FILE NAME: RT Vanderbilt (RTV)

DATE: 0000

DOC#: RTV052

DOCUMENT DESCRIPTION: Excerpts from Mineralogy of NY - Specification of Various Grades of Talc Mined, Milled and Produced by International Talc

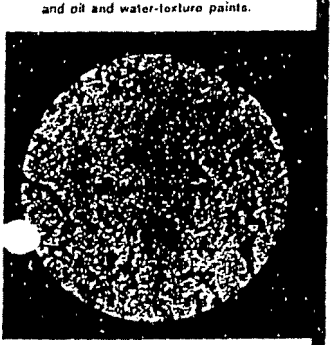
1984

ASBESTINE® FIBRE #2

EXHIBIT
10-5-88

Imparts to caulking compounds all of the excellent color, extrudability, wettability and anti-slump properties of Asbestine Fibre #1 in formulations requiring a reinforcing pigment with higher consistency and oil demand. It can be used to replace or supplement asbestos shorts.

Asbestine Fibre #2 is also recommended for use in mastic cements and oil and water-texture paints.



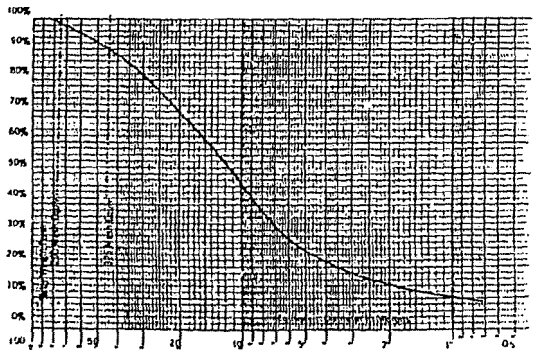
15x Magnification

TYPICAL PHYSICAL CONSTANTS

% Less Than 325 Mesh	98 ± 4%
Average Particle Size	11 Microns
Color (Tri-Stimulus Green)	88 Minimum
Water Absorption	280 ± 40
Specific Gravity	2.81
Weight Per Solid Gallon	23.41
1 lb. Bulk/Gallons	0.04272
Volume/100 Grams (Loose)	52.8cc
(Tamped)	19.8cc
Moisture	0.25%
Structure	Fibrous
Hegman	0

TYPICAL CHEMICAL ANALYSIS

SiO_2	60.7 %
MgO	28.01%
CaO	7.24%
R_2O_3	0.65%
MnO	0.25%
CO_2	0.64%
Loss on Ignition	2.95%
pH, 10% Slurry	9.4
Water Solubility	Trace



PARTICLE SIZE DISTRIBUTION

% less than 44 Microns...88.5	% less than 10 Microns...48
% less than 30 Microns...81	% less than 5 Microns...29
% less than 20 Microns...69	% less than 2 Microns...14
% less than 15 Microns...60	% less than 1 Micron...10

International Talc Co., Inc.
WORLD'S LARGEST PRODUCER OF TALC
ASBESTINE • CERAMITALC • INTERNATIONAL TIBRE • MOULDERE

OFFICES
420 Lexington Ave., New York, N. Y. 10017
Phone 212-922-8533

MINES and MILLS
Gouverneur, New York

5a - Specification Sheet of Talc Product Trade Name "Fibertal"

R.T. Vanderbilt Company, Inc.

TEC
DAT

KEMCO Chem-Materia

216-476

FIBERTAL

August 7, 1975

FIBERTAL is a complex hydrous calcium magnesium silicate. It is a unique fibrous mineral whose only known source is in northern New York State.

FIBERTAL has great affinity for oils, polymers, solvents and water, rendering it a particularly useful tool for the coatings formulator. FIBERTAL is supplied with a wide range of water absorption, providing maximum versatility to the formulator. Wherever stable thixotropy is desired, the proper FIBERTAL will do the job. In addition, its light color allows the preparation of whites and clean light tiles.

Among its useful applications are: texture paints, stucco coatings, gel coats, block fillers, roof paints, asphalt curbings, putties, caulking compounds and floor tiles. Another use is in nonferrous metal casting plasters.

Typical properties:

	FIBERTAL 6	FIBERTAL 1	FIBERTAL 2	M
Dry brightness, minimum:	88	88	88	
Specific gravity:	2.86	2.86	2.86	
Plus 325 mesh, % maximum:	25	15	15	
Water absorption, range:	100-180	180-240	240-290	

FIBERTAL carries an asbestos warning label and should be handled accordingly.

PH EXH. 24 FOR I
Henry 2
5/27/87
JANINE JONES, C.S.R. CSR #3328

new deposits formed of any importance, and those already existing were little modified during the interval.

Consequently the occurrence of Potsdam has little or no bearing upon the existence of mineral deposits in the underlying Precambrian. There is the same likelihood of finding them under the sandstone as in the exposed formations, other things being equal.

List of Minerals and Mineral Localities

Preliminary to the description of the deposits of economic importance, brief mention will be made of the various minerals which have been noted as native to the district and of their local occurrence. The list of mineral species for the district embraces a large number that have no special value industrially, as in fact the useful minerals generally constitute only a small proportion of those actually known. The vicinity of Gouverneur has provided a great array of minerals in the way of crystallized and uncommon physical forms, and not a little that has served as type material for purposes of scientific description or illustration, so that an enumeration of the individual species with information of their occurrence may prove serviceable to the student and collector.

