

# COFFEYVILLE, KANSAS

## BOUND BROOK, N.J.

PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT

Issued August 1, 1964

| PRODUCT                                                       | GRADE                           | SERIAL<br>NUMBER | SPECIFICATIONS |                        | USES                                                                                                                                                                                    |
|---------------------------------------------------------------|---------------------------------|------------------|----------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                               |                                 |                  | ASTM           | GOVERNMENT             |                                                                                                                                                                                         |
| ZINC OXIDE<br>(ZnO)                                           | OZIDE 10R                       | 40               |                |                        | Rubber activator; ceramics;<br>abrasives; agricultural zinc<br>deficiencies; lubricant addi-<br>tives; matches; paint pigment;<br>chemical smokes; floor cover-<br>ings.                |
|                                                               | OZIDE 10R B8                    | 51               |                |                        |                                                                                                                                                                                         |
|                                                               | OZIDE 22P                       | 58               | D79-44         | M124-46 (1)            |                                                                                                                                                                                         |
|                                                               | OZIDE 20                        | 41               | D79-44         | TT-P-463a<br>TT-P-301a |                                                                                                                                                                                         |
| LEADED ZINC OXIDES<br>(ZnO, PbO, PbSO <sub>4</sub> )          | OZLO 12                         | 48               | D80-61         |                        | Exterior paints.                                                                                                                                                                        |
|                                                               | OZLO 18M                        | 49               | D80-61         |                        |                                                                                                                                                                                         |
|                                                               | OZLO 35                         |                  |                |                        |                                                                                                                                                                                         |
|                                                               | OZLO 50                         |                  |                |                        |                                                                                                                                                                                         |
|                                                               | OZLO 55                         |                  |                |                        |                                                                                                                                                                                         |
| AGRICULTURAL<br>ZINC COMPOUNDS                                | NUZIDE 78S                      | 43               |                |                        | Spray application - Corrects<br>nutritional zinc deficiencies.<br>Fertilizer (ground application)<br>zinc deficiencies.                                                                 |
|                                                               | NUZIDE 76F                      | 44               |                |                        |                                                                                                                                                                                         |
| ZINC SULFATE<br>(ZnSO <sub>4</sub> ·H <sub>2</sub> O)         | 360                             | 45               |                |                        | Paint and varnish processing.<br>Alleviate agricultural zinc<br>deficiencies; rayon manufacture;<br>flotation reagent clarification<br>glue; wood preservation;<br>electro galvanizing. |
|                                                               | 361-S                           | 46               |                |                        |                                                                                                                                                                                         |
|                                                               | 360-G                           |                  |                |                        |                                                                                                                                                                                         |
|                                                               | 362S, 361S + sulfuric<br>acid.  |                  |                |                        |                                                                                                                                                                                         |
| BARIUM CARBONATE<br>(BaCO <sub>3</sub> )                      | 75C                             | 30               |                | JAN-B-624              | Beet sugar refining; flat wall<br>paints; ceramics; linoleum;<br>brick manufacture to prevent<br>efflorescence; glass manu-<br>facture; Ba titanate; Ba<br>ferrites; ammunition.        |
|                                                               | 50F                             | 31               |                | "                      |                                                                                                                                                                                         |
|                                                               | 70F                             | 32               |                | "                      |                                                                                                                                                                                         |
|                                                               | 90F                             | 33               |                | "                      |                                                                                                                                                                                         |
|                                                               | 135G                            | 34               |                | "                      |                                                                                                                                                                                         |
|                                                               | 145G                            | 36               |                | "                      |                                                                                                                                                                                         |
|                                                               | 45T                             | 35               |                | "                      |                                                                                                                                                                                         |
|                                                               |                                 |                  |                |                        |                                                                                                                                                                                         |
| BARIUM MONOHYDRATE<br>(Ba(OH) <sub>2</sub> ·H <sub>2</sub> O) |                                 | 47               |                |                        | Oil additives; plastic stabil-<br>izers and inhibitors; printing<br>inks, water softening; beet<br>sugar refining.                                                                      |
| LITHOPONE<br>(ZnS + BaSO <sub>4</sub> )                       | PERMOLITH 20L                   | 53               | D477-45        | TT-P-400               | Latex emulsion paints; leather;<br>linoleum; chalks; crayons;<br>rubber; plastics; patching<br>plaster and crack filler;<br>paper filler.                                               |
|                                                               | PERMOLITH 40M                   | 54               | "              | "                      |                                                                                                                                                                                         |
|                                                               | PERMOLITH 60H                   | 52               | "              | "                      |                                                                                                                                                                                         |
|                                                               | PERMOLITH W320                  | 55               | "              | "                      |                                                                                                                                                                                         |
|                                                               | PERMOLITH W421                  | 57               | "              | "                      |                                                                                                                                                                                         |
|                                                               | PERMOLITH 60N                   | 56               | "              | "                      |                                                                                                                                                                                         |
|                                                               | PERMOLITH 60J                   |                  | "              | "                      |                                                                                                                                                                                         |
| ARSENIC ACID<br>(H <sub>3</sub> AsO <sub>4</sub> )            | Regular, Clari-<br>fied BD-1124 | 60               |                |                        | Manufacture of insecticides,<br>pharmaceuticals, dyes, pigments,<br>wood preservatives, cotton<br>defoliation.                                                                          |
|                                                               | Special Grade<br>BD-1083        | 59               |                |                        |                                                                                                                                                                                         |
|                                                               |                                 |                  |                |                        |                                                                                                                                                                                         |

(1) Complete listing of applicable paint specifications is available upon request.

