



SIERRA MISTRON[®] TALCS

SELECTED TYPES

PRODUCED TO ULTRA FINE PARTICLE SIZE

MINED AND SCIENTIFICALLY GRADED BY

SIERRA TALC & CLAY CO.

PLAINTIFF'S
EXHIBIT
CAM-12

NAP 70128552
SERIES "D"

THAN 1480

SIERRA MISTRON

... is the registered trade mark of the ultra fine micron talcs produced by Sierra Talc & Clay Company. SIERRA MISTRON TALCS are available in a full variety of types and a range of particle size extending far below the conventional 325 mesh (44 micron) sieve gradings.

SIERRA MISTRON TALCS are superior in quality and variety to any other fine particle size talcs that have ever been produced for industrial use.

SIERRA MISTRON TALCS, scientifically conceived, produced, and controlled, have the following outstanding properties:

1. Complete control of top particle size. No oversize.
2. Particle size distribution controlled in the fine micron range.
3. Available in platey, granular, and acicular particle shapes and in combinations thereof.
4. Whitest color.
5. Non-abrasiveness.
6. Completely inert.

MESH COMPARISON	
44 microns =	325 Mesh
20 " =	825 Mesh
10 " =	1,250 Mesh
5 " =	2,500 Mesh
2 1/2 " =	5,000 Mesh
1 " =	12,500 Mesh

MISTRON T-076

• TOP PARTICLE SIZE 10 MICRONS

MISTRON F-128

• TOP PARTICLE SIZE 14 MICRONS

MISTRON HG-75

• TOP PARTICLE SIZE 12 MICRONS

MISTRON HGO-75

• TOP PARTICLE SIZE 10 MICRONS

MISTRON MSC

• TOP PARTICLE SIZE 7.5 MICRONS

PHYSICAL AND CHEMICAL PROPERTIES

	MISTRON T-076	MISTRON F-128	MISTRON HG-75	MISTRON HGO-75	MISTRON MSC
PARTICLE SIZE DATA					
Surface mean diameter in microns	0.85	1.28	0.78	0.81	1.10
% finer than 20 microns	100.0	100.0	100.0	100.0	100.0
% finer than 15 microns	100.0	97.4	100.0	100.0	100.0
% finer than 10 microns	100.0	94.6	98.3	100.0	100.0
% finer than 5 microns	81.4	67.0	77.2	78.3	92.0
% finer than 1 micron	20.4	13.0	15.0	13.3	19.3
% finer than 0.5 micron	5.8	3.6	3.2	2.8	4.5
CHEMICAL PROPERTIES					
Combined calcium and magnesium silicates, %	90.88	89.59	92.69	91.01	90.88
Loss on ignition, %	6.42	8.77	5.38	5.62	6.42
Acid solubles as CaO, %	3.5	5.7	0.5-1.0	0.9-1.2	4.5
pH (1-5 suspension)	9.30	9.40	9.30	9.31	9.70
Specific resistance	7,035	7,170	15,350	15,160	5,475
PHYSICAL PROPERTIES					
Specific gravity	2.79	2.79	2.75	2.76	2.79
Weight per solid gallon	23.24	23.24	22.91	22.99	23.24
One lb. bulk, gallons	.04303	.04303	.04365	.04350	.04303
Apparent density (lbs/ft ³) (by Scott Volumeter)	11.82	11.93	8.72	10.51	10.20
CONSISTENCY					
Stormer					
— As grams/100 rev/30 sec.	297	261	344	576	127
— As Krebs Units (40% linseed oil suspension)	95	90	100	118	67
CHARACTERISTICS IN OIL					
Oil absorption					
— Gardner Coleman, ml/20 gm	12.4	11.2	14.6	14.8	9.8
— Spectra rub-out, lbs/100lbs.	51.2	40.6	54.8	53.2	35.5
Hegman Fineness	6.5	6.5	7.0	7.0	6.5
TRISTIMULUS COLOR TESTS					
Luminous apparent reflectance (green filter)	88.0	88.0	85.0	88.5	81.0
% Yellowness	3.41	3.41	4.12	2.26	0.62

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Interesting Applications for Sierra Mistron Talcs...

PAINT

No other extender offers the paint manufacturer as many advantages as does SIERRA MISTRON TALC. Consider what Mistron talcs will do in *YOUR* plant:

1. The grind of a paint as measured by the Hegman gauge is proportionate to its COARSEST particles. The coarsest particles in Mistron talcs are no greater in thickness than that of the finest enamel film. RESULT: Less grind, a smoother film, and lower production cost.
 2. Mistron talcs are "mix-in" extenders—require no grind if properly wetted and dispersed.
 3. They are a handy tool for quick consistency increase either in initial formulation or as an alter-mix to correct manufacturing deficiencies.
 4. They make possible a wide range of flats or semi-gloss paints and varnishes due to their quick flattening effect. They are the handiest products available for control of sheen in eggshell enamels.
 5. They improve suspension and promote can stability.
 6. They improve brushing at the same time as they reduce sagging.
 7. In sealers they impart smoothness, promote adhesion, and enhance "stand-out" of the finish coat. Require little or no sanding.
- The selection of a particular Mistron talc depends upon the properties desired. Sierra Mistron talcs are made in a wide enough range of types to fit any need.