In the compilation of the mineral occurrences information has been drawn to some extent from published sources, notably Dana's Manual which is valuable principally for the data about the early discoveries, from the reports of the First Geological Survey of New York State and particularly those by Emmons and Beck, and from Whitlock's New York Mineral Localities.[1] The last-named work is the most complete in its references to the mineral occurrences of the district that has appeared up to the present time. The information thus made available has been supplemented by observations in the district by the writer in the course of a field experience that extends through a period of many years.

Although attention is restricted generally to those occurrences within the limits of the map, a few localities of particular interest that are found in the bordering areas will be included, for which Gouverneur would naturally be used as a base by any one intending to visit such places.

Actinolite. This variety of amphibole occurs in characteristic development of thin bladed and fibrous crystals in the walls of the talc mines in the town of Edwards. It has the same methods of occurrence as tremolite, the common parent mineral of the talc, and

[1] N. Y. State Mus. Bul. 50, 1903.

differs in appearance only in its greenish color which is traceable to the small content of iron in ferrous form. The crystals occur in felted or matted intergrowths, as actinolite schist. The country rock is limestone, but porphyritic granite appears nearby.

Albite. Soda feldspar is present in some of the pegmatite bodies, as one of the essential constituents. It is associated usually with microcline and may be intergrown with it as perthite. One of the localities where both varieties are found in large crystals or masses is at the quarry now being worked for pottery spar on the road between Richville station and East De Kalb, 3 miles northeast of the former place.

Amphibole. The members of this mineral family are mentioned under their specific names, as far as they are recognized. (*See* actinolite and tremolite.) Various aluminous amphiboles are represented, of which the exact composition and type has not been determined. One of the common forms is of greenish color in prismatic shapes, to be classed probably with the variety pargasite. It is found in the limestones, often associated with tremolite and diopside. Localities are the Calvin Mitchel farm in East De Kalb, the zinc mines at Edwards and the vicinity of Talcville. Darker green or black amphibole is an important ingredient of the gneisses; one of the gneissic rocks developed on the borders of the Edwards limestone belt consists largely of this mineral and is described in the first part of the report under the name "amphibolite." It is believed to be derived from gabbro, in which case the amphibole is probably derived from an aluminous pyroxene. Black or green amphibole is also an accompaniment of some of the Grenville schists.

Apatite. Crystals of apatite, greenish or reddish in color, small to fairly large in size, occur in the crystalline limestones, notably in the marble quarries north and south of Gouverneur. The quarries just southwest of the town have supplied examples of the usual six-sided prisms, terminated by the unit pyramid, 4 to 6 inches long. Beck[1] records a crystal nearly a foot long and weighing 18 pounds from the Robinson farm, town of Hammond, which is outside the limits of the map. This locality is perhaps the same as that listed by Whitlock as near DeLong's mills.

Asbestos. Fibrous tremolite, or brittle asbestos, is not uncommon in the walls of the talc mines, one or both of which may be constituted of tremolite schist. It is also to be seen in other limestone areas, as a development of the normal tremolite. The flexible

[1] Mineralogy of New York, 1842, p. 282.

5 - Specifications of Various Grades of Talc Mined, Milled and Produced by International Talc (Pages 1893-1904)

Asbestine
Asbestol
Carbola
International
Micro Velex
Micro Velva
Platene

FUNCTIONAL PIGMENTS for WATER-BASED COATINGS

INTERNATIONAL TALC CO., INC.
420 Lexington Ave., New York, N. Y. 10017

Talc and its related mineral products provide coatings formulators with a versatile selection of extenders to use in water-thinned systems. Their natural blue-white color is valuable in both white paints and tint bases.

We offer 15 different grades, based on International and Carbola minerals, ranging from platey to fibrous textures, ground and classified to your specifications. Our coatings application research laboratory will gladly help in choosing the extender best suited to your formulation.

These functional pigments have inherently good suspension properties. No deflocculant is needed. They are low in water-soluble salts and have an untreated pH of 8-9. Because of their acicular crystalline shape and hydrophobic nature they don't agglomerate on settling but can be quickly redispersed by stirring.

The fact that they are hydrophobic also imparts wearing qualities to your finished film.

The suggested starting formulations included are reprinted through the courtesy of the com listed and are offered subject to the customary ment of non-liability. These formulations incorpor the most part, the "workhorse" extenders Asbesti and Asbestine 3X. They are only a few of the ma are or can be made particularly when you utilize t range of properties available to you in some of o cially grades. Our laboratories are at your disp assist you.

A list of the raw materials, sources, registered marks and other pertinent detail relating to formulations are contained on the back page.

REICHHOLD CHEMICALS, INC.

EC-42A NON-CHALKING ONE-COAT EXTERIOR
based on 40-124 Wallpol®

Ingredients	Pounds	Gallons
Water	333.0	40.00
Cellosize QP-4400	4.0	0.35
Nopco NDW	2.0	0.25
Potassium Tripolyphosphate	0.5	0.04
Igepal CO-630	2.0	0.25
Tamol 731(25%)	8.0	0.90
PMA-18	2.0	0.20
Ethylene Glycol	18.4	2.00
Carbitol Acetate	8.3	1.00
Ti-Pure R-931C	250.0	7.15
Asbestine 3X	35.0	3.20
325 Mesh WG Mica	25.0	1.10
Grind on Cowles Type Mixer		
Let Down:		
Nopco NDW	2.0	0.25
40-124 Wallpol	405.8	45.00
Water	16.7	2.00
	1151.90	103.69

FOR TINTS: When adjusting TiO_2 level, replace 1 lb. talc for every 2 lbs. TiO_2 removed.