# AUXILIARIES DEPT.

## PRODUCTS

### COFFEYVILLE, KANSAS

ISSUED: November 1, 1968

| PRODUCT                                                        | GRADE           | SERIAL<br>NUMBER | SPECIFICATIONS |            | USES                                                                                                                                                                                     | TYPICAL PROPERTIES |         |
|----------------------------------------------------------------|-----------------|------------------|----------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------|
|                                                                |                 |                  | ASTM           | GOVERNMENT |                                                                                                                                                                                          | Issued             | Reprint |
| ZINC OXIDE<br>(ZnO)                                            | OZIDE 10R       | 63               |                |            | Rubber activator; ceramics;<br>abrasives; agricultural zinc<br>deficiencies; lubricant addi-<br>tives; matches; chemical<br>smokes; floor coverings.                                     | 11/1/68            |         |
|                                                                | OZIDE 20        | 41               | D79-44         | TT-P-463a  |                                                                                                                                                                                          | 11/1/68            |         |
| LEADED ZINC OXIDES<br>(ZnO, PbO, PbSO <sub>4</sub> )           | OZLO 12         | 82               | D80-61         |            | Exterior paints                                                                                                                                                                          | 11/1/68            |         |
|                                                                | OZLO 18M        | 49               | D80-61         |            |                                                                                                                                                                                          | 1/2/63             | 8/1/64  |
|                                                                | OZLO 35         |                  | D80-61         | TT-P-462A  |                                                                                                                                                                                          | 6/1/63             | 8/1/64  |
|                                                                | OZLO 50         |                  | D80-61         |            |                                                                                                                                                                                          | 6/1/63             | 8/1/64  |
|                                                                | OZLO 55         |                  | D80-61         |            |                                                                                                                                                                                          | 6/1/63             | 8/1/64  |
| AGRICULTURAL ZINC<br>COMPOUND                                  | NUZIDE 78S      | 85               |                |            | Spray application - corrects<br>nutritional zinc deficiencies;<br>fertilizer.                                                                                                            | 11/1/68            |         |
|                                                                | NUZIDE 70A      |                  |                |            | Agric. Soil Application                                                                                                                                                                  | 4/1/68             |         |
| ZINC SULFATE<br>(ZnSO <sub>4</sub> ·H <sub>2</sub> O)          | 360             | 45               |                |            | Paint and varnish processing.<br>Alleviate agricultural zinc<br>deficiencies; rayon manufacture;<br>flotation reagent; clarification<br>glue; wood preservaton; electro-<br>galvanizing. | 3/1/65             |         |
|                                                                | 361-S           | 46               |                |            |                                                                                                                                                                                          | 3/1/65             |         |
|                                                                | 360-G           |                  |                |            |                                                                                                                                                                                          | 7/1/65             |         |
|                                                                | 360-F           |                  |                |            |                                                                                                                                                                                          | 9/15/64            |         |
| BARIUM CARBONATE<br>(BaCO <sub>3</sub> )                       | 75C             | 79               |                | JAN-B-624  | Beet sugar refining; flat wall<br>paints; ceramics; linoleum;<br>brick manufacture to prevent<br>efflorescence; glass manufact-<br>ure; barium titanate; barium<br>ferrites; ammunition. | 11/1/68            |         |
|                                                                | 50F             | 31               |                | "          |                                                                                                                                                                                          | 11/1/68            |         |
|                                                                | 70F             | 32               |                | "          |                                                                                                                                                                                          | 11/1/68            |         |
|                                                                | 90F             | 33               |                | "          |                                                                                                                                                                                          | 11/1/68            |         |
|                                                                | 145G            | 81               |                | "          |                                                                                                                                                                                          | 11/1/68            |         |
|                                                                | 45T             | 80               |                | "          |                                                                                                                                                                                          | 11/1/68            |         |
| BARIUM MONOHYDRATE<br>(Ba [OH] <sub>2</sub> ·H <sub>2</sub> O) |                 | 77               |                |            | Oil additives; plastic stablil-<br>izers and inhibitors; printing<br>inks; water softening.                                                                                              | 11/1/68            |         |
| LITHOPONE<br>(ZnS + BaSO <sub>4</sub> )                        | PERMOLITH 20L   | 53               | D477-45        | TT-P-400   | Latex emulsion paints; leather;<br>linoleum; chalks; crayons;<br>rubber; plastics; patching<br>plaster and crack filler;<br>paper filler.                                                | 1/2/63             | 8/1/64  |
|                                                                | PERMOLITH 40M   | 54               | "              | "          |                                                                                                                                                                                          | 1/2/63             | 8/1/64  |
|                                                                | PERMOLITH 60H   | 52               | "              | "          |                                                                                                                                                                                          | 1/2/63             | 8/1/64  |
|                                                                | PERMOLITH W-320 | 55               | "              | "          |                                                                                                                                                                                          | 11/1/68            |         |
|                                                                | PERMOLITH W-421 | 57               | "              | "          |                                                                                                                                                                                          | 1/2/63             | 8/1/64  |
|                                                                | PERMOLITH 60N   | 56               | "              | "          |                                                                                                                                                                                          | 1/2/63             | 8/1/64  |
|                                                                | PERMOLITH 60J   |                  | "              | "          |                                                                                                                                                                                          | 8/1/64             |         |
|                                                                | PERMOLITH 10N   | 78               |                |            |                                                                                                                                                                                          | 3/1/68             |         |

0007-PMC-000000545

SHERWIN-WILLIAMS

PIGMENT,

COLOR &

CHEMICAL

DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

LEADED ZINC OXIDE  
OZLO RG  
For  
Rubber Usage

Issued April 1, 1968

## Miscellaneous Properties

Appearance

Gray-White Powder

Screen Analysis Residue 325 Tyler

0.3%

## Chemical Analysis

Zinc as Zn

73.0 %

Zinc as ZnO

91.0 %

Lead as Pb

6.0 % (60% PbSO<sub>4</sub> + 40% PbO)

Iron as Fe

.024%

0007-PMC-000000546

Serial No. 40

Issued January 2, 1963  
Reprinted August 1, 1964

## Miscellaneous Properties

|                                    |                            | <u>Method</u> |
|------------------------------------|----------------------------|---------------|
| Appearance                         | White Powder, Grayish Cast | 50h           |
| Specific Gravity                   | 5.57                       | 50b           |
| Screen Analysis (Residue 325 Mesh) | 0.1% Max.                  | 50f           |

## Chemical Analysis

|                                 |         | <u>Method</u> |
|---------------------------------|---------|---------------|
| Zinc Oxide, ZnO, Min.           | 98.5 %  | 50A           |
| Lead, Pb, Max.                  | 0.34 %  | 50K           |
| Copper, Cu, Max.                | 0.0008% | 50C           |
| Manganese, Mn, Max.             | 0.002%  | 50D           |
| Total Copper Plus Manganese     | 0.004%  |               |
| Cadmium, Cd, Max.               | 0.005%  | 50L           |
| Iron, Fe, Max.                  | 0.040%  | 50B           |
| Sulfur, as SO <sub>3</sub> Max. | 0.25 %  | 50P           |
| Water Soluble Salts, Max.       | 0.5 %   | 50Q           |
| 10% Acetic Acid Insoluble, Max. | 1.0 %   | 50M           |

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

Zinc Oxide  
ZnO  
OZIDE 10R  
For  
Rubber Manufacture  
*Replaces 3-1-65*

Issued November 1, 1968

## Miscellaneous Properties

Appearance  
Specific Gravity  
Screen Analysis  
Residue 325 Mesh

White Powder, Grayish Cast  
5.57  
0.09%

## Chemical Analysis

Zinc Oxide, ZnO  
Lead as Pb  
Copper, Cu  
Manganese, Mn  
Cadmium, Cd  
Iron, Fe  
Sulfur as SO<sub>3</sub>  
Water Soluble Salts

98.8 %  
0.20 %  
0.0025%  
0.0008%  
0.002 %  
0.025 %  
0.10 %  
0.15 %

T-3-1-65

0007-PMC-000000548

Serial No. 51

Issued January 2, 1963

Reprinted August 1, 1964

## Miscellaneous Properties

## Method

|                              |                         |     |
|------------------------------|-------------------------|-----|
| Appearance                   | White Pellets           | 50h |
| Specific Gravity             | 5.57                    | 50b |
| Apparent Packed Bulk Density | Approx. 110 lbs./cu.ft. | 50f |

## Chemical Analysis

## Method

|                                      |        |     |
|--------------------------------------|--------|-----|
| Zinc Oxide, ZnO, Min.                | 98.5 % | 50A |
| Lead, Pb, Max.                       | 0.34 % | 50K |
| Copper, Cu, Max.                     | 0.003% | 50C |
| Manganese, Mn, Max.                  | 0.002% | 50D |
| Total Copper Plus Manganese          | 0.004% |     |
| Cadmium, Cd, Max.                    | 0.005% | 50L |
| Iron, Fe, Max.                       | 0.040% | 50B |
| Sulfur, S, as SO <sub>3</sub> , Max. | 0.25 % | 50P |
| Water Soluble Salts, Max.            | 0.50 % | 50Q |
| 10% Acetic Acid Insoluble, Max.      | 1.0 %  | 50M |

TYPICAL  
PROPERTIESAUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOISZINC OXIDE  
ZnO  
OZIDE 10R B8  
Pelletized For  
Rubber ManufacturingIssued January 2, 1963  
Reprinted August 1, 1964Miscellaneous PropertiesAppearance  
Specific Gravity  
Apparent Packed Bulk DensityWhite Pellets, Grayish Cast  
5.57  
Approximately 110 lbs./cu.ft.Chemical Analysis

|                           |         |
|---------------------------|---------|
| Zinc Oxide, ZnO           | 99.1 %  |
| Lead as Pb                | 0.20 %  |
| Copper, Cu                | 0.0025% |
| Manganese, Mn             | 0.0008% |
| Cadmium, Cd               | 0.002 % |
| Iron, Fe                  | 0.025 % |
| Sulfur as SO <sub>3</sub> | 0.10 %  |
| Water Soluble Salts       | 0.15 %  |
| 10% Acetic Acid Insoluble | 0.60 %  |

Serial No. 58

Issued June 1, 1963

Reprinted August 1, 1964

## Miscellaneous Properties

|                                    |                     | <u>Method</u> |
|------------------------------------|---------------------|---------------|
| Appearance                         | White Powder        | 50h           |
| Bulking Value                      | 2.14 gals./100 lbs. | 50b           |
| Screen Analysis (Residue 325 Mesh) | 0.3% Max.           | 50f           |
| Color, Min.                        | 85                  | 50i           |

## Chemical Analysis

|                       |        | <u>Method</u> |
|-----------------------|--------|---------------|
| Zinc Oxide, ZnO, Min. | 98.5 % | 50A           |
| Lead, Pb, Max.        | 0.15%  | 50K           |

