Material Safety Data

September 1, 1972

UNION CARBIDE CORPORATION • 4625 ROYAL AVENUE • NIAGARA FALLS, NEW YORK • 14302

TELEPHONE: (716) 285-3311 EXT. 6567

PRODUCT: Chrysotile Asbestos **CHEMICAL FORMULA:** $Mg_6(OH)_8Si_4O_{10}$

TRADE NAMES: "Calidria" Asbestos

I. PHYSICAL DATA

BOILING POINT AND MELTING POINT: Not Pertinent

SPECIFIC GRAVITY ($H_2O = 1$): 2.45

VOLATILE CONTENT: Absorbed Water 1 – 4% By Weight. Structural Water Approximately 13% by Weight.

APPEARANCE: Pellets or Fine White Powder. No odor. Very Slight Solubility in Water.

II. HAZARDOUS INGREDIENTS

Not Applicable.

III. FIRE AND EXPLOSION HAZARD DATA

Material is not Combustible. No Fire or Explosion Hazard.

IV. REACTIVITY DATA

INERT MATERIAL: No Decomposition or Polymerization Conditions.

V. HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE TO AIRBORNE CONCENTRATION:

The current standard of the Occupational Safety and Health Act of 1970 contains the following exposure limits:

"The 8-hour time-weighted average airborne concentration of asbestos fibers to which employees are exposed shall not exceed 5 fibers per milliliter greater than 5 microns in length, as determined by the membrane filter method at 400-450X magnification (4 millimeter objective) phase contrast illumination. No employee shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers per milliliter, longer than 5 microns." (Federal Register – Vol. 37, June 7, 1972, page 11320).

EFFECTS OF OVER EXPOSURE: Prolonged over exposure may result in lung damage.

EMERGENCY AND FIRST AID PROCEDURES: Not applicable. Material has no acute toxicity.

VI. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Avoid inhalation of dust. Remove spilled material by vacuum cleaner or by water wash.

WASTE DISPOSAL METHOD:

If reasonably foreseeable handling will not produce airborne concentrations in excess of exposure limits, no special procedures are required. When limits are likely to be exceeded, waste and scrap shall be collected and disposed of in impermeable sealed bags or other closed, impermeable containers, suitably labelled.

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CALIDRIA ASBESTOS - TYPICAL CHEMICAL ANALYSIS

Component	Weight %
MgO	41.9
SiO_2	41.8
Al_2O_3	0.5
Fe	1.4
Ca	0.075
Co	0.012
Cr	0.15
Cu	0.005
Ni	0.22
Se	<0.001
Loss on Ignition (CO_2 & H_2O)	13.5

CALIDRIA ASBESTOS - TYPICAL SPECTROGRAPHIC ANALYSIS

Component	Detection Limit, Wt. %	Analysis, Wt. %
Ag	0.001	0.0002-0.002
Al	0.003	0.08-0.8
As	0.01	N.D.(2)
Au	0.002	N.D.
B	0.006	N.D.
Ba	0.003	N.D.
Be	0.001	N.D.
Bi	0.005	N.D.
Ca	0.002	0.008-0.08
Cb	0.006	N.D.
Cd	0.01	N.D.
Co	0.01	0.008-0.08
Cr	0.003	0.02-0.2
Cs	N.A.(1)	----
Cu	0.001	0.004-0.04
Fe	0.006	0.8-8.0
Ga	0.01	N.D.
Ge	0.005	N.D.
Hf	0.03	N.D.
Hg	0.02	N.D.
In	0.03	N.D.
Ir	0.03	N.D.
K	N.A.	----
La	0.01	N.D.
Li	0.1	N.D.
Mg	0.001	Major
Mn	0.003	0.008-0.08
Mo	0.003	N.D.
Na	0.03	N.D.
Ni	0.003	0.08-0.8
Os	0.03	N.D.
P	0.08	N.D.
Pb	0.003	N.D.
Pd	0.005	N.D.
Pt	0.005	N.D.
Rb	N.A.	----
Re	0.03	N.D.
Rh	0.02	N.D.
Ra	0.03	N.D.
Sb	0.01	N.D.
Sc	0.01	N.D.
Se	----	<0.001(3)
Si	0.001	Major
Sn	0.002	N.D.
Sr	0.01	N.D.
Ta	0.01	N.D.
Te	0.05	N.D.
Th	0.03	N.D.
Ti	0.003	0.004-0.04
Tl	0.2	N.D.
U	0.1	N.D.
V	0.003	N.D.
W	0.01	N.D.
Y	0.01	N.D.
Yb	0.01	N.D.
Zn	0.02	N.D.
Zr	0.006	N.D.

(1) N.A. - Not analyzed.

(2) N.D. - Not detected.

(3) By chemical analysis.