Paint Properties	
Non-Volatiles	50%
pH	7.0-7.5
Viscosity	85-90 KU
Pigment Volume Concentration	33%
Weight/Gallon	11.1 lbs.
Raw Material Cost/Gallon	$1.66 (L.C.L.)
Contrast Ratio	.963 (Tinted .980)
Reflectance	.922 (Tinted .870 to .890)
Leveling	Very Good
Brushability	Excellent
Color and Sheen Uniformity	Very Good
Tint Retention	Excellent
Heat Stability (5 cycles, 135°F)	Pass
Freeze-Thaw Stability (3 cycles, 14°F)	Pass
Borax Stability	O.K.

THE BORDEN CHEMICAL COMPANY

EV 5-804 PL LOW-COST PVA INTERIOR-EXTERIOR WHITE AND TINT BASE based on Polyco® 804 PL

	Pounds	Gallons
Water	175.0	21.00
4800 cps. Methocel 90 HG DGS	2.5	.22
Potassium Carbonate	1.0	.05
Tamol 731	4.5	.50
Emulphor EL-719	3.0	.34
Potassium Tripolyphosphate	1.1	.06
R & R 551	4.8	.45
Troysan PMA-30	8.0	.82
Nopco NRZ	2.8	.27
Titanium Dioxide — RA-46 type	140.0	4.78
Asbestine 325	223.0	9.58
Iceberg Clay	75.0	3.50
Water	136.0	16.33
	775.1	57.91

Disperse on a Cowles Dissolver or similar high speed disperser* for approximately 20 minutes and let down with:

R & R 551	3.0	.34
Carbitol	35.0	1.74
Water	50.0	6.00
Polyco 804PL	232.0	25.30
Water and/or 3% 4000 cps. Methocel (90 HG DGS grade) and/or 10% K_2CO_3	177.0	21.20
	1252.1	112.49

Paint Properties	
Weight/Gallon	11.2 lbs.
Pigment Volume Concentration	58%
Solids Content	47%
Raw Material Cost/Gallon	$0.97
Viscosity (Krebs)	90-95 KU

EVT 1-804 PL PVA EXTERIOR MASONRY TINT BASE
based on Polyco® 804 PL

	Pounds	Gallons
Water	150	18.00
Potassium Carbonate	1	—
Tamol 731 — 25%	3	.33
Emulphor EL-719	3	.30
R & R 551	4	.46
Carbitol	17	1.98
Ethylene Glycol	18	1.94
Troysan PMA-30 or equal	10	1.02
Colloids 581B	1	.15
3% 4000 cps. Methocel (65 HG Grade) Solution	100	12.00
325 Mesh W. G. Mica	25	1.06
Rutile Titanium Dioxide — maximum chalk resistance	175	5.00
Asbestine 3X	175	7.36
	682	49.60

Disperse on a Cowles Dissolver* or similar high speed disperser for approximately 20 minutes and let down with:

R & R 551	3	.33
Polyco 804 PL	450	49.20
10% Potassium carbonate solution (for pH adjustment) and water and/or 3% 4000 cps. Methocel solution (for viscosity adjustment)	100	12.00
	1235	111.13

Paint Properties	
Weight/Gallon	11.12 lbs.
Pigment Volume Concentration	34.5%
Solids Content	51.1%
Raw Material Cost/Gallon	$1.36
Viscosity (overnight)	72-76 KU
pH	7.5-8.5

EAT 1-2718 ACRYLIC EXTERIOR TINT BASE
based on Polyco® 2718

	Pounds	Gallons
Water	100	12.0
3% 4000 cps. Methocel (65 HG grade) solution	71	8.5
Fergitol NP-14	5	0.6
R & R 551	2	0.2
Emulphor EL-719	2	0.2
Rutile Titanium Dioxide — maximum chalk resistance	150	4.7
Asbestine 3X	200	8.4
325 Mesh W. G. Mica	25	1.1
Carbitol	17	2.0
Ethylene Glycol	18	1.9
Troysan PMA-30	10	1.0
Colloids 581-B	1	0.1
	601	40.3

Add in the order listed and mix as a heavy paste for a minimum of 20 minutes. Disperse on a three-roll mill* and let down with:

R & R 551	3	0.3
Water	75	9.0
Polyco 2719	409	47.2
Concentrated ammonium hydroxide (for pH adjustment if required and water and/or 3% 4000 cps. Methocel solution (for viscosity adjustment)	39	4.7
	1126	101.5

Paint Properties	
Weight/Gallon	11.10 lbs.
Pigment Volume Concentration	39.6%
Solids Content	51.7%
Raw Material Cost/Gallon	$1.44
Viscosity (overnight)	72-76 KU
pH	8.0-9.0

EVT 1-0155 VINYL-ACRYLIC TERPOLYMER EXTERIOR TINT BASE
based on Polyco® 0155

	Pounds	Ga
Water	150	18
Potassium Carbonate	1	
Tamol 731 — 25%	3	
Emulphor EL-719	3	
R & R 551	4	
Carbitol	17	
Ethylene Glycol	18	
Troysan PMA-30 or equal	18	
Colloids 581B	1	
3% 4000 cps. Methocel (90 HG Grade) Solution	180	1
325 Mesh W. G. Mica	25	
Rutile Titanium Dioxide — maximum chalk resistance	175	
Asbestine 3X	175	
	682	4

Disperse on a Cowles Discolver* or a similar speed disperser for approximately 20 minutes let down with:

R & R 551	3	
Polyco 0155	450	4
10% Potassium carbonate solution (for pH adjustment) and water and/or 4000 cps. 3% Methocel solution (for viscosity adjustment)	100	1
	1235	11