SHERWIN-WILLIAMS

PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

ZINC OXIDE  
ZnO  
OZIDE 22P  
For  
Paint Pigment

Issued June 1, 1963  
Reprinted August 1, 1964

## Miscellaneous Properties

|                                    |                     |
|------------------------------------|---------------------|
| Appearance                         | White               |
| Bulking Value                      | 2.14 gals./100 lbs. |
| Screen Analysis (Residue 325 Mesh) | 0.1%                |
| Color Compared to Standard         | 87                  |

## Chemical Analysis

|                 |        |
|-----------------|--------|
| Zinc Oxide, ZnO | 99.0 % |
| Lead, Pb        | 0.09%  |

## Packaging

Bags, 50 lbs. net

0007-PMC-000000552

Serial No. 41

Issued January 2, 1963  
Reprinted August 1, 1964

Miscellaneous Properties

Method

|                                    |                            |     |
|------------------------------------|----------------------------|-----|
| Appearance                         | White Powder, Grayish Cast | 50h |
| Specific Gravity                   | 5.57                       | 50b |
| Screen Analysis (Residue 325 Mesh) | 0.3% Max.                  | 50f |
| Color, Min.                        | 60                         | 50i |

Chemical Analysis

Method

|                       |        |     |
|-----------------------|--------|-----|
| Zinc Oxide, ZnO, Min. | 98.5 % | 50A |
| Lead, Pb, Max.        | 0.34%  | 50K |

SHERWIN-WILLIAMS

PIGMENT,

COLOR &

CHEMICAL

DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

ZINC OXIDE  
ZnO  
OZIDE 20  
For  
General Use

Issued November 1, 1968

## Miscellaneous Properties

|                                    |                            |
|------------------------------------|----------------------------|
| Appearance                         | White Powder, Grayish Cast |
| Specific Gravity                   | 5.57                       |
| Screen Analysis (Residue 325 Mesh) | 0.09                       |

## Chemical Analysis

|                 |         |
|-----------------|---------|
| Zinc Oxide, ZnO | 98.8 %  |
| Lead, Pb        | 0.3 %   |
| Iron, Fe        | 0.025 % |
| Manganese, Mn   | 0.0008% |
| Cadmium, Cd     | 0.004 % |

T-1-2-63

0007-PMC-000000554

SHERWIN-WILLIAMS

PIGMENT

COLOR &

CHEMICAL

DEPARTMENT

# SPECIFICATION

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

12% CO-FUMED  
LEADED ZINC OXIDE  
OZLO 12  
For  
General Application

Serial No. 82

Issued November 1, 1968

## Miscellaneous Properties

|                                   |                     | <u>Method</u> |
|-----------------------------------|---------------------|---------------|
| Appearance                        | White Powder        | 40a           |
| Oil Absorption                    | 10-13               | 40b           |
| Color Compared to Standard        | 74                  | 40c           |
| Screen Analysis Residue 325 Tyler | 0.2%                | 40d           |
| Bulking Value                     | 2.12 gals./100 lbs. | 40 e          |

## Chemical Analysis

|                                 |             |     |
|---------------------------------|-------------|-----|
| Zinc Oxide, ZnO, Min.           | 86.0%       | 40A |
| Lead Sulfate, PbSO <sub>4</sub> | 7.0 - 14.0% | 40B |
| Zinc Sulfate, Max.              | 0.3%        | 40C |

S48-1-2-63

0007-PMC-000000555

SHERWIN-WILLIAMS

PIGMENT,

COLOR &

CHEMICAL

DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

12% CO-FUMED  
LEADED ZINC OXIDE  
OZLO 12

For  
General Application

Issued November 1, 1968

## Miscellaneous Properties

|                                   |                     |
|-----------------------------------|---------------------|
| Appearance                        | White Powder        |
| Oil Absorption                    | 12                  |
| Color Compared to Standard        | 80                  |
| Screen Analysis Residue 325 Tyler | 0.1%                |
| Bulking Value                     | 2.12 gals./100 lbs. |

## Chemical Analysis

|                                 |        |
|---------------------------------|--------|
| Zinc Oxide, ZnO                 | 89.7 % |
| Lead Sulfate, PbSO <sub>4</sub> | 9.6 %  |
| Zinc Sulfate, ZnSO <sub>4</sub> | 0.25%  |

T-1-2-63

$$\begin{array}{r} 207.2 \\ 324 \\ \hline 3032 \end{array} = \frac{4.790 \text{ Pk}}{7.090 \text{ Pk}} \text{ Wt.}$$

168

0007-PMC-000000556

SHERWIN-WILLIAMS

PIGMENT

COLOR &

CHEMICAL

DEPARTMENT

# SPECIFICATION

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

CO-FUMED  
LEADED ZINC OXIDE  
OZLO 18M  
For  
General Application

Serial No. 49

Issued January 2, 1963  
Reprinted August 1, 1964

## Miscellaneous Properties

|                                  |                     |
|----------------------------------|---------------------|
| Appearance                       | White Powder        |
| Oil Absorption                   | 10 - 12             |
| Color Compared to Standard, Min. | 75                  |
| 325 Mesh Residue (Tyler) Max.    | 0.2%                |
| Bulking Value                    | 2.10 gals./100 lbs. |

## Method

40a  
40b  
40c  
40d  
40e

## Chemical Analysis

|                        |              |
|------------------------|--------------|
| Zinc Oxide             | 80.0 - 82.0% |
| Monobasic Lead Sulfate | 16.5 - 19.5% |
| Available Lead as PbO  | 6.0 - 8.0%   |

## Method

40A  
40B  
40C

0007-PMC-000000557

SHERWIN-WILLIAMS

PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

CO-FUMED  
LEADED ZINC OXIDE  
OZLO 18M

For  
General Application

Issued November 1, 1968

## Miscellaneous Properties

|                                            |                     |
|--------------------------------------------|---------------------|
| Appearance                                 | White Powder        |
| Oil Absorption                             | 10.5                |
| Color Compared to Standard                 | 78                  |
| Bulking Value                              | 2.10 gals./100 lbs. |
| Screen Analysis Residue 325 Mesh,<br>Tyler | 0.1%                |

## Chemical Analysis

|                        |       |
|------------------------|-------|
| Zinc Oxide             | 81.7% |
| Monobasic Lead Sulfate | 18.0% |
| Available Lead as PbO  | 7.0%  |

T-1-2-63

0007-PMC-000000558

**SHERWIN-WILLIAMS**

**PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT**

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

55%  
LEADED ZINC OXIDE

OZLO 55

For

General Application

Issued November 1, 1968

## Miscellaneous Properties

Appearance  
Oil Absorption  
Color Compared to Standard  
Screen Analysis Residue 325  
Tyler  
Bulking Value

White Powder  
12.5  
82  
0.1%  
2.00 gals./100 lbs.

## Chemical Analysis

Zinc Oxide  
Basic Sulfate White Lead

45.0%  
55.0%

## Packaging

Bags, 50 lbs. net

T-6-1-63

0007-PMC-000000559

SHERWIN-WILLIAMS

PIGMENT,

COLOR &

CHEMICAL

DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

35%  
LEADED ZINC OXIDE  
Ozlo 35  
For  
General Application

Issued June 1, 1963

Reprinted August 1, 1964

## Miscellaneous Properties

|                                   |                     |
|-----------------------------------|---------------------|
| Appearance                        | White Powder        |
| Oil Absorption                    | 12.5                |
| Color Compared to Standard        | 85                  |
| Screen Analysis Residue 325 Tyler | 0.1%                |
| Bulking Value                     | 2.06 gals./100 lbs. |

## Chemical Analysis

|                          |       |
|--------------------------|-------|
| Zinc Oxide               | 65.0% |
| Basic Sulfate White Lead | 35.0% |

## Packaging

Bags, 50 lbs. net

0007-PMC-000000560

**SHERWIN-WILLIAMS**  
**PIGMENT,**  
**COLOR &**  
**CHEMICAL**  
**DEPARTMENT**

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

50%  
LEADED ZINC OXIDE  
OZLO 50  
For  
General Application

Issued June 1, 1963  
Reprinted August 1, 1964

## Miscellaneous Properties

|                                            |                     |
|--------------------------------------------|---------------------|
| Appearance                                 | White Powder        |
| Oil Absorption                             | 12.5                |
| Color Compared to Standard                 | 85                  |
| Screen Analysis Residue 325 Mesh,<br>Tyler | 0.1%                |
| Bulking Value                              | 2.02 gals./100 lbs. |