MISTRON T-076: This is the most versatile Mistron. It is high enough in oil absorption for sufficient flattening but does not build up too high a consistency. It can be safely used in any type of paint or varnish, including latex emulsion paints.

MISTRON F-128: Recommended for use where lower consistency and less flattening is desired than with T-076. Permits greater pigment loading.

MISTRON HG-75: Its great uniformity of particle shape makes it ideal for sanding sealers and for paints that have to pass rigid salt-spray and flexibility tests.

MISTRON HGO-75: Yields the highest consistency of any Mistron. Its low soluble salts content as indicated by its high specific resistance and its platy particle shape makes it the recommended grade for all latex and other types of emulsion paints.

MISTRON MSC: This sensational new coated Mistron offers many intriguing possibilities. The finest of all the Mistrons, it is at the same time the lowest in oil absorption and consistency. It can be used up to 28% in alkyd gloss enamels without flattening. It adds great slip and flow to enamels that are ordinarily difficult to spread without sagging. It is non-settling in primers and enamels.

SIERRA MISTRON TALCS will solve many of your manufacturing difficulties, improve your product, and lower your production costs.

PLASTICS

Mistron T-076 is recommended for use in any plastic product where a mineral filler is indicated. It has proven particularly valuable as a filler in polyester resin-fiberglass molded or laminated plastics. It promotes acid resistance because of its low carbonate content. Its

irregular particle shape and extreme fineness retard settling. It is non-hygroscopic. It improves corrosion resistance. It promotes a smoother finish. It will not break down under forcing heat or pressure. It will not absorb an excessive amount of the plastic. It permits heavier loading.

PRINTING INK

Most of the properties that make Mistron valuable in paint manufacture are applicable to printing ink except that softness and non-abrasiveness are even more important than in paint. Hard or gritty extenders cause undue type wear when the ink is used. The printing ink

manufacturer is assured of soft texture and freedom from hard oversize particles when using Mistron. Mistron T-076 has found favor in some of the largest printing ink plants in the country. Any of the Mistrons except F-128 are suitable for this use because they all meet the above requirements of the industry.

PAPER

The paper industry has never before had available a filler or coating talc of the quality of MISTRON HGO-75. Its great brightness, extreme fineness, and platy particle structure make it the ideal extender for titanium dioxide. Calendered paper will take on a greater

smoothness and a better writing or printing surface when Mistron HGO-75 is used than with any other filler. It is non-abrasive on screens and cutting knives. Its low carbonate content assures its non-reactivity with alum. It will detract from hiding power and opacity to a lesser degree than other commonly used minerals.

CERAMICS

Where increased body density or increased consistency is desired in ceramics MISTRON HG-75 will prove a valuable product. Being the most chemically pure of the various Mistrons it is particularly recommended for use in steatite insulators and other types of electrical ceramics. Due to its extremely fine particle size and uniform granular

particle shape, it tends to fill the pores and greatly increase density of the green and fired ware. This greater density has been found to improve the electrical properties of such ceramics. Greater shrinkage due to greater fineness can largely be compensated for by increasing the forming pressure of dry pressed bodies.

COSMETICS

Mistron HGO-75 meets all the requirements of the cosmetic industry. Its platy particle shape imparts smoothness and slip. It is uniformly white and remarkably pure. Its low apparent density imparts bulk and fluffiness to face and body powders. Its fine particle size and

excellent suspension properties indicate its value in liquid and semi-liquid cosmetics. It is an excellent extender for zinc or titanium dioxide. It is completely inert. Mistron HGO-75 will not cause loss of fragrance or color shadings.

A study of the interesting properties of the various SIERRA MISTRONS should indicate their value in many other industrial products not mentioned in this pamphlet. Further information on Mistron will be forwarded on request.

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S IERRA Talc & Clay Company,
with headquarters in South Pasadena, operates
four mills, located in Los Angeles and in the
Owens Valley of California as well as in Grand
Island, Nebraska. Fourteen mining properties
operated by Sierra in California, Nevada and
Montana yield all the known types of talc—
steatite, fibrous, platey, and tremolitic. Control
laboratories are located at each mill, and a large
central laboratory is maintained at headquarters
for research and development.

The availability of necessary raw
talcs, plus expert mining technique, production
know-how and laboratory control and research,
makes possible a SPECIFIC Sierra Talc for
every known use.

CERAMICS
COSMETICS
PHARMACEUTICALS
PAINT MANUFACTURING
TEXTILE FINISHING
SOAP MANUFACTURING

PAPER MAKING
RUBBER
PRINTING INKS
PLASTICS
RICE COATING
INSECTICIDES



For the complete story of Sierra Talcs, our handy and
complete loose Talc Portfolio will be sent you on request.
Full specifications on ALL our Talcs for ALL uses are con-
tained in this portfolio together with results of our research
projects. Individual pamphlets similar to this are also
available covering the specific industries listed above.



SIERRA TALC & CLAY CO.

LOS ANGELES, SOUTH PASADENA, KEELER, OLANCHA — CALIFORNIA • GRAND ISLAND, NEBRASKA

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