Paint Properties	
Weight/Gallon	11.12 lbs.
Pigment Volume Concentration	34.5%
Solids Content	51.8%
Raw Material Cost/Gallon	$1.39
Viscosity (overnight)	72-76 KU
pH	7.5-8.5

EAP 1-2719 ACRYLIC EXTERIOR PRIMER
based on Polyco® 2719

	Pounds	G.
Water	50	
3% 4000 cps. Methocel (65 HG grade) solution	75	
R & R 551	2	
Fergitol NP-14	5	
Emulphor EL-719	2	
Rutile Titanium Dioxide — maximum chalk resistance	150	
Asbestine 3X	125	
325 Mesh W. G. Mica	25	
Carbitol	17	
Ethylene Glycol	18	
Troysan PMA-30	18	
Colloids 581-B	1	
	480	5

Add in the order listed and mix as a heavy pa a minimum of 20 minutes. Disperse on a thr mill* and let down with:

R & R 551	3	
Water	50	
Polyco 2719	353	4
Emulsified Raw Tung Oil**	71	
Concentrated ammonium hydroxide (for pH adjustment if required) and water and/or 3% 4000 cps. Methocel 65 HG grade) solution (for viscosity adjustment)	95	1
	1052	1

Paint Properties	
Weight/Gallon	10.62 lbs
Pigment Volume Concentration	78.4%
Solids Content	52.7%
Raw Material Cost/Gallon	$1.43
Viscosity (overnight)	72-76 KU
pH	8.0-9.0

EA 7 2719 LOW COST ACRYLIC INTERIOR-EXTERIOR
based on Pelyco® 2719

	Pounds	Gallons
Water	100	12.00
Methocel 4Cl Solution	75	9.00
Calcium Carbonate	1	0.05
TSPP	2	0.10
Tamol 731	3	0.33
Emulphor EL 719	3	0.34
DF & R 551	4	0.46
Rutile Titanium Dioxide (chalk resistant)	200	5.73
CP 300	30	1.40
Asbestine 325	150	6.43
325 Mesh W. G. Mica	25	1.87
Carbitol Solvent	4	0.48
Ethylene Glycol	18	1.94
Amyzan PMA 30	7	0.71
Proxcel NL2	2	0.27
	624	30.91

Disperse on a Cowles Dissolver* or similar high speed disperser for approximately 20 minutes and let down with

Water	100	12.00
Pelyco 2719	245	29.25
Water and/or 3% 4800 cps. Methocel 90 HG 06S solution (for viscosity adjustment) and/or 10% K_2CO_3 (for pH)	237	28.44
	1223	100.00

Paint Properties

Weight/Gallon	12.23 lbs.
Pigment Volume Concentration	56.1%
Solids Content	43.0%
Raw Material Cost/Gallon	$1.23
Viscosity	80-85
pH	9.0-9.5

EVERBOND 55 OIL-MODIFIED VINYL-ACRYLIC TERPOLYMER EXTERIOR TINT BASE based on Pelyco® 8655

	Pounds	Gallons
Water	100.0	12.00
TSPP	2.0	0.10
Natrosol 250 MR	1.0	0.08
Tamol 38	10.0	1.04
Surfynol NP-14	5.0	0.58
DF & R 551	2.0	0.23
Emulphor EL-719	2.0	0.23
Rutile Titanium Dioxide (maximum chalk resistant)	193.0	5.52
Asbestine 3X	180.0	7.56
325 Mesh W. G. Mica	30.0	1.78
Carbitol Solvent	8.5	0.99
Ethylene Glycol	20.0	2.15
Amyzan PMA-30	10.0	1.07
Proxcel NL2	2.0	0.22
Water	166	2.00
2% Natrosol 250 MR Solution	50.1	6.00
3% Natrosol 250 MR Solution	632.1	41.07

Disperse on a Cowles Dissolver* or similar high speed disperser for approximately 20 minutes and let down with

DF & R 551	3.0	0.34
Emulsifiable Raw Tung Oil**	44.0	5.50
Pelyco 8155	462.0	50.50
Water and/or 2% 250 MR Solution and/or 10% K_2CO_3 Solution	230	2.76
	1164.1	100.17

Paint Properties

Weight/Gallon	11.60 lbs.
Pigment Volume Concentration	31.7%
Solids Content	61.0%
Raw Material Cost/Gallon	$1.84
Viscosity	85-90 KU
pH	7.8-8.5

Based on Burdyn Formulations.
*Adjustments for other types of dispersing equipment can be readily made by varying the amount of water in the pigment paste.
**Composition: 80.5 parts raw tung oil, 7.0 parts Foramer NPA, 0.4 parts boiler naphthenate drier, 1.4 parts cobalt naphthenate drier.