## Chemical Analysis

|                          |       |
|--------------------------|-------|
| Zinc Oxide               | 50.0% |
| Basic Sulfate White Lead | 50.0% |

## Packaging

Bags, 50 lbs. net

0007-PMC-000000561

**SHERWIN-WILLIAMS**

**PIGMENT,**

**COLOR &**

**CHEMICAL**

**DEPARTMENT**

# SPECIFICATION

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

Zinc Oxide  
ZnO  
NUZIDE 78S  
For  
Agricultural Sprays

Serial No. 85

Issued November 1, 1968

## Miscellaneous Properties

## Method

|                                    |                            |     |
|------------------------------------|----------------------------|-----|
| Appearance                         | White Powder, Grayish Cast | 50h |
| Apparent Packed Bulk Density       | Approx. 70 lbs./cu.ft.     | 50j |
| Screen Analysis (Residue 325 Mesh) | 0.3% Max.                  | 50f |

## Chemical Analysis

|                       |       |     |
|-----------------------|-------|-----|
| Zinc Oxide, ZnO, Min. | 98.0% | 50A |
|-----------------------|-------|-----|

S43-1-2-63  
(S74-3-1-66)

0007-PMC-000000562

SHERWIN-WILLIAMS

PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

Zinc Oxide  
ZnO  
NUZIDE 78S  
For  
Agricultural Sprays

Issued January 2, 1963

Reprinted August 1, 1964

## Miscellaneous Properties

Appearance  
Apparent Packed Bulk Density  
Screen Analysis (Residue 325 Mesh)

White Powder, Grayish Cast  
Approximately 70 lbs./cu.ft.  
0.05%

## Chemical Analysis

Zinc Oxide, ZnO  
Arsenic, As

98.8 %  
0.03%

0007-PMC-000000563

**SHERWIN-WILLIAMS**

**PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT**

# **SPECIFICATION**

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

Zinc Oxide  
ZnO  
NUZIDE 76F  
For  
Agriculture

Serial No. 44

Issued January 2, 1963

Reprinted August 1, 1964

## Miscellaneous Properties

Appearance  
Apparent Packed Bulk Density

Brown Powder  
Approx. 160 lbs./cu.ft.

## Method

50h  
50j

## Chemical Analysis

Zinc Oxide, ZnO, Min.  
Zn, Min.

94.5%  
76.0%

50A  
50A

0007-PMC-000000564

SHERWIN-WILLIAMS

PIGMENT.

COLOR &

CHEMICAL

DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

ZINC OXIDE

ZnO

NUZIDE 70A

For

Agricultural Soil Appli-  
cation

Issued April 1, 1968

## Miscellaneous Properties

Appearance

Yellow to Gray Powder

Screen Analysis (Residue 250 Mesh)

2.2%

## Chemical Analysis

|                                        |        |
|----------------------------------------|--------|
| Zinc as Zn                             | 74.0 % |
| Zinc as ZnO                            | 92.0 % |
| Lead as Pb                             | 2.0 %  |
| Sulfur as SO <sub>3</sub>              | 0.2 %  |
| Iron as Fe <sub>2</sub> O <sub>3</sub> | 1.5 %  |
| Copper as Cu                           | 0.04%  |
| Manganese as Mn                        | 1.2 %  |
| Calcium as CaO                         | 2.0 %  |
| Water Soluble Salts                    | 0.85%  |

## Screen Test

|           | <u>%</u> | <u>% Cumulative</u> |
|-----------|----------|---------------------|
| 20 Mesh   | 15.3     | 15.3                |
| 48 Mesh   | 2.4      | 17.7                |
| 60 Mesh   | 10.0     | 27.7                |
| 80 Mesh   | 22.3     | 50.0                |
| 100 Mesh  | 18.6     | 68.6                |
| 150 Mesh  | 20.0     | 88.6                |
| 200 Mesh  | 4.0      | 92.6                |
| 250 Mesh  | 5.2      | 97.8                |
| -250 Mesh | 2.2      | --                  |

0007-PMC-000000565

**SHERWIN-WILLIAMS****PIGMENT,****COLOR &****CHEMICAL****DEPARTMENT**

# SPECIFICATION

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

ZINC SULFATE

 $\text{ZnSO}_4 \cdot \text{H}_2\text{O}$ 

Grade 360

For

General Application

Serial No. 45

Issued January 2, 1963

Reprinted August 1, 1964

Miscellaneous PropertiesMethod

|                              |                        |     |
|------------------------------|------------------------|-----|
| Appearance                   | White Granules         | 60i |
| Apparent Packed Bulk Density | Approx. 90 lbs./cu.ft. | 60j |

Chemical AnalysisMethod

|                       |        |     |
|-----------------------|--------|-----|
| Zinc as Zn, Min.      | 36.0 % | 60A |
| Lead as Pb, Max.      | 0.004% | 60B |
| Copper as Cu, Max.    | 0.001% | 60C |
| Manganese as Mn, Max. | 0.002% | 60D |
| Cadmium as Cd, Max.   | 0.003% | 60E |
| Iron as Fe, Max.      | 0.002% | 60F |
| Nickel as Ni, Max.    | 0.001% | 60N |
| Acid Insoluble, Max.  | 0.1 %  | 60Q |

0007-PMC-000000566

SHERWIN-WILLIAMS

PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

ZINC SULFATE  
 $\text{ZnSO}_4 \cdot \text{H}_2\text{O}$   
Grade 360  
For  
General Application

Issued January 2, 1963  
Reprinted August 1, 1964

## Miscellaneous Properties

Appearance

White Granules

Apparent Packed Bulk Density

Approximately 90 lbs./cu.ft.

## Chemical Analysis

|                          |               |   |
|--------------------------|---------------|---|
| Zinc as Zn               | 36.0          | % |
| Lead as Pb               | 0.002         | % |
| Copper as Cu             | 0.0005        | % |
| Manganese as Mn          | 0.001         | % |
| Cadmium as Cd            | 0.001         | % |
| Iron as Fe               | 0.001         | % |
| Nickel as Ni             | 0.0005        | % |
| Acid Insoluble           | 0.08          | % |
| Calcium as Ca            | 0.02          | % |
| Sodium as Na             | Trace         | % |
| Magnesium as Mg          | 0.003         | % |
| Aluminum as Al           | 0.005         | % |
| Arsenic as As            | 0.00004       | % |
| Antimony as Sb           | 0.0001        | % |
| Tin as Sn                | Trace, if any |   |
| Bismuth as Bi            | Trace, if any |   |
| Chlorine as Cl           | 0.015         | % |
| Silica as $\text{SiO}_2$ | 0.015         | % |
| Chromium as Cr           | Trace, if any |   |
| Indium as In             | Trace, if any |   |

0007-PMC-000000567

Serial No. 46

Issued January 2, 1963  
Reprinted August 1, 1964

Miscellaneous Properties

Appearance  
Apparent Packed Bulk Density

White Crystalline Powder  
Approx. 65 lbs./cu. ft.

Method

60i  
60j

Chemical Analysis

Zinc as Zn, Min.  
Lead as Pb, Max.  
Copper as Cu, Max.  
Manganese as Mn, Max.  
Cadmium as Cd, Max.  
Iron as Fe, Max.  
Nickel as Ni, Max.

36.0 %  
0.004%  
0.001%  
0.002%  
0.003%  
0.002%  
0.001%

Method

60A  
60B  
60C  
60D  
60E  
60F  
60N

SHERWIN-WILLIAMS

PIGMENT,

COLOR &

CHEMICAL

DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

ZINC SULFATE  
 $\text{ZnSO}_4 \cdot \text{H}_2\text{O}$   
Grade 361-S  
For  
General Application

Issued January 2, 1963  
Reprinted August 1, 1964

## Miscellaneous Properties

Appearance  
Apparent Packed Bulk Density

White Powder  
Approximately 65 lbs./cu.ft.

