UC 149-2

UNION CARBIDE

INTERNAL CORRESPONDENCE

PLAINTIFF'S EXHIBIT UC-39

Bob -

MINING AND METALS DIVISION

P. O. BOX 579, NIAGARA FALLS, NEW YORK 14302

To (Name) Mr. W. C. Thurber
Division UCC Mining and Metals
Location 38th Floor
270 Park Avenue
New York, NY 10017

Copy to Messrs. W. B. Ackart
F. H. Ancker
F. H. Larrison ✓
O. J. Malacarne
J. L. Myers
H. B. Rhodes
R. G. Woolery
File

Date December 11, 1973

Originating Dept. "Calidria" Asbestos

Answering letter date

Subject RG-600 Safety Data

DISTRIBUTION
F. H. Larrison
R. C. Warren
R. J. Krabbenhoft
J. M. Anderson
A. A. Arbiter
C. [illegible]
P. [illegible]
R. [illegible]
[illegible]
[illegible]
D. J. Cerilli
G. L. Vessels
M. K. West
File

Attached is a completed Product Safety Bulletin for DMBP (CRLA-1203). It includes potential hazards and health precautions to be taken when handling this liquid reactive resin. You will note that in the unreacted, liquid state, the principle hazards are labile phenols and formaldehyde present in the mix. These are known to cause skin or eye irritation with possible sensitization occurring after repeated contact.

Our use of this material for RG-600 includes advancing or curing CRLA-1203 to an inert solid by heating. Dr. Watson Ackart at Bound Brook reminds me that, at this point, the cured resin is similar to that in pot handles, etc., and is nontoxic. They do not appear to fall under the jurisdiction of the Toxic Substances Act.

We plan to move smartly toward publishing a Material Safety Data sheet for RG-600. It seems to me that this will be a combination of the MSDS for "Calidria" modified by some of the same information for a phenolic molding material. The RG-600 MSDS should be ready for approvals shortly after the first of the year.

R. E. Byrne, Jr.

REB:cjb
Attachment

A00301

UNION CARBIDE CHEMICALS AND PLASTICS

PRODUCT SAFETY BULLETIN

DESIGNATION: CRLA-1203 **DATE** 10/30/73

FORMULA OR COMPOSITION: para tertiary butyl phenol/formaldehyde heat reactive resin/water solution.

PHYSICAL PROPERTIES:

Boiling Point, 760 mm. Hg NA °C. ( ) °F.
Specific Gravity at 20/20°C. 1.08
Freezing Point NA °C.
Solubility at 20°C., % by Wt.,
In water Very low
Water in 20 % contained (no added)
Vapor Pressure at 20°C — mm. Hg
Flash Point, °F. ( ) (method)
Contained water boils before "flash point" is reached

Flammability Limits in Air, % by Volume
Lower — NA
Upper — NA
Autoignition Temperature, °F. NA
Average Pounds per Gallon at 20°C. 9
Per Cent Volatiles by Volume 20 %
Appearance and Odor Medium Viscosity syrup with phenolic type odor. Tan to Brown color

NA = not applicable

FIRE FIGHTING MEDIA AND PROCEDURES:

Not flammable until water has been driven off.
Polymerized resin has poor flammability characteristic of phenolic resins generally. Quench with water, CO_2 etc.

STABILITY:

Unstable to heat
Stable when refrigerated.
Incompatibility NA
Hazardous Thermal Decomposition Products Formaldehyde, phenols
Polymerization to a solid when heated

EMERGENCY PHONE NUMBERS:

A00302

Dr. C. U. Dernehl, 212/551-4785
Dr. K. S. Lane, 212/551-4787
C. P. Carpenter, Ph.D., 421/327-1020
212/551-2345 (nights, weekends, and holidays); or 304/744-3487

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Technology Manager: Please return carbon copies of pages 1 and 2 to:
JOAN ALONGE, Promotion and Advertising, Chemicals and Plastics, 270 Park Avenue, New York, N.Y. 10017

Doc. 12/11/7
RJB

SPILL AND LEAK PROCEDURES: Soak up large spills and incinerate or bury in Land fill. Flush small spill to sewer.

Waste Disposal Method Incineration

PERSONNEL PROTECTION: safety glasses. Rubber gloves.