E. I. DU PONT DE NEMOURS & CO., INC.

E-1157A-8A HIGH PERFORMANCE MASONRY PAINTS
based on Elvacet® Polyvinyl Acetate Emulsions

	E-1157A White	E-1158A Tint Base
	(Pounds/100 Gallons)	
Pigment Grind		
Water	148	148
Carbitol diethylene glycol monoethyl ether	30	30
Tamol 731 dispersing agent	7	7
Makon 10 wetting agent	4	4
Potassium tripolyphosphate	1	1
Wilco 912 wetting agent	4	4
TI-PURE R-960 titanium dioxide, rutile	200	175
TI-PURE FF or PC titanium dioxide, anatase	50	—
Asbestine 325	247	300
Mica, 325 mesh, waterground	30	30
Colloid 581 B antifoam	1	1
Cellosize WP-4400 hydroxyethyl cellulose, 2% soln.	52	52
Reduction		
Cellosize WP-4400, 2% soln.	44	44
Colloid 581-B antifoam	1	1
Elvacet emulsion Grade 1454	355	355
2 Amino 2-methyl-1-propanol	3	3
Water and/or thickener soln.*	43	43
Super Ad-it preservative	10	10
Paint Properties		
Pigment Volume Concentration	46.3%	46.2%
Nonvolatiles, by weight	60.5%	59.8%
Weight/Gallon	12.3 lbs.	12.0 lbs.
Consistency, (approx.)*	76 K.U.	84 K.U.
pH (approx.)	7	7

(Pigment)

*Consistency based on the use of water only.

E-4818 EXTERIOR WHITE
based on Elvacet® PB 3-1952 Acetate/Ethylene Copolymer Emulsion

	Lb (Wet)	Gal. (Wet)	$ Cost*	Lb. (Dry)
Pigment Grind				
Water	114.8	13.80	.00	0
Tamol 731 dispersing agent	10.8	1.09	1.85	2.5
Potassium tripolyphosphate	1.5	.08	.27	1.5
Propylene glycol	25.0	2.90	3.12	0
Colloid 581B antifoamer	2.0	.30	.47	2.0
TI-PURE R-610 titanium dioxide	236.4	6.87	63.04	236.4
TI-PURE FF titanium dioxide	19.2	.60	4.79	19.2
Cellosize WP-4400, 3%	49.9	5.96	1.03	1.5
Water	22.0	2.64	.00	.8
Asbestine 325	144.1	6.17	3.48	144.9
Celite 281 diatomaceous silica	25.0	1.30	1.10	25.0
Mica, 325-mesh waterground	25.0	1.06	2.25	25.0
Reduction				
Cellosize WP-4400, 3%	59.9	7.12	1.24	1.8
Elvace PB 3-1952 (55%)	398.4	44.26	74.70	219.1
Super Ad-it preservative	10.0	1.23	14.98	2.1
Water	10.0	1.20	.00	.0
Ammonia solution, 28%	.5	.07	.02	.0
Water	24.8	2.88	.00	.0
TOTALS	1178.3	100.00	173.14	680.9

*Costs shown are based on published prices (1/67).

Paint Properties

Pigment Volume Concentration	40.7%
Nonvolatiles, by weight	57.8%
by volume	39.5%
Consistency	84-88 K.U.
Heat stability (28 days at 120°F)	96-100 K.U.
Freeze-thaw stability (16 hrs. at 0°F / 8 hrs. at 74°F)	> 5 cycles
pH	7.7
Wet adhesion	excellent
Blister resistance	good
Low temperature coalescence	good
Hiding power (0.002" wet film drawdown) Contrast ratio	0.931
5%	4.78
Theoretical 1-mil Coverage/Gallon	626 sq. ft.

E-1069 GENERAL PURPOSE F
based on Elvacet® Polyvinyl A

Pigment Grind
Water
Tamol 731 dispersing agent (25% solution)
Surfynol NPX wetting agent
Dibutyl phthalate
TI-PURE R-911 or R-510 titanium dioxide, rutile
Asbestine 3X
Satintone No. 1 calcined clay
Celite 281 diatomaceous silica
Colloid 581-B antifoam
Water

Reduction
Water
Cellosize WP-4400 hydroxyethyl cellulose, 2% solution
Colloid 581-B antifoam
Wilco 912 wetting agent
Carbitol diethylene glycol monoethyl ether
Diethylene glycol
Elvacet emulsion grade 1430
Troysan PMA-30 preservative
Water and/or thickener solution

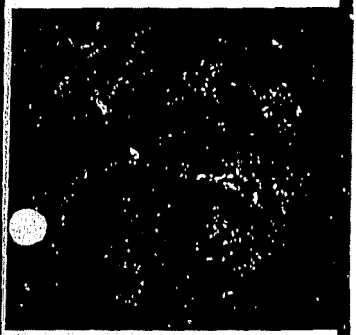
Paint Properties
Pigment Volume Concentration
Nonvolatiles, by weight
Weight/Gallon
Consistency (approx.)*
pH (approx.)

Following are the suppliers of raw materials included in the formulations. In most cases, the names used are registered trademarks or trademarks of the companies listed:

ASP-100, 400	Minerals & Chemicals Philipp Corporation
CARBITOL	Union Carbide Corporation
CELITE	Johns Manville
CELLOSIZE QP-4400	Union Carbide Corporation
COLLOID 677, 581-B	Colloids, Inc.
DAXAD 30	W. R. Grace & Co., Dewey & Almy Chemical Div.
ELVACE ACETATE/ ETHYLENE COPOLYMER	E. I. du Pont de Nemours & Co., Inc.
ELVACET POLYVINYL ACETATE	E. I. du Pont de Nemours & Co., Inc.
EMULPHOR EL-719	General Aniline & Film Corp., Dyestuff & Chem. Div.
IGEPAL	General Aniline & Film Corp., Dyestuff & Chem. Div.
MAKON 10	Stepan Chemical Co.
METHOCEL	The Dow Chemical Co.
325 MESH WG MICA	English Mica Co.
NATROSOL 250HR	Hercules Powder Company, Inc.
NOPCO NDW	Nopco Chemical Company
PMA-18	Nuodex Products Div., Heyden-Newport Chem. Corp.
POLYCO	Borden Chemical Co.
POTASSIUM TRIPOLYPHOSPHATE	Victor Chemicals, Div. of Stauffer Chemical Co.
R&R 551	Ross-Rowe, Inc.
SATINTONE #1	Minerals & Chemicals Philipp Corp.
SUPER AD-IT	Nuodex Products Div., Heyden-Newport Chem. Corp.
TAMOL 731, 850	Rohm & Haas Company
TERGITOL NPX	Union Carbide Corporation
TI-PURE TITANIUM DIOXIDE	E. I. du Pont de Nemours & Co., Inc.
TITANOX	National Lead Co., Titanium Pigment Division
TROYSAN	Troy Chemical Co.
WALLPOL	Reichhold Chemicals, Inc.