## Chemical Analysis

|                 |         |
|-----------------|---------|
| Zinc as Zn      | 36.3 %  |
| Lead as Pb      | 0.002 % |
| Copper as Cu    | 0.0005% |
| Manganese as Mn | 0.001 % |
| Cadmium as Cd   | 0.001 % |
| Iron as Fe      | 0.001 % |
| Nickel as Ni    | 0.0005% |
| Calcium as Ca   | 0.02 %  |
| Chlorine as Cl  | 0.015 % |

0007-PMC-000000569

SHERWIN-WILLIAMS

PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

ZINC SULFATE  
GRADE 360-G  
Agriculture

Issued July 1, 1965  
Revised April 1, 1968

## Miscellaneous Properties

Appearance  
Apparent Packed Bulk Density

White, granular  
About 85 lbs./cu.ft.

## Screen Analysis

| Mesh (Tyler) | Cumulative % |
|--------------|--------------|
| + 6          | 0            |
| + 8          | 21           |
| + 10         | 60           |
| + 14         | 87           |
| + 16         | 96           |
| + 20         | 98           |
| - 20         | 2            |

## Chemical Analysis

Zn 36%

SHERWIN-WILLIAMS

PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

ZINC SULFATE  
 $\text{ZnSO}_4 \cdot \text{H}_2\text{O}$   
Grade 361-A  
For

Agricultural Application

Issued April 1, 1968

## Miscellaneous Properties

Appearance  
Apparent Packed Bulk Density

White Powder  
Approximately 65 lbs./cu.ft.

## Chemical Analysis

|                 |         |
|-----------------|---------|
| Zinc as Zn      | 36.3 %  |
| Lead as Pb      | 0.002%  |
| Copper as Cu    | 0.0005% |
| Manganese as Mn | 0.001%  |
| Cadmium as Cd   | 0.001%  |
| Iron as Fe      | 0.001%  |
| Nickel as Ni    | 0.0005% |
| Chlorine as Cl  | 0.015%  |

0007-PMC-000000571

**SHERWIN-WILLIAMS****PIGMENT****COLOR &****CHEMICAL****DEPARTMENT**

# SPECIFICATION

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOISBARIUM CARBONATE  
 $\text{BaCO}_3$   
Grade 75C  
For  
General Application

Serial No. 79

Issued November 1, 1968

Miscellaneous PropertiesMethod

|                              |                        |     |
|------------------------------|------------------------|-----|
| Appearance                   | White                  | 20a |
| Apparent Packed Bulk Density | Approx. 60 lbs./cu.ft. | 20d |
| Specific Gravity             | 4.29                   | 20g |

Chemical Analysis

|                                         |        |     |
|-----------------------------------------|--------|-----|
| Total Ba + Sr as $\text{BaCO}_3$ , Min. | 99.0 % | 20A |
| Total Sulfur as S, Max.                 | 0.10 % | 20B |
| Sulfate Sulfur as S, Max.               | 0.07 % | 20C |
| Sulfide-Sulfite Sulfur as S, Max.       | 0.06 % | 20D |
| Iron as Fe, Max.                        | 0.001% | 20E |

S30-1-2-63

0007-PMC-000000572

SHERWIN-WILLIAMS

PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

BARIUM CARBONATE  
 $\text{BaCO}_3$   
Grade 75C  
For  
General Application

Issued November 1, 1968

## Miscellaneous Properties

|                                             |                        |
|---------------------------------------------|------------------------|
| Appearance                                  | White                  |
| Apparent Packed Bulk Density                | Approx. 60 lbs./cu.ft. |
| Screen Analysis (through 150 mesh<br>Tyler) | 99%                    |

## Chemical Analysis

|                                                   |          |
|---------------------------------------------------|----------|
| Total Ba + Sr as $\text{BaCO}_3$                  | 99.3 %   |
| Total Sulfur as S                                 | 0.06 %   |
| Sulfate Sulfur as S                               | 0.04 %   |
| Sulfide-Sulfite Sulfur as S                       | 0.04 %   |
| Fe                                                | 0.0008 % |
| $\text{SrCO}_3$                                   | 0.90 %   |
| $\text{CaCO}_3$                                   | 0.16 %   |
| $\text{Na}_2\text{O}$                             | Trace    |
| $\text{Al}_2\text{O}_3$                           | 0.09 %   |
| Cl                                                | 0.008 %  |
| Acid Insoluble ( $\text{BaSO}_4 + \text{SiO}_2$ ) | 0.30 %   |

T-1-2-63

0007-PMC-000000573

Serial No. 31

Issued January 2, 1963  
Reprinted August 1, 1964

Miscellaneous Properties

Method

|                                               |                        |     |
|-----------------------------------------------|------------------------|-----|
| Appearance                                    | White                  | 20a |
| Apparent Packed Bulk Density                  | Approx. 50 lbs./cu.ft. | 20d |
| Screen Analysis (through 150 mesh Tyler) Min. | 99%                    | 20e |
| Specific Gravity                              | 4.29                   | 20g |

Chemical Analysis

Method

|                                         |       |     |
|-----------------------------------------|-------|-----|
| Total Ba + Sr as $\text{BaCO}_3$ , Min. | 98.5% | 20A |
|-----------------------------------------|-------|-----|

SHERWIN-WILLIAMS

PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

BARIUM CARBONATE  
 $\text{BaCO}_3$   
Grade 50F  
For  
General Application

Issued November 1, 1968

## Miscellaneous Properties

Appearance

White

Apparent Packed Bulk Density

Approximately 50 lbs./cu.ft.

Screen Analysis through 150 mesh  
Tyler

99%

## Chemical Analysis

Total Ba + Sr as  $\text{BaCO}_3$

99.1 %

Total Sulfur as S

0.08 %

$\text{Fe}_2\text{O}_3$

0.001%

T-1-2-63

0007-PMC-000000575

SHERWIN-WILLIAMS

PIGMENT

COLOR &

CHEMICAL

DEPARTMENT

# SPECIFICATION

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

BARIUM CARBONATE  
 $\text{BaCO}_3$   
Grade 70F  
For  
Ceramics

Serial No. 32

Issued January 2, 1963  
Reprinted August 1, 1964

## Miscellaneous Properties

|                                               |                        | <u>Method</u> |
|-----------------------------------------------|------------------------|---------------|
| Appearance                                    | White                  | 20a           |
| Apparent Packed Bulk Density                  | Approx. 70 lbs./cu.ft. | 20d           |
| Screen Analysis (through 150 mesh Tyler) Min. | 99%                    | 20e           |
| Specific Gravity                              | 4.29                   | 20g           |

## Chemical Analysis

|                                         |       | <u>Method</u> |
|-----------------------------------------|-------|---------------|
| Total Ba + Sr as $\text{BaCO}_3$ , Min. | 98.5% | 20A           |

0007-PMC-000000576

Issued November 1, 1968

Miscellaneous Properties

Appearance  
Apparent Packed Bulk Density  
Screen Analysis Through 150 Mesh,  
Tyler

White  
Approx. 70 lbs./cu.ft.  
99%

Chemical Analysis

Total Ba + Sr as  $\text{BaCO}_3$   
Total Sulfur as S  
 $\text{Fe}_2\text{O}_3$

99.1 %  
0.08 %  
0.001%

T-1-2-63

0007-PMC-000000577

Serial No. 33

Issued January 2, 1963

Reprinted August 1, 1964

Miscellaneous Properties

|                                                  |                        | <u>Method</u> |
|--------------------------------------------------|------------------------|---------------|
| Appearance                                       | White                  | 20a           |
| Apparent Packed Bulk Density                     | Approx. 90 lbs./cu.ft. | 20d           |
| Screen Analysis (through 150<br>Mesh Tyler) Min. | 99%                    | 20e           |
| Specific Gravity                                 | 4.29                   | 20g           |

Chemical Analysis

|                                         |       | <u>Method</u> |
|-----------------------------------------|-------|---------------|
| Total Ba + Sr as $\text{BaCO}_3$ , Min. | 98.5% | 20A           |

0007-PMC-000000578

SHERWIN-WILLIAMS

PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

BARIUM CARBONATE  
 $\text{BaCO}_3$   
Grade 90F  
For  
Ceramics

Issued November 1, 1968

## Miscellaneous Properties

Appearance  
Apparent Packed Bulk Density  
Screen Analysis Through 150  
Mesh, Tyler

