

CYPRUS INDUSTRIAL MINERALS

RESOURCES, PRODUCTS & TECHNOLOGY

E.F. MCCARTHY

MARCH, 1990

PLAINTIFF'S
EXHIBIT
CAM-120

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CYPRUS INDUSTRIAL MINERALS - PHILOSOPHY

- * WE SELL FUNCTIONAL MINERAL PIGMENTS - NOT FILLERS OR EXTENDERS
- * OUR PRODUCTS ARE MORE EXPENSIVE - BUT WORTH IT
- * WE CERTIFY THAT OUR PRODUCTS ARE FREE OF AMPHIBOLE
(ASBESTIFORM) MINERALS
- * OUR PRODUCTS ARE BACKED BY TECHNICAL SERVICE, IN PLANT QUALITY
CONTROL AND AN ORGANIZATION THAT HAS BEEN PRODUCING
FINE TALC AND BARYTES FOR OVER 60 YEARS

RESOURCES

MINES:	*	MONTANA	-	YELLOWSTONE	TALC
			-	BEAVERHEAD	TALC
			-	ANTLER	CHLORITE
	*	VERMONT	-	TROY	TALC
			-	CHESTER	TALC
			-	LUDLOW (4)	TALC
	*	ALABAMA	-	WINTERBORO	TALC
	*	CALIFORNIA	-	TOYON	TALC
	*	GEORGIA	-	CARTERSVILLE	BARYTES
	*	SPAIN	-	MALAGA	TALC
	*	AUSTRALIA	-	MT. SEABROOK*	TALC
	*	ITALY	-	VAL CHISONE*	TALC

*MINES NOT OWNED BY CYPRUS

RESOURCES - U.S. MILLS

LOCATION	PROCESSING CAPABILITY	MARKETS
Three Forks, MT	Milling & Micronizing High Purity Talc	Paper, Rubber, Ceramics
Grand Island, NE	Milling, Micronizing & Sterilizing Talc & Chlorite	Rubber, Plastics, Cosmetics
Houston, TX	Milling & Micronizing Talc and Barytes	Plastics
Alpine, AL	Flotation, Milling & Sterilizing Talc	Cosmetics, Pharmaceuticals
Johnson, VT	Flotation, Milling, Micronizing and Sterilizing Talc	Cosmetics, Plastics, Paints
Windsor, VT	Flotation, Delaminating and Sterilizing Talc	Cosmetics, Plastics
Chester, VT	Milling Talc	Construction Products, Plastics
Columbia, VT	Milling Talc	Construction Products, Plastics
Toyon, CA	Milling Talc	Construction Products
Cartersville, GA	Flotation, Milling, Micronizing Barytes	Plastics, Coatings

RESOURCES - FOREIGN

*	EUROPE	MILLS IN BELGIUM AND SPAIN
*	JAPAN	JOINT VENTURE WITH JAPANESE TRADING COMPANY
		NIHON MISTRON
		MILLS IN SUZUKA AND HOKKAIDO
*	SOUTH AMERICA	LICENSE MILLS IN MEXICO AND VENEZUELA

TECHNICAL CAPABILITIES

- ° PRODUCT SAFETY
 - ° 2 PHILLIPS AUTOMATED XRD
 - ° OPTICAL MICROSCOPY
 - ° JEOL TEM
 - ° AMRAY SEM WITH EDAX
- ° ANALYTICAL
 - ° CILAS LASER PARTICLE SIZE ANALYSER
 - ° SEDIGRAPH, BET SURFACE AREA
 - ° PYNOMETER, WET CHEMISTRY
 - ° HUNTER, TECHNIDYNE, PHOTOVOLT COLOR
- ° COATINGS
 - ° GLOSS, COLOR, ABRASION, OPACITY
WEATHERING, TOP SIZE, RHEOLOGY
- ° PAPER
 - ° IR DEPOSIT ANALYSIS, PITCH DEPOSITION
HANDSHEET MACHINE, PAPER PROPERTIES
LASER ZETA POTENTIAL, EINLEINER ABRASION

TECHNICAL CENTER PERSONNEL

*	KAREN POERSCH	EXT 5562	MESSAGES, LOCATOR
*	BILL STEEN	5565	PLASTICS, RUBBER
*	OSCAR NOEL	5570	PVC, RUBBER
*	TOM ZINGE	5571	COATINGS
*	MIKE CLARK	5574	MINERALOGY
*	BILL CAVANAGH	5572	PAPER
*	ED MCCARTHY	5563	ANY PROBLEMS

WHAT IS TALC?

