CONSOLIDATED MONTHLY REPORT

JUNE 1973

This Consolidated Monthly Summary contains the technical information for June 1973. Because of the highly confidential nature of its contents, circulation is limited. Those receiving copies are requested to limit access to only those members within their organization who have a real need-to-know.

G R A C E C O N F I D E N T I A L

W. R. GRACE & CO.

RESEARCH DIVISION

WASHINGTON RESEARCH CENTER
7379 ROUTE 32, COLUMBIA, MARYLAND 21044
Telephone 301 - 531-5711

MONTHLY REPORT FOR JUNE 1973

CONSOLIDATED EDITION

GRACE CONFIDENTIAL

NOT TO GO OUTSIDE U.S.

This report contains information on the following activities at the Washington Research Center:

PROJECT TITLE	PROJECT NO.	PAGE
DAREX Desalting Plant Services - WRC Support	2451	1
Mono-Kote Product Improvement	2659	2
Davison Cracking Catalyst	2419	2
New Construction Products	2680	3
Clay Products Additive	2680	3
Auto Exhaust Catalyst	2302	4a
Monolith Catalyst Support	2304	4b
Air Pollution Control - Alumina Sphere Process	2212	4c
HYPOL™ Type FHP	1432	5
HYPOL™ Type CHC	1438	6
Epoxy Hardeners	1404	7
New Epoxy Resins	1408	7
Printable Water-Based Release Coatings	1435	8
Polystyrene Bead Board Shrinkage	1437	9
Fire-Resistant Bag Study	1427	10
Airmold Support	1561	10
Golding Brothers Consultation	1560	11
Fire Retardancy - Marco Polyester Resins	1407	11
Disposable Dishes for Microwave and Thermal Ovens	1332	12
Photopolymer Wear Coating for Resilient Flooring	1343	13
Dry-Film Photoresist	1372	13
Solder Photoresist	1387	14
Photopolymer Production	1314	16
Polyene Inventory	1392	16
LETTERFLEX - GLASS Project	1385	16a
Adapted Rumen Microbes - CHRON-X®	4640	17
Dairy	4647	17
Methane Inhibition	4649	17
Enzymatic Treatment of Feedlot Bloat 15208073	4650	18
Scours Preventative	4634	18
Poultry Growth Promoter	4661	18
Ammonium Isobutyrate as Grain & Haylage Preservative	4631	19
Bound Enzymes	4629	19
Fradiase	4670	20

PROJECT TITLE	PROJECT NO.	PAGE
Phillips R 8162 Catalyst - 410		21
Magnapore® Catalyst Production	2417	21
Ceramic Bonded Vermiculite	2663	22
Vermiculite Thermal Expansion	2684	22

15208074

MONO-KOTE PRODUCT IMPROVEMENT (Project 2659)

The emphasis of this month's activity continued to be the characterization of Mono-Kote raw materials (vermiculite and gypsum) from different sources and determining the interaction effects between Maryland gypsum and expanded vermiculite.

Ohio and Maryland gypsums prepared as neat pastes (water-gypsum mixtures) were found prone to cracking while drying. These are produced by U.S. Gypsum Company.

California, Iowa, and Lorain, Ohio gypsums prepared as neat pastes do not show a tendency to crack while drying. These gypsums are produced by National Gypsum Company. These findings are in general agreement with MK-IV shrink-crack field experience.

Flexural strength of a cured Libby vermiculite/Maryland gypsum mortar was found to be inversely proportional to the amount of water used to mix the mortar. Mortars prepared with lower water content had the higher flexural strength.

The work plan for this project has been revised. Major change in the plan was deletion of extensive strength testing of MK-IV and MK-V. Shrinkage and crack-formation studies in MK-IV remain in the plan unchanged.

(Kraus, Kolbe, Legal)

DAVISON CRACKING CATALYST (Project 2419)

The program objective is to determine if technology developed with sodium-silicofluoride sodium-silicate cements can be applied to improve attrition resistance of Davison's cracking catalysts. Samples tested by Davison were reported to have improved attrition resistance but sharply reduced activity.

Several potential methods for improving activity and attrition resistance have been suggested in an RPA submitted to the Davison Division. Approval of the RPA will determine the direction and extent of additional research effort in this area.

(Legal, Herrera, Brown)