White  
Approx. 90 lbs./cu.ft.  
99%

## Chemical Analysis

Total Ba + Sr as  $\text{BaCO}_3$   
Total Sulfur as S  
 $\text{Fe}_2\text{O}_3$

99.1 %  
0.08 %  
0.001%

T-1-2-63

0007-PMC-000000579

Serial No. 34

Issued January 2, 1963  
Reprinted August 1, 1964

## Miscellaneous Properties

|                                                  |                         | <u>Method</u> |
|--------------------------------------------------|-------------------------|---------------|
| Appearance                                       | White                   | 20a           |
| Apparent Packed Bulk Density                     | Approx. 135 lbs./cu.ft. | 20d           |
| Screen Analysis (through<br>150 mesh Tyler) Max. | 25%                     | 20e           |
| Specific Gravity                                 | 4.29                    | 20g           |

## Chemical Analysis

|                                         |         | <u>Method</u> |
|-----------------------------------------|---------|---------------|
| Total Ba + Sr as $\text{BaCO}_3$ , Min. | 98.5 %  | 20A           |
| Total Sulfur as S, Max.                 | 0.10 %  | 20B           |
| Sulfate Sulfur as S, Max.               | 0.10 %  | 20C           |
| Sulfide-Sulfite Sulfur as S,<br>Max.    | 0.01 %  | 20D           |
| Fe, Max.                                | 0.0014% | 20E           |
| Acid Insoluble, Max.                    | 0.70 %  | 20L           |

TYPICAL  
PROPERTIESAUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOISBARIUM CARBONATE  
 $\text{BaCO}_3$   
Grade 135G  
For  
Glass Manufacture

Issued August 1, 1964

Miscellaneous Properties

Appearance

White

Apparent Packed Bulk Density

Approx. 135 lbs./cu.ft.

Screen Analysis Cumulative,

Tyler

+ 14

0%

+ 20

2%

+ 28

20%

+ 48

50%

+100

70%

+150

80%

-150

20%

Chemical AnalysisTotal Ba + Sr as  $\text{BaCO}_3$ 

98.8 %

Total Sulfur as S

0.07 %

Sulfate Sulfur as S

0.07 %

Sulfide-Sulfite Sulfur as S

0.002 %

Fe

0.0008%

 $\text{SrCO}_3$ 

0.90 %

 $\text{CaCO}_3$ 

0.16 %

 $\text{Na}_2\text{O}$ 

Trace

 $\text{Al}_2\text{O}_3$ 

0.09 %

Cl

0.008 %

Acid Insoluble

0.50 %

**SHERWIN-WILLIAMS****PIGMENT****COLOR &****CHEMICAL****DEPARTMENT**

# SPECIFICATION

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOISBARIUM CARBONATE  
 $\text{BaCO}_3$   
Grade 145G  
For  
Glass Manufacture

Serial No. 81

Issued November 1, 1968

Miscellaneous PropertiesMethod

|                                               |                         |     |
|-----------------------------------------------|-------------------------|-----|
| Appearance                                    | White                   | 20a |
| Apparent Packed Bulk Density                  | Approx. 140 lbs./cu.ft. | 20d |
| Screen Analysis (through 150 Mesh Tyler) Max. | 25%                     | 20e |
| Specific Gravity                              | 4.29                    | 20g |

Chemical Analysis

|                                         |        |     |
|-----------------------------------------|--------|-----|
| Total Ba + Sr as $\text{BaCO}_3$ , Min. | 98.5 % | 20A |
| Total Sulfur as S, Max.                 | 0.10 % | 20B |
| Sulfate Sulfur as S, Max.               | 0.10 % | 20C |
| Sulfide-Sulfite Sulfur as S, Max.       | 0.08 % | 20D |
| Fe, Max.                                | 0.001% | 20E |
| Acid Insoluble, Max.                    | 0.700% | 20L |

S36-1-2-63

0007-PMC-000000582

**SHERWIN-WILLIAMS**

**PIGMENT,**

**COLOR &**

**CHEMICAL**

**DEPARTMENT**

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

BARIUM CARBONATE  
 $\text{BaCO}_3$   
Grade 145G  
For  
Glass Manufacture

Issued November 1, 1968

## Miscellaneous Properties

Appearance

White

Apparent Packed Bulk Density

Approx. 140 lbs./cu.ft.

Screen Analysis, Cumulative, Tyler

|   |     |     |
|---|-----|-----|
| + | 14  | 5%  |
| + | 20  | 10% |
| + | 28  | 35% |
| + | 48  | 60% |
| + | 100 | 75% |
| + | 150 | 80% |
| - | 150 | 20% |

## Chemical Analysis

|                                  |        |   |
|----------------------------------|--------|---|
| Total Ba + Sr as $\text{BaCO}_3$ | 98.6   | % |
| Total Sulfur as S                | 0.07   | % |
| Sulfate Sulfur as S              | 0.07   | % |
| Sulfide-Sulfite Sulfur as S      | 0.05   | % |
| Fe                               | 0.0008 | % |
| $\text{SrCO}_3$                  | 0.90   | % |
| $\text{CaCO}_3$                  | 0.16   | % |
| $\text{Na}_2\text{O}$            | Trace  |   |
| $\text{Al}_2\text{O}_3$          | 0.13   | % |
| Cl                               | 0.008  | % |
| Acid Insoluble                   | 0.50   | % |

T-8-1-64

0007-PMC-000000583

**SHERWIN-WILLIAMS****PIGMENT****COLOR &****CHEMICAL****DEPARTMENT**

# SPECIFICATION

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

BARIUM CARBONATE

BaCO<sub>3</sub>

Grade 45T

Special Fine Grade For  
General Use

Serial No. 80

Issued November 1, 1968

Miscellaneous PropertiesMethod

|                              |                        |     |
|------------------------------|------------------------|-----|
| Appearance                   | White                  | 20a |
| Particle Size                | Fisher No. 1.60, Max.  | 20c |
| Apparent Packed Bulk Density | Approx. 50 lbs./cu.ft. | 20d |
| Specific Gravity             | 4.29                   | 20g |

Chemical Analysis

|                                   |        |     |
|-----------------------------------|--------|-----|
| BaCO <sub>3</sub> , Min.          | 99.2 % | 20A |
| Total Sulfur as S, Max.           | 0.10 % | 20B |
| Sulfate Sulfur as S, Max.         | 0.07 % | 20C |
| Sulfide-Sulfite Sulfur as S, Max. | 0.07 % | 20D |
| Iron as Fe, Max.                  | 0.001% | 20E |

S35-1-2-63

0007-PMC-000000584

Issued November 1, 1968

Miscellaneous Properties

|                       |                        |
|-----------------------|------------------------|
| Appearance            | White                  |
| Particle Size         | Fisher No. 1.15 - 1.60 |
| Apparent Bulk Density | Approx. 50 lbs./cu.ft. |

Chemical Analysis

|                             |         |
|-----------------------------|---------|
| $\text{BaCO}_3$             | 99.4 %  |
| Total Sulfur as S           | 0.08 %  |
| Sulfate Sulfur as S         | 0.06 %  |
| Sulfide-Sulfite Sulfur as S | 0.06 %  |
| Iron as Fe                  | 0.0008% |

T-1-2-63

0007-PMC-000000585

**SHERWIN-WILLIAMS**

**PIGMENT**

**COLOR &**

**CHEMICAL**

**DEPARTMENT**

# SPECIFICATION

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

**BARIUM SULFIDE**  
**(Black Ash)**  
**BaS**

Serial No. 86

Issued November 1, 1968

## Miscellaneous Properties

|                                          |       |
|------------------------------------------|-------|
| Appearance                               | Black |
| Screen Analysis (Minus 16<br>Mesh Tyler) | 100%  |

## Chemical Analysis

|                           |       |
|---------------------------|-------|
| Barium Sulfide, BaS, Min. | 85.0% |
|---------------------------|-------|

0007-PMC-000000586

SHERWIN-WILLIAMS

PIGMENT

COLOR &

CHEMICAL

DEPARTMENT

# SPECIFICATION

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

BARIUM MONOHYDRATE  
 $\text{Ba}(\text{OH})_2 \cdot \text{H}_2\text{O}$   
For  
General Application

Serial No. 87

Issued January 1, 1969

## Miscellaneous Properties

|                              |                        | <u>Method</u> |
|------------------------------|------------------------|---------------|
| Appearance                   | White Dry Flakes       | 10a           |
| Apparent Packed Bulk Density | Approx. 80 lbs./cu.ft. | 10b           |

## Chemical Analysis

|                                   |              |     |
|-----------------------------------|--------------|-----|
| BaO Range                         | 78.5 - 80.5% | 10A |
| Acid Insoluble as $\text{BaSO}_4$ | 0.12%        | 10B |
| $\text{BaCO}_3$ , Max.            | 0.8 %        | 10C |
| Cl, Max.                          | 0.02%        | 10D |
| S, Max.                           | 0.02%        | 10E |
| Fe, Max.                          | 0.002%       | 10F |

S77-1-1-69

0007-PMC-000000587

SHERWIN-WILLIAMS

PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

BARIUM MONOHYDRATE  
 $\text{Ba}(\text{OH})_2 \cdot \text{H}_2\text{O}$   
For  
General Application

Issued November 1, 1968

## Miscellaneous Properties

Appearance  
Apparent Packed Bulk Density

White Dry Flakes  
Approximately 80 lbs./cu.ft.