ASBESTINE® 3X

This is a fibrous, general-purpose pigment of medium consistency that works well in both interior and exterior paints based on oil, oleoresinous and water-emulsion systems.



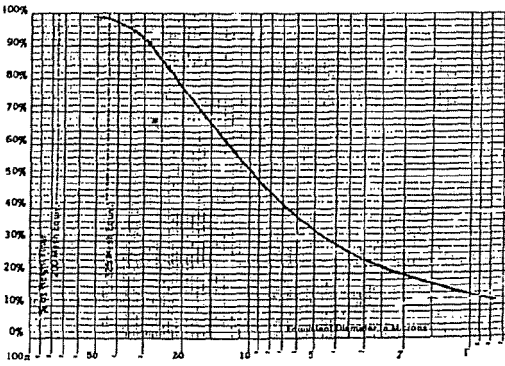
75x Magnification

TYPICAL PHYSICAL CONSTANTS

% Less Than 325 Mesh	98.5 ± 0.5%
Average Particle Size	9.0 Microns
Oil Absorption (Gardner-Coleman Cup Method)	38 ± 3
Color (Tri-Stimulus Green)	90 Minimum
Paint Consistency	79 ± 4 KU
Water Absorption	120 ± 10
Specific Gravity	2.78
Weight Per Solid Gallon	23.16 lbs.
1 lb. Bulk/Gallons	0.04318
Volume/100 Grams (Loose)	224cc
(Tamped)	91cc
Moisture	0.24%
Structure	Acicular
Hegman	0-2

TYPICAL CHEMICAL ANALYSIS

SiO_2	53.44%
MgO	30.30%
CaO	6.92%
R_2O_3	1.08%
MnO	0.12%
CO_2	0.52%
Loss on Ignition	5.9 %
pH, 10% Slurry	9.4
Water Solubility	Trace



PARTICLE SIZE DISTRIBUTION

% less than 44 Microns...98.5 ± 0.5	% less than 10 Microns . 53
% less than 30 Microns...93	% less than 5 Microns...34
% less than 20 Microns...78	% less than 2 Microns.. 20
% less than 15 Microns...67	% less than 1 Micron... 13

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Phone 212-532-0833

MINES and MILLS
Gouverneur, New York

ASBESTINE® X

EXHIBIT

Asbestine X is a semi-fibrous talc of low oil demand with a high PVC potential in a low KU range. It can be used in interior paints, and is especially recommended for exterior tint-based formulations.

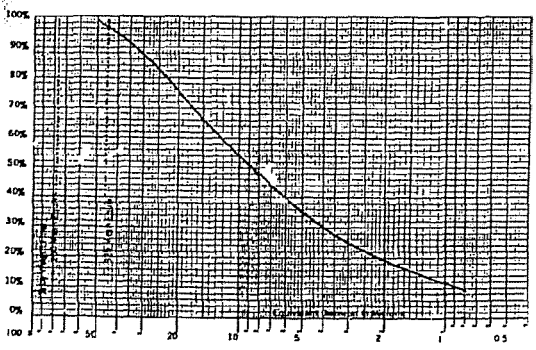
75x Magnification

TYPICAL PHYSICAL CONSTANTS

% Less Than 325 Mesh	98.5 ± 0.5%
Average Particle Size	7.6 Microns
Oil Absorption (Gardner-Coleman Cup Method)	31 ± 3
Color: (Tri-Stimulus Green)	90 Minimum
Paint Consistency	72 ± 3 KU
Water Absorption	88 ± 10cc
Specific Gravity	2.79
Weight Per Solid Gallon	23.24 lbs.
1 lb. Bulk/Gallons	0.04303
Volume/100 Grams (Loose)	216cc
(Tamped)	87cc
Moisture	0.20%
Structure	Granular
Hegman	0 – 1

TYPICAL CHEMICAL ANALYSIS

SiO_2	62.64%
MgO	26.08%
CaO	5.48%
R_2O_3	0.45%
MnO	0.44%
CO_2	0.55%
Loss on Ignition	3.8 %
pH, 10% Slurry	9.5
Water Solubility	Trace



PARTICLE SIZE DISTRIBUTION

% less than 44 Microns ..88.5 ± 0.5	% less than 10 Microns ..57
% less than 30 Microns ..80	% less than 5 Microns ..38
% less than 20 Microns ..78	% less than 2 Microns ..21
% less than 15 Microns ..69	% less than 1 Micron ..14

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ASBESTINE® 325

Tailored by our unique process, Asbestine 325 offers good suspension and antisagging properties in a semifibrous talc with medium oil absorption and consistency. Recommended for quality oil and water-emulsion paints. Noted for its ease of dispersion and good suspension without chemical additives.