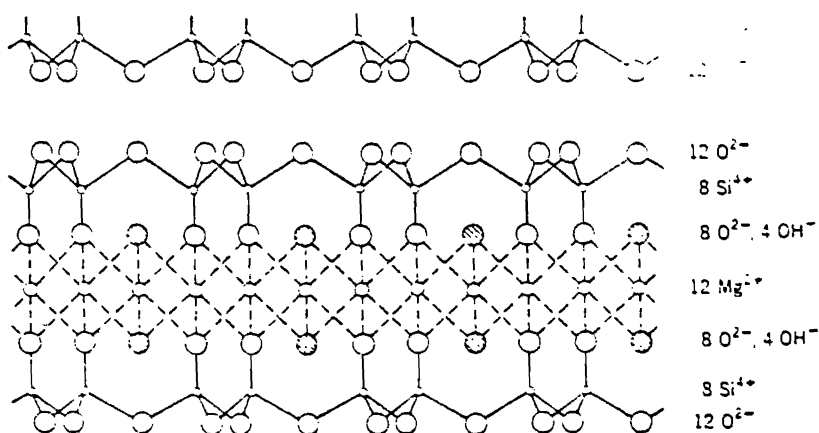
TALC IS ONE OF A GROUP OF NATURALLY OCCURRING ORES THAT IS USED IN THE SAME CHEMICAL FORM AS IT OCCURS. THESE ARE KNOWN AS INDUSTRIAL MINERALS.

CORRECT NAME: "HYDROUS MAGNESIUM SILICATE"

CHEMICAL FORMULA: $2\text{MgO} \cdot 4\text{SiO}_2 \cdot \text{H}_2\text{O}$

ALSO KNOWN AS: SOAPSTONE

STRUCTURE: BRUCITE LAYER SANDWICHED BETWEEN SILICA SHEETS



TALC IS SLICK, PLATY, AND HYDROPHOBIC.

TALC APPLICATIONS

* COATINGS

- PRIMERS
- VAPOR RESISTANCE
 - CORROSION RESISTANCE
 - VISCOSITY BUILD
 - ADHESION CHARACTERISTICS
 - 325 MESH-VARIABLE COLOR

INTERIOR FLATS

- FLATTING
- VISCOSITY BUILD
- ADHESION CHARACTERISTICS
- TITANIUM EFFICIENCY
- 4 - 5 HEGMAN WHITE

GEL COATS

- VISCOSITY
- SANDING PROPERTIES
- TITANIUM EFFICIENCY
- 5 - 6 HEGMAN WHITE

HIBUILD

- VISCOSITY - SAG RESISTANCE
- CORROSION PROTECTION

MARINE

- MILSPEC 24441
- HIGH SOLIDS, TWO PART EPOXY
- MISTRON 400, 500

TALC APPLICATIONS

- * WALL JOINT COMPOUNDS
 - SANDING PROPERTIES, VISCOSITY
 - 200/325 MESH 70-80 GEB -

- * ADHESIVES & SEALANTS
 - VISCOSIFIER (SILICA)
 - REINFORCING AGENT
 - VAPOR BARRIER
 - 325 MESH & FINER PRODUCTS

TALC APPLICATIONS

RUBBER - REINFORCEMENT

- HIGHER MODULUS
- HIGHER TENSILE
- REDUCED DIE SWELL
- EASIER PROCESSING

MISTRON VAPOR R - CYPRUBOND

- DUSTING

- TIRES VERTAL 150
- RUBBERTHREAD VERTAL C-2, STELLAR 200

PLASTICS - NUCLEATION OF POLYPROPYLENE, PET, NYLON, PS 5-6 HEGMAN WHITE

- REINFORCEMENT OF POLYPROPYLENE
 - 325 MESH WHITE TALC
 - GOOD OVEN AGING
 - FINER PRODUCTS FOR TPE, TPO
- ANTIBLOCK OF FILM
5 HEGMAN WHITE, STELLAR 500