## Chemical Analysis

Total Barium (weak acid soluble) as

|                 |         |
|-----------------|---------|
| BaO             | 79.0 %  |
| $\text{BaSO}_4$ | 0.08 %  |
| $\text{BaCO}_3$ | 0.5 %   |
| Cl              | 0.01 %  |
| S as Sulfide    | 0.006 % |
| Fe              | 0.001 % |

T-6-1-67

0007-PMC-000000588

**SHERWIN-WILLIAMS**

**PIGMENT**

**COLOR &**

**CHEMICAL**

**DEPARTMENT**

# SPECIFICATION

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

PERMOLITH  
LITHOPONE  
Grade 10N  
Non-Reactive  
Low Consistency

Serial No. 78

Issued March 1, 1968

## Miscellaneous Properties

|                                          |              | <u>Method</u> |
|------------------------------------------|--------------|---------------|
| Appearance                               | White Powder | 30a           |
| Total Residue, 325 Mesh, Max.            | 0.15%        | 30b           |
| Oil Absorption, Min.                     | 10           | 30c           |
| Water Soluble Matter, Max.               | 0.2 %        | 30d           |
| Moisture and Other Volatile Matter, Max. | 0.1 %        | 30e           |

## Chemical Analysis

|                         |                     |     |
|-------------------------|---------------------|-----|
| Zinc Sulfide, ZnS, Min. | 28.0 %              | 30A |
| Zinc Oxide, ZnO, Max.   | 0.10%               | 30B |
| Barium Sulfate, Min.    | 95.0 % of Remainder | 30C |

0007-PMC-000000589

Serial No. 54

Issued January 2, 1963

Reprinted August 1, 1964

Miscellaneous Properties

Method

|                                             |                   |     |
|---------------------------------------------|-------------------|-----|
| Appearance                                  | Fine White Powder | 30a |
| Total Residue, 325 Mesh, Max.               | 0.15%             | 30b |
| Oil Absorption, Min.                        | 14                | 30c |
| Water Soluble Matter, Max.                  | 0.2%              | 30d |
| Moisture and Other Volatile Matter,<br>Max. | 0.1%              | 30e |

Chemical Analysis

Method

|                         |                    |     |
|-------------------------|--------------------|-----|
| Zinc Sulfide, ZnS, Min. | 28.0%              | 30A |
| Zinc Oxide, ZnO, Max.   | 0.4%               | 30B |
| Barium Sulfate, Min.    | 95.0% of Remainder | 30C |

**SHERWIN-WILLIAMS****PIGMENT,****COLOR &****CHEMICAL****DEPARTMENT**

# SPECIFICATION

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOISPERMOLITH  
LITHOPONE  
Grade 60H  
For  
General Accounts

Serial No. 52

Issued January 2, 1963

Reprinted August 1, 1964

Miscellaneous PropertiesMethod

|                                             |              |     |
|---------------------------------------------|--------------|-----|
| Appearance                                  | White Powder | 30a |
| Total Residue, 325 Mesh, Max.               | 0.15%        | 30b |
| Oil Absorption, Min.                        | 15           | 30c |
| Water Soluble Matter, Max.                  | 0.2 %        | 30d |
| Moisture and Other Volatile Matter,<br>Max. | 0.1 %        |     |

Chemical AnalysisMethod

|                         |                    |     |
|-------------------------|--------------------|-----|
| Zinc Sulfide, ZnS, Min. | 28.0%              | 30A |
| Zinc Oxide, ZnO, Max.   | 0.4%               | 30B |
| Barium Sulfate, Min.    | 95.0% of Remainder | 30C |

0007-PMC-000000591

Serial No. 53

Issued January 2, 1963

Reprinted August 1, 1964

## Miscellaneous Properties

|                                             |              | <u>Method</u> |
|---------------------------------------------|--------------|---------------|
| Appearance                                  | White Powder | 30a           |
| Total Residue, 325 Mesh, Max.               | 0.15%        | 30b           |
| Oil Absorption, Min.                        | 12           | 30c           |
| Water Soluble Matter, Max.                  | 0.2 %        | 30d           |
| Moisture and other Volatile Matter,<br>Max. | 0.1 %        | 30e           |

## Chemical Analysis

|                         |                    | <u>Method</u> |
|-------------------------|--------------------|---------------|
| Zinc Sulfide, ZnS, Min. | 28.0%              | 30A           |
| Zinc Oxide, ZnO, Max.   | 0.4%               | 30B           |
| Barium Sulfate, Min.    | 95.0% of Remainder | 30C           |

**SHERWIN-WILLIAMS**

**PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT**

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

PERMOLITH  
LITHOPONE  
Grade 10N  
Non-Reactive  
Low Consistency

Issued March 1, 1968

## Miscellaneous Properties

|                                    |                     |
|------------------------------------|---------------------|
| Appearance                         | White               |
| Total Residue, 325 Mesh            | 0.10%               |
| Oil Absorption                     | 12                  |
| Water Soluble Matter               | 0.10%               |
| Bulking Value                      | 2.79 gals./100 lbs. |
| Moisture and Other Volatile Matter | 0.09%               |

## Chemical Analysis

|                      |                     |
|----------------------|---------------------|
| Zinc Sulfide, ZnS    | 28.5 %              |
| Zinc Oxide, ZnO      | 0.06%               |
| Barium Sulfate, Min. | 95.0 % of Remainder |

0007-PMC-000000593

SHERWIN-WILLIAMS

PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

PERMOLITH  
LITHOPONE  
Grade 20L  
Low Oil Absorption

Issued January 2, 1963

Reprinted August 1, 1964

## Miscellaneous Properties

|                                    |                     |
|------------------------------------|---------------------|
| Appearance                         | White               |
| Total Residue, 325 Mesh            | 0.10%               |
| Oil Absorption                     | 13                  |
| Water Soluble Matter               | 0.10%               |
| Bulking Value                      | 2.79 gals./100 lbs. |
| Moisture and Other Volatile Matter | 0.09%               |

## Chemical Analysis

|                      |                    |
|----------------------|--------------------|
| Zinc Sulfide, ZnS    | 28.5%              |
| Zinc Oxide, ZnO      | 0.2%               |
| Barium Sulfate, Min. | 95.0% of Remainder |

0007-PMC-000000594

TYPICAL  
PROPERTIESAUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOISPERMOLITH  
LITHOPONE  
Grade 40M  
Medium Oil Absorption

Issued January 2, 1963

Reprinted August 1, 1964

Miscellaneous Properties

|                                    |                     |
|------------------------------------|---------------------|
| Appearance                         | White               |
| Total Residue, 325 Mesh            | 0.10%               |
| Oil Absorption                     | 15                  |
| Water Soluble Matter               | 0.10%               |
| Bulking Value                      | 2.79 gals./100 lbs. |
| Moisture and Other Volatile Matter | 0.09%               |

Chemical Analysis

|                      |                    |
|----------------------|--------------------|
| Zinc Sulfide, ZnS    | 28.5%              |
| Zinc Oxide, ZnO      | 0.2%               |
| Barium Sulfate, Min. | 95.0% of Remainder |