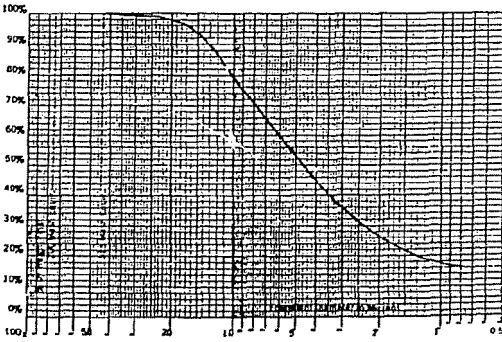
75x Magnification

TYPICAL PHYSICAL CONSTANTS

% Less Than 325 Mesh	99.95% Minimum
Average Particle Size	4.6 Microns
Oil Absorption (Gardner-Coleman Cup Method)	39 ± 3
Color (Tri-Stimulus Green)	90 Minimum
Paint Consistency	78 ± 4KU
Water Absorption	95 ± 10
Specific Gravity	2.78
Weight Per Solid Gallon	23.16 lbs.
1 lb. Bulk/Gallons	0.04319
Volume/100 Grams (Loose)	240cc
(Tamped)	100cc
Moisture	0.85%
Structure	Acicular-Platey
Hegman	4 Minimum

TYPICAL CHEMICAL ANALYSIS

SiO_2	52.84%
MgO	31.09%
CaO	8.28%
R_2O_3	0.84%
MnO	0.12%
CO_2	0.80%
Loss on Ignition	6.92%
pH, 10% Slurry	9.5
Water Solubility	Trace



PARTICLE SIZE DISTRIBUTION

% less than 44 Microns..99.95	% less than 10 Microns..79
% less than 30 Microns..99.5	% less than 5 Microns..54
% less than 20 Microns..88	% less than 2 Microns..27
% less than 15 Microns..84	% less than 1 Micron..18

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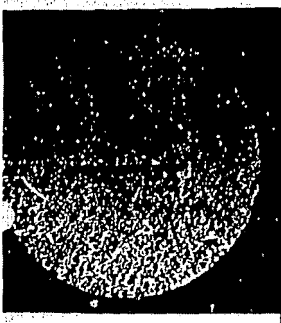
ASBESTINE® FT

This is a fine-textured, fibrous talc that is suitable for both interior and exterior formulations.



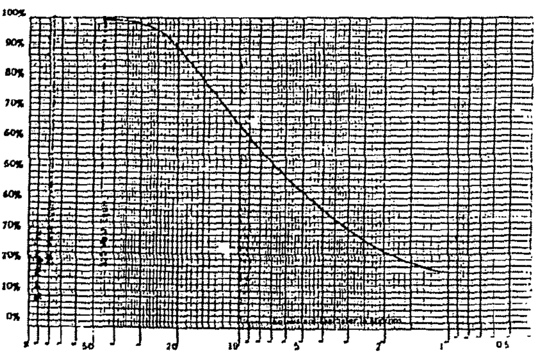
75x Magnification

TYPICAL PHYSICAL CONSTANTS

% Less Than 325 Mesh	99.5% Minimum
Average Particle Size	6.0 Microns
Oil Absorption (Gardner-Coleman Cup Method)	39 ± 3
Color (Tri-Stimulus Green)	90 Minimum
Paint Consistency	80 ± 4 KU
Water Absorption	105 ± 10cc
Specific Gravity	2.78
Weight Per Solid Gallon	23.16 lbs.
1 lb. Bulk/Gallons	0.04318
Volume/100 Grams (Loose)	252cc
(Tamped)	98cc
Moisture	0.27%
Structure	Acicular
Hegman	1-3

TYPICAL CHEMICAL ANALYSIS

SiO_2	54.22%
MgO	30.27%
CaO	6.58%
R_2O_3	0.56%
MnO	0.12%
CO_2	0.77%
Loss on Ignition	6.57%
pH, 10% Slurry	9.5
Water Solubility	Trace



PARTICLE SIZE DISTRIBUTION

% less than 44 Microns	98.8
% less than 30 Microns	[illegible]
% less than 20 Microns	92
% less than 15 Microns	82
% less than 10 Microns	67
% less than 5 Microns	45
% less than 2 Microns	26
% less than 1 Micron	19

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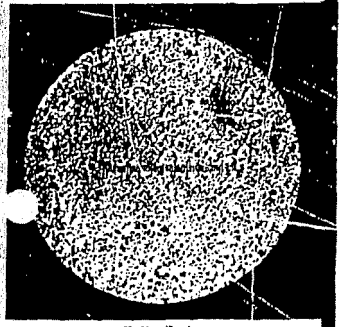
ASBESTINE® 425

Asbestine 425 is a semi-fibrous talc with medium to high oil demand. This "stir-in" pigment has good suspension properties and is recommended for industrial paints. It is tailored by our unique process which eliminates coarse particles and provides balanced particle-size distribution.



