example of Applications

- Clear catalyst for condensation cure rubber compounds, specifically **BLUESIL™ V-1060** and **V-1080** series.

Technical Characteristics

TYPICAL PROPERTIES - AS SUPPLIED	
Color	Clear
Consistency	Pourable
Viscosity, cP. (mPa.s)	90
Specific Gravity	1.00
Flash Point, closed cup	>204°F (96°C)

TYPICAL CATALYZED PROPERTIES	
Mixed at 24°C (75°F) and 50% R.H. with BLUESIL™ V-1068A	
Color	Translucent
Mix Ratio, A:B (by weight)	10:1
Pot Life, hours (1)	4
24 Hour Thick Section	
Hardness, Shore A ²	12
Viscosity, cp. (mPa.s)	35,000

EXAMPLE OF CURED RUBBER, with BLUESIL V-1068A	Cured 3 days at 24°C (75°F) and 50% RH	
Property	Test Method	Value
Color		Translucent
Hardness, Shore A	ASTM D2240	13
Tensile Strength, psi (N/mm²)	ASTM D412	570 (3.9)
Elongation, %	ASTM D412	560
Tear Resistance, ppi (N/mm)	ASTM D624, Die B	120 (21)

(1) Time at which material gels. (2) 0.5 in. (1.27 cm) thick cup specimen

Packaging

Product	Linked Packagings
BLUESIL HI PRO CLEAR	- Pail of 20.000 KG (44.09 LBS) - Box of 2.000 KG (4.41 LBS)

Storage Temperature

Product	Minimum storage temperature (when stored in its original packaging)	Maximum storage temperature (when stored in its original packaging)
BLUESIL HI PRO CLEAR	-20°C / -4°F	50°C / 122°F

Shelf Life

Product	Shelf life from date of manufacturing
BLUESIL HI PRO CLEAR	24 months

Instruction of Use

1. Stir the base (Part A) well before use (except when machine dispensing).
2. Shake the catalyst container (Part B) well before use.
3. Weigh the desired amount of base into a clean mixing container. Tip the container and roll the base all the way around the side wall up to two inches from the top. This will prevent the catalyst from becoming absorbed into the container. It is recommended that the container be filled to not more than 1/3 the container depth to allow sufficient room for expansion during the deaeration procedure.
4. Weigh the proper amount of catalyst into the container. Mix the base and catalyst together by stirring with a stiff, flat ended metal spatula until a uniform color is obtained. Scrape the container walls and bottom well to insure a thorough mix.
5. Place the container into a vacuum chamber and evacuate the entrapped air from the mixture using a vacuum pump capable of achieving 29 inches of mercury vacuum. The mixture will rise, crest and then collapse in the container. Interruption (bumping) of the vacuum may be necessary to prevent overflowing the container. Keep the mixture under full vacuum for 2-3 minutes after the material has receded in the container.
6. Bleed air slowly into the vacuum chamber. When the chamber is at atmospheric equilibrium, remove the cover plate and take out the container.
7. Pour the deaired material slowly in a steady stream from one end of the mold box so that the material flows evenly over the pattern. This should minimize entrapment of air bubbles under the flowing material. A "print" coat may be poured first over the pattern which will also help reduce the possibility of entrapping air on the pattern and in the cured rubber. A mold release (petroleum jelly) may be applied on the pattern first to improve release.
8. Allow the rubber to cure for 16-24 hours at 75±5°F (24°C) before removing the cured rubber mold from the pattern. Heat acceleration is not recommended with this product.
9. For best results, allow the mold to air cure an additional 24 hours before using it in production. Full cure is achieved in 3-7 days.
10. For bonding to wood or metals, use **BLUESIL™ V-04** primer. Follow recommendations on the **BLUESIL™ V-04** technical data sheet for best results.

PROCESSING INFORMATION

CATALYZED PROCESSING PROPERTIES ARE AFFECTED BY TEMPERATURE AND HUMIDITY VARIATION

1. For best results, mix and cure the material at 75°F (24°C) and 50% relative humidity.
2. Higher temperature and humidity will decrease the work life and pot life of the material. The faster cure will also affect the flow properties. Refrigeration of the base prior to use in hot environments has shown to improve the handling properties of this material.
3. Lower temperatures and humidity will increase the work life and pot life of the material. The slower cure will increase the flow time. Cure temperatures below 68°F (20°C) are not recommended and have been found to cause a reduction in final cure hardness and properties.
4. It is important that the catalyst containers are tightly closed after use. Catalyst exposed to air for extended periods of time will hydrolyze (cure). An indication of hydrolysis is a film or crust formation on the surface of the catalyst. The use of hydrolyzed catalyst is not recommended and may cause incomplete cure.

Sustainability

For Elkem, sustainability is central to our business strategy. Our mission is to provide advanced material solutions shaping a better and more sustainable future, adding value to our stakeholders globally. We are committed to reducing in embodied carbon emission. For further information, please visit our website or contact us to learn more about our sustainability roadmap.

Additional Information

Should you have any questions, please contact Elkem for more information.

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