TALC - APPLICATIONS

* CERAMICS

- * STEATITE 85% 20 MESH TALC
 10% KAOLIN
 5% BaCO_3
- * CORDIERITE 16% TALC
 4% Al_2O_3
 80% CLAY & OTHER
- * WALL TILE 30-70% TALC
 BALANCE CLAYS
- * FLUX (PLASTICIZER) & DUNTING AGENT

* TEXTILES

- * SIZE FOR STIFFENED FABRICS
- * 50/50 STARCH/325 MESH TALC

* AGRICULTURAL CHEMICALS

- * CARRIER 200 MESH LO COLOR
- * PRILL DUSTING AGENT 200/325 MESH LO COLOR

CYPRUS PRODUCTS - MONTANA TALC

<u>PRODUCT</u>	<u>MEAN PARTICLE SIZE</u>	<u>HEGMAN</u>	<u>COLOR</u>	<u>APPLICATIONS</u>
GLACIER 200	8	2	76	AG CARRIER, WALL JOINT SEALANTS
GLACIER 325	6	3.5	78	AG CARRIER, TRAFFIC PAINT, SEALANTS
BEAVERWHITE 200	8	2	83	SEALANTS, DUSTING
BEAVERWHITE 325	6	3.5	85	WORKHORSE PAINT PRODUCT
MISTRON 400	4.5	4	86	MILSPEC, LATEX FLAT
MISTRON 500	3.5	5	87	MILSPEC, LATEX FLAT
MISTRON RCS	3.5	5	87	LOW VISCOSITY SEALANTS INTERIOR FLATS
MISTRON MIST	3	5.5	87	INTERIOR FLATS
MISTRON 600	2.5	6	88	LOW VISCOSITY, HIGH HEGMAN
MISTRON MONOMIX	1.5	6.5	89	FLATTING, HIDING GEL COATS
MISTRON ULTRAMIX	1.3	6.0	90	HIDING, GEL COATS
MISTRON VAPOR-R	1.7	5.5	86	RUBBER REINFORCEMENT
CYPRUBOND	1.7	5.5	86	SILANE TREATED FOR RUBBER REINFORCEMENT
MISTRON ZSC	1.7	5.5	86	STEARATE TREATED FOR DISPERSION & MOLD RELEASE

CYPRUS PRODUCTS - VERMONT TALC

<u>PRODUCT</u>	<u>MEAN PARTICLE SIZE</u>	<u>HEGMAN</u>	<u>COLOR</u>	<u>APPLICATIONS</u>
VERTAL 15	15	1	70	BODYPATCH, RUBBER DUSTING, AG CARRIER, WALL JOINT
VERTAL 10	10	2	72	WALL JOINT, ADHESIVES PLASTICS
VERTAL 6	6	3.5	76	PRIMERS, PLASTICS
VERTAL 1500	15	1	76	RUBBER DUSTING, ADHESIVES & SEALANTS
VERTAL 1000	10	2	77	RUBBER DUSTING, ADHESIVES & SEALANTS
VERTAL 700	7	3.5	78	COATINGS, PLASTICS
VERTAL 300	3	4.5	82	COATINGS, PLASTICS
VERTAL 200	2	5.5	85	RUBBER
VERTAL ZSC	2	5.5	85	RUBBER, PLASTICS

