UC 149.2

UNION CARBIDE INTERNAL CORRESPONDENCE

UNION CARBIDE PLASTICS COMPANY • RIVER ROAD, BOUND BROOK, NEW JERSEY

To (Name) Mr. G. J. Kuzmak/R. A. DeCoudres
Company Union Carbide Plastics Company
Location Bound Brook, New Jersey

Date January 30, 1961

Originating Dept.

Answering letter date

Copy to Mr. W. Colclough/C. Martino
Mr. E. F. Jenny
Mr. B. G. Murray
Mr. R. Peck/E. Legat/A. Zorenyi

Subject Development Run Report
BRZA-4025 Brown 135
Batch 2
3494 No. 669

Report by: E. F. Stuhr Date of Run: January 20, 1961

Product and Quantity: BRZA-4025 Brown 135, soft grade, 500 lbs.

Unit: Mill #3; Department 014-3

Followed by: E. F. Stuhr and W. Colclough

3494 Author and Date: R. A. Thomas; January 19, 1961

Customer and Use: Samples for Haveg and Cutler Hammer; heavy duty industrial electrical equipment.

Is this first run of product: Yes

Will transfer be requested: No

Recommendation: In view of the poor impact strength, a second batch of material should be produced using a lower ratio of ball weight to raw mix weight and cutting back the milling cycle from three hours to two hours.

Discussion:

This material is a high heat resistant-high impact strength molding material similar to, but having better properties than BRZ-5250. The improved properties are attributed to the use of a bisphenol "S" modified, one-step resin....BRNA-2512.

The resin for this run was coarse crushed in the Department 014-3 Grundler Crusher. A 97% resin-3% silane mix was prepared and ball milled for two hours in Mill #3, Department 014-3....the pulverized resin was identified as BRNA-4020.

A 500 pound raw mix was prepared using the following formula:

BRNA-4020 (Pulv. Resin)	32.00%
RM-132-A (Zinc Stearate)	2.25%
RM-3-AA (Brown Umber)	2.50%
RM-101-AC (Red Dye)	0.25%
RM-13-0 (long fiber asbestos)	63.00%
	100.00%

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The mix was charged into Mill #3, 014-3, which contained 1700 pounds of balls, and was milled for 3 hours. The finished material was then packed out to drums.

The plasticity was within specifications (CCT 25-30 secs.), and the appearance was excellent. However, the impact strength was too low (.662 and .692 ft-lbs/inch of notch), and consequently no further testing was done....impact strength should have been approximately .900 or higher. It is suspected that the low impact strength was caused by one or both of the following conditions, both of which would tend to break-up the asbestos fibers and consequently cause low impact strength.

1. Too high a ratio of ball weight to raw mix weight....3.4 to 1 in this run.

2. Too long a milling cycle....3 hours in this run.

A second run will be scheduled for the week of January 30. A ball weight to raw mix weight ratio of 2 to 1 will be used and the milling cycle will be cut to two hours.

E. P. Stuhr, Jr.

EPS:aga

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