HEALTH PRECAUTIONS: Avoid contact with skin and eyes. Repeated skin contact causes sensitization and skin rash.
In case of contact, flush eyes with water. Wash skin contact with soap and water.

STORAGE AND HANDLING: Keep Cool, preferably refrigerated

PRECAUTIONARY LABELING: not available but warns of skin irritation.

FOR INDUSTRY USE ONLY

A06363

METALS CONTENT:

We do not routinely test our bulk organic chemicals, silicones, and plastics for metals such as copper, lead, and mercury. Our chemicals and plastics are manufactured under controlled conditions designed to minimize metal contamination. Thus, we are confident that they would not contain harmful amounts of these materials. This belief is supported by a tabulation of analyses of random samples of several products (see below).

In the tabulated data below, [<] indicates a concentration lower than the minimum which the method used will determine.

The methods used in obtaining the analytical data are:

1. Mercury was determined using "flameless" atomic absorption using a background compensator where necessary (most esters).
2. Zinc and cadmium were determined by atomic absorption.
3. Arsenic was determined using the Codex colorimetric procedure – (silver diethyldithiocarbamate).
4. All other elements were determined by emission spectroscopy.

METALS CONTENT – PPM

	Aluminum	Arsenic	Cadmium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Tin	Zinc
Acetone	0.2	<1.0	<0.05	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	0.23
Butyl Phenol 4T	0.5	<1.0	<0.05	<0.1	0.2	0.6	<0.1	<0.1	<0.1	<0.05	0.1	<0.1	0.75
Butyl Acetate	<0.1	<1.0	<0.05	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	0.17
Butyl CELLOSOLVE	<0.1	<1.0	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.02
CELLOSOLVE Acetate	<0.1	<1.0	<0.05	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	0.4
Isopropyl Acetate	<0.1	<1.0	<0.05	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.02
Isopropanol	0.1	<1.0		<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.05	0.1	<0.1	
Methyl Ethyl Ketone	<0.1	<1.0	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	0.08
Methyl Isobutyl Ketone	<0.1	<1.0	<0.05	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	0.05
Monoethanolamine	<0.1	<1.0	<0.05	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	1.25
SYNASOL Solvent PM-3224	<0.1	<1.0	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	0.1
TERGITOL NPX	<1.0	<1.0	<0.05	<1.0	<1.0	0.1	<0.1	<1.0	<1.0	<0.05	<0.1	<0.1	<0.02
BAKELITE Phenolic Resin CKM 2400	0.8	<1.0	<0.05	<1.0	0.3	2.0	0.1	0.6	<0.1	<0.05	0.4	0.1	0.5
BAKELITE Epoxy Resin ERL-2774	0.2	<1.0	<0.05	<0.1	0.7	0.3	0.2	<0.1	<0.1	<0.05	2.0	<0.1	0.24
BAKELITE Vinyl Resin VMCC	3.6	<1.0	<0.05	1.9	0.4	2.6	3.0	0.2	<0.1	<0.05	0.8	0.1	0.7
CARBOWAX PEG-600	1.7	<1.0	<0.05	<0.1	<0.1	0.6	<0.1	<0.1	0.1	<0.05	1.0	<0.1	<0.02
CELLOSIZE HEC QP 300H	6.0	<1.0	<0.05	<1	2	8	1	<1	<1	<0.05	<1	1	0.25
CELLOSIZE HEC QP 4400	6.0	<1.0	<0.05	<1	2	4	1	<1	<1	<0.05	<1	<1	0.25
UCAR Latex 180	0.5	<1.0	<0.05	<0.1	<0.1	0.3	1.5	<0.1	<0.1	<0.05	<0.1	<0.1	0.2
UCAR Latex 360	0.8	<1.0	<0.05	<0.1	0.1	0.4	<0.1	0.1	<0.1	<0.05	<0.1	<0.1	1.5
UCAR Latex 380	0.6	<1.0	<0.05	0.3	0.2	0.7	<0.1	<0.1	<0.1	<0.05	0.1	<0.1	1.1

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< INDICATES A CONCENTRATION LOWER THAN THE MINIMUM WHICH THE METHOD USED WILL DETERMINE.

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