CYPRUS PRODUCTS - AUSTRALIAN & CHINESE

<u>PRODUCT</u>	<u>MEAN PARTICLE SIZE</u> (MICRON)	<u>HEGMAN</u>	<u>COLOR</u>	<u>APPLICATIONS</u>
STELLAR 200	11	2	86	PLASTICS, PAINT
STELLAR 400	7	3.5	88	PLASTICS
STELLAR 500	3.5	5	90	ANTIBLOCK, PLASTICS
STELLAR 600	2.2	6	92	GEL COATS, PLASTICS
STELLAR 410	8.5	3.5	87	PLASTICS
AF - 200	11	2	80	TRAFFIC PAINT
AF - 400	7	3.5	83	PAINT

ALL OF THESE PRODUCTS ARE SOURCED OUT OF HOUSTON EXCEPT FOR STELLAR 400, STELLAR 500, AND STELLAR 600 WHICH ARE ALSO AVAILABLE AT GRAND ISLAND

CHLORITE

- * HYDROUS MAGNESIUM ALUMINUM SILICATE
- * APPROXIMATE COMPOSITION: $5 \text{ MgO} \cdot \text{Al}_2\text{O}_3 \cdot 3 \text{ SiO}_2 \cdot 8(\text{OH})$
- * PLATY PIGMENT WITH MINIMAL FINES
- * CYPRUS IS ONLY U.S. PRODUCER

CHLORITE - APPLICATIONS

* CERAMIC

CORDIERITE

25% CHLORITE

NO Al_2O_3

BALANCE CLAY & FELDSPAR

FIRES AT CONE 5 VS CONE 11 FOR TALC

* COATINGS

LOW VOC

CHLORITES CAN BE LOADED AT 5 - 6#/GAL

FLAT WELL AT HIGHER LOADINGS

GOOD DISPERSION PROPERTIES

CORROSION RESISTANCE

GOOD CORROSION RESISTANCE BELOW 30 PVC

TiO_2 OPTIMIZATION

BARYTES

- * BaSO_4
- * DOES NOT THERMALLY DEGRADE UNTIL 1540°C
- * COMPLETELY INERT TO ACID OR ALKALI
- * SPECIFIC GRAVITY OF 4.5 g/cc
- * VERY LOW OIL ADSORPTION (LESS THAN 12 gm/100gm)
- * ABSORBS SOUND, X-RAYS (NOT MICROWAVES)
- * CYPRUS BARIMITE, BARIMITE XF AND BARYTES #22 ARE ONE OF ONLY TWO FLOATED PRODUCTS AVAILABLE IN THE U.S.

BARYTES - APPLICATIONS

* AUTOMOTIVE PRIMERS

- * INERTNESS
- * LOW OIL ADSORPTION
- * SOUND DEADENING
- * BARIMATE XF

* AUTOMOTIVE SOUND DEADENING

- * HIGHER DENSITY
- * PLASTICOLS 200-500 PHR
- * TPE 250-350 PHR
- * FOAMS
- * CARPET BACKING

* AUTOMOTIVE BRAKES

- * THERMAL STABILITY
- * CONSISTENCY
- * 25% OF FORMULATION
- * BARYTES #22

* SPECIALTY

- * APPLIANCES (DENSITY)
- * MEDICAL X-RAY SHIELDS
- * SOUND PANELS
- * PRIMARILY POLYESTER THERMOSETS

CYPRUS PRODUCTS - BARYTES

<u>PRODUCT</u>	<u>MEAN PARTICLE SIZE</u> (MICRON)	<u>HEGMAN</u>	<u>COLOR</u>	<u>APPLICATIONS</u>
G-50	30	0	TAN	CONSTRUCTION PRODUCTS
BARYTES #22	10	2	TAN	BRAKES, PLASTICS RUBBER
BARIMITE	4	3	TAN	RUBBER, PLASTICS, PAINT
BARIMITE XF	2	5	TAN	COATINGS, TPO
CIMBAR 325	10	3	88	COATINGS, PLASTICS
CIMBAR XF	2	5	90	COATINGS

PRODUCT AND APPLICATIONS LITERATURE

DATA SHEETS

APPLICATIONS BULLETINS

TECHNICAL BULLETINS

TECHNICAL REPORTS

PUBLISHED PAPERS