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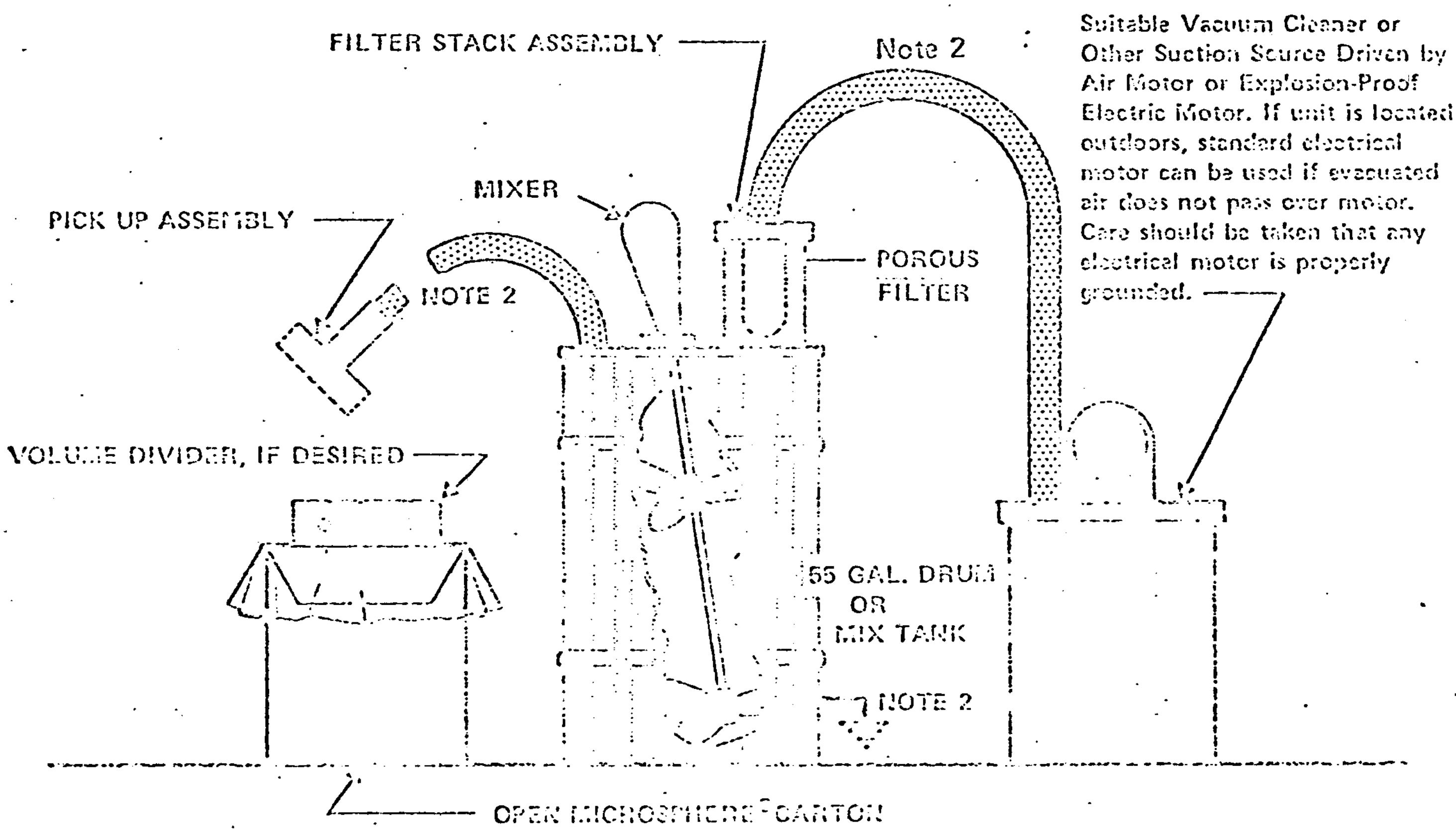
THOMAS F. ANDERSON
RESINS TECHNICAL SERVICE & DEVELOPMENT

DOW CHEMICAL U.S.A. — DESIGNED PRODUCTS DEPARTMENT
L1603 — 713-233-1672 — FREEPORT, TEXAS 77541

Saran Microspheres - Vacuum Transfer System

BECAUSE THE DRY EXPANDED SARAN MICROSPHERES, XD-7051.04, ARE VERY SMALL AND VERY LIGHT (ca .6 pcf BULK DENSITY), THEY TEND TO DUST[1] VERY EASILY AND BE HARD TO HANDLE. IT HAS BEEN FOUND THAT XD-7051.04 CAN BE TRANSFERRED FROM THE PACKING CARTON TO A MIXING CONTAINER VERY READILY USING A VACUUM TRANSFER SYSTEM AS DESCRIBED BELOW.



[1] SEE TECHNICAL BULLETIN SARAN MICROSPHERES-SAFETY AND HEALTH CONSIDERATIONS.

[2] PICK UP ASSEMBLY, DRUM OR MIX TANK, FILTER, & VACUUM UNIT SHOULD ALL BE CONNECTED WITH METAL HOSE OR GROUNDING WIRE AND COMPLETE SYSTEM GROUNDED TO MINIMIZE STATIC ACCUMULATION.

THE DOW CHEMICAL COMPANY
DESIGNED PRODUCTS DEPARTMENT • MIDLAND, MICHIGAN 48640

A 14106

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