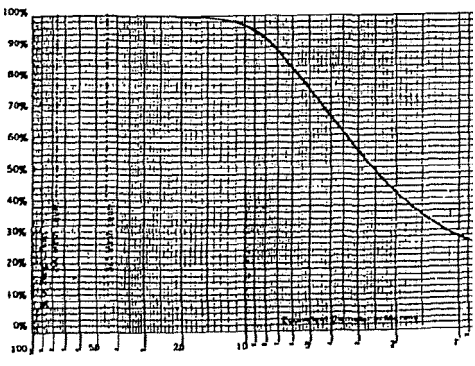
1Ka Magnification

TYPICAL PHYSICAL CONSTANTS

% Less Than 325 Mesh	99.95% Minimum
Average Particle Size	2.5 Microns
Oil Absorption (Gardner-Coleman Cup Method)	45 ± 4
Color (Tri-Stimulus Green)	90 Minimum
Paint Consistency	91 ± 4 KU
Water Absorption	135 ± 15cc
Specific Gravity	2.76
Weight Per Solid Gallon	22.99 lbs.
1 lb. Bulk/Gallons	0.0435
Volume/100 Grams (Loose)	38cc
(Tamped)	18cc
Moisture	0.50%
Structure	Acicular-Platey
Hegman	6 Minimum

TYPICAL CHEMICAL ANALYSIS

SiO_2	52.84%
MgO	31.09%
CaO	8.28%
R_2O_3	0.64%
MnO	0.12%
CO_2	0.80%
Loss on Ignition	6.92%
pH, 10% Slurry	9.5
Water Solubility	Trace
Acid Solubility (6N HCl)	11.2 %



PARTICLE SIZE DISTRIBUTION

% less than 44 Microns. Trace	% less than 10 Microns. . 97.5
% less than 30 Microns. Trace	% less than 5 Microns. . 78
% less than 20 Microns. . . 99.9	% less than 2 Microns. . 45
% less than 15 Microns. . . 99.6	% less than 1 Micron. . . 30

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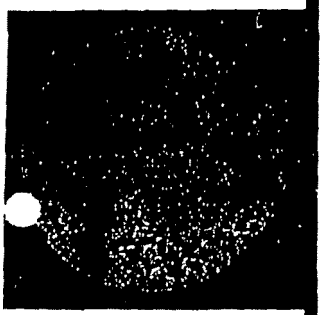
ASBESTINE® 5X

EXHIBIT

Our most fibrous grade. High consistency and oil absorption. It is recommended for exterior oil and water-emulsion formulations and is excellent for texture paints.



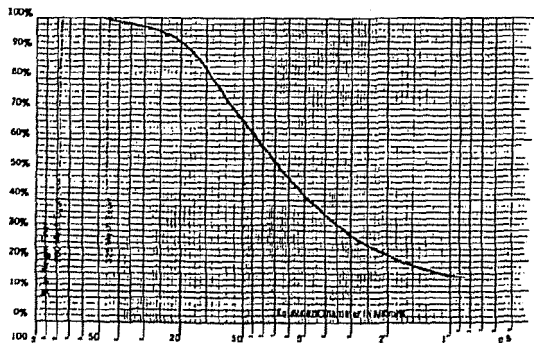
75x Magnification

TYPICAL PHYSICAL CONSTANTS

% Less Than 325 Mesh	99.5% Minimum
Average Particle Size	6.2 Microns
Oil Absorption (Gardner-Coleman Cup Method)	46 ± 3
Color (Tri-Stimulus Green)	.90 Minimum
Paint Consistency	85 KU Minimum
Water Absorption	135 ± 10cc
Specific Gravity	2.78
Weight Per Solid Gallon	23.16 lbs.
1 lb. Bulk/Gallons	0.04318
Volume/100 Grams (Loose)	260cc
(Tamped)	104cc
Moisture	0.27%
Structure	Fibrous
Hegman	0-1½

TYPICAL CHEMICAL ANALYSIS

SiO_2	55.52%
MgO	30.37%
CaO	0.9 %
R_2O_3	0.48%
MnO	0.14%
CO_2	0.68%
Loss on Ignition	6.28%
pH, 10% Slurry	9.4
Water Solubility	Trace



PARTICLE SIZE DISTRIBUTION

% less than 44 Microns...99.5	% less than 10 Microns...66
% less than 30 Microns...97	% less than 5 Microns...43
% less than 20 Microns...93	% less than 2 Microns...23
% less than 15 Microns...85	% less than 1 Micron....15

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INTERNATIONAL 6N F

This is a magnesium silicate reinforcing pigment that is recommended where lower oil absorption and consistency are required than are found in our regular grade of International Fibre.

It offers good extrusion and anti-slump properties like the other grades of International Fibre, its natural white color enhances the finished appearance of both white and colored caulking compounds. Suitable for both knife and gun applications.

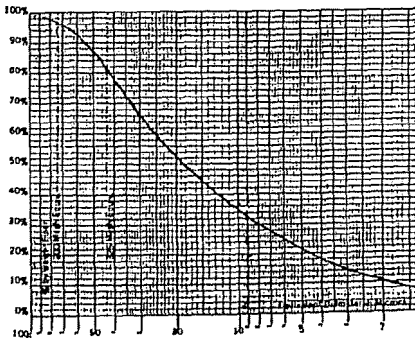
75x Magnification

TYPICAL PHYSICAL CONSTANTS

% Less Than 325 Mesh	
Average Particle Size	18
Oil Absorption (Gardner-Colaman Cup Method)	
Color (Tri-Stimulus Green)	66
Water Absorption	
Specific Gravity	
Weight Per Solid Gallon	
1 lb. Bulk/Gallons	
Volume/100 Grams (Loose)	
(Tamped)	
Moisture	
Structure	
Hegman	

TYPICAL CHEMICAL ANALYSIS

SiO_2	
MgO	
CaO	
R_2O_3	
MnO	
CO_2	
Loss on Ignition	
pH, 10% Slurry	
Water Solubility	



PARTICLE SIZE DISTRIBUTION

% less than 44 Microns...90 ± 5%	% less than 10 Micro
% less than 30 Microns...85	% less than 5 Micro
% less than 20 Microns...53	% less than 2 Micro
% less than 15 Microns...45	% less than 1 Micro

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