TYPICAL  
PROPERTIESAUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOISPERMOLITH  
LITHOPONE  
Grade 60H  
High Oil AbsorptionIssued January 2, 1963  
Reprinted August 1, 1964Miscellaneous Properties

|                                    |                     |
|------------------------------------|---------------------|
| Appearance                         | White Powder        |
| Total Residue, 325 Mesh            | 0.10%               |
| Oil Absorption                     | 16                  |
| Water Soluble Matter               | 0.10%               |
| Bulking Value                      | 2.79 gals./100 lbs. |
| Moisture and Other Volatile Matter | 0.09%               |

Chemical Analysis

|                      |                    |
|----------------------|--------------------|
| Zinc Sulfide, ZnS    | 28.5%              |
| Zinc Oxide, ZnO      | 0.2%               |
| Barium Sulfate, Min. | 95.0% of Remainder |



# SPECIFICATION

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

PERMOLITH  
LITHOPONE  
Grade W-320  
Water Wetting

Serial No. 55

Issued January 2, 1963

Reprinted August 1, 1964

## Miscellaneous Properties

## Method

|                                             |              |     |
|---------------------------------------------|--------------|-----|
| Appearance                                  | White Powder | 30a |
| Total Residue, 325 Mesh, Max.               | 0.15%        | 30b |
| Oil Absorption, Min.                        | 16           | 30c |
| Water Soluble Matter, Max.                  | 0.2 %        | 30d |
| Moisture and Other Volatile Matter,<br>Max. | 0.1 %        | 30e |

## Chemical Analysis

## Method

|                         |                    |     |
|-------------------------|--------------------|-----|
| Zinc Sulfide, ZnS, Min. | 28.0%              | 30A |
| Zinc Oxide, ZnO, Max.   | 0.4%               | 30B |
| Barium Sulfate, Min.    | 95.0% of Remainder | 30C |

SHERWIN-WILLIAMS

PIGMENT,

COLOR &

CHEMICAL

DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

PERMOLITH  
LITHOPONE  
Grade W-320  
Water Wetting

Issued November 1, 1968

## Miscellaneous Properties

|                                    |                     |
|------------------------------------|---------------------|
| Appearance                         | White Powder        |
| Total Residue, 325 Mesh            | 0.10%               |
| Water Soluble Matter               | 0.18%               |
| Bulking Value                      | 2.79 gals./100 lbs. |
| Moisture and Other Volatile Matter | 0.04%               |
| Oil Absorption                     | 16                  |

## Chemical Analysis

|                      |                    |
|----------------------|--------------------|
| Zinc Sulfide, ZnS    | 28.5%              |
| Zinc Oxide, ZnO      | 0.2%               |
| Barium Sulfate, Min. | 95.0% of Remainder |

T-1-2-63

0007-PMC-000000598

Serial No. 57

Issued January 2, 1963

Reprinted August 1, 1964

## Miscellaneous Properties

|                                             |              | <u>Method</u> |
|---------------------------------------------|--------------|---------------|
| Appearance                                  | White Powder | 30a           |
| Total Residue, 325 Mesh, Max.               | 0.15%        | 30b           |
| Oil Absorption                              | 15           | 30c           |
| Moisture and Other Volatile Matter,<br>Max. | 0.1 %        | 30e           |

## Chemical Analysis

|                         |                    | <u>Method</u> |
|-------------------------|--------------------|---------------|
| Zinc Sulfide, ZnS, Min. | 28.0%              | 30A           |
| Zinc Oxide, ZnO, Max.   | 0.4%               | 30B           |
| Barium Sulfate, Min.    | 95.0% of Remainder | 30C           |

SHERWIN-WILLIAMS

PIGMENT,

COLOR &

CHEMICAL

DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

PERMOLITH  
LITHOPONE  
Grade W-421  
Water Dispersible

Issued January 2, 1963

Reprinted August 1, 1964

## Miscellaneous Properties

|                                    |                     |
|------------------------------------|---------------------|
| Appearance                         | White               |
| Total Residue, 325 Mesh, Max.      | 0.10%               |
| Bulking Value                      | 2.79 gals./100 lbs. |
| Moisture and Other Volatile Matter | 0.09%               |

## Chemical Analysis

|                      |                    |
|----------------------|--------------------|
| Zinc Sulfide, ZnS    | 28.5%              |
| Zinc Oxide, ZnO      | 0.2%               |
| Barium Sulfate, Min. | 95.0% of Remainder |

0007-PMC-000000600

Serial No. 56

Issued January 2, 1963  
Reprinted August 1, 1964

### Miscellaneous Properties

### Method

|                                             |              |     |
|---------------------------------------------|--------------|-----|
| Appearance                                  | White Powder | 30a |
| Total Residue, 325 Mesh, Max.               | 0.15%        | 30b |
| Oil Absorption, Min.                        | 12           | 30c |
| Water Soluble Matter, Max.                  | 0.2 %        | 30d |
| Moisture and Other Volatile Matter,<br>Max. | 0.1 %        | 30e |

### Chemical Analysis

### Method

|                         |                     |     |
|-------------------------|---------------------|-----|
| Zinc Sulfide, ZnS, Min. | 28.0 %              | 30A |
| Zinc Oxide, ZnO, Max.   | 0.10%               | 30B |
| Barium Sulfate, Min.    | 95.0 % of Remainder | 30C |

SHERWIN-WILLIAMS

PIGMENT,  
COLOR &  
CHEMICAL  
DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

PERMOLITH  
LITHOPONE  
Grade 60N  
Non-Reactive

Issued January 2, 1963  
Reprinted August 1, 1964

## Miscellaneous Properties

|                                    |                     |
|------------------------------------|---------------------|
| Appearance                         | White               |
| Total Residue, 325 Mesh            | 0.10%               |
| Oil Absorption                     | 12                  |
| Water Soluble Matter               | 0.10%               |
| Bulking Value                      | 2.79 gals./100 lbs. |
| Moisture and Other Volatile Matter | 0.09%               |

## Chemical Analysis

|                      |                     |
|----------------------|---------------------|
| Zinc Sulfide, ZnS    | 28.5 %              |
| Zinc Oxide, ZnO      | 0.06%               |
| Barium Sulfate, Min. | 95.0 % of Remainder |

0007-PMC-000000602

SHERWIN-WILLIAMS

PIGMENT,

COLOR &

CHEMICAL

DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

PERMOLITH  
LITHOPONE  
GRADE 60J  
Hydrophobic

Issued August 1, 1964

## Miscellaneous Properties

|                               |                     |
|-------------------------------|---------------------|
| Appearance                    | White Powder        |
| Total Residue, 325 Mesh, Max. | 0.01%               |
| Bulking Value                 | 2.79 gals./100 lbs. |
| Moisture                      | 0.03%               |

## Chemical Analysis

|                      |                    |
|----------------------|--------------------|
| Zinc Sulfide, ZnS    | 28.5%              |
| Zinc Oxide           | 0.2%               |
| Barium Sulfate, Min. | 95.0% of Remainder |

0007-PMC-000000603

**SHERWIN-WILLIAMS****PIGMENT****COLOR &****CHEMICAL****DEPARTMENT**

# SPECIFICATION

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOISARSENIC ACID  
 $\text{H}_3\text{AsO}_4$   
BD-1124  
Regular Grade

Serial No. 84

Issued November 1, 1968

Miscellaneous PropertiesAppearance  
Specific Gravity  
Pounds Per Gallon\*See Below  
1.90 - 2.00  
15.85 - 16.70Method70a  
70b  
70cChemical AnalysisArsenic Acid,  $\text{H}_3\text{AsO}_4$   
Arsenic Acid Calc. to  $\text{As}_2\text{O}_5$   
Arsenous Oxide,  $\text{As}_2\text{O}_3$ , Max.  
Nitric Acid,  $\text{HNO}_3$ 74.86 - 79.16%  
60.6 - 64.1%  
0.75%  
None70A  
70A  
70B  
70C

\*Liquid, hazy, varying from off white depending on raw material sources.  
Not clarified for bulk shipments in tank car or tank truck quantities.

0007-PMC-000000604

Issued November 1, 1968

Miscellaneous Properties

|                   |            |
|-------------------|------------|
| Appearance        | *See Below |
| Specific Gravity  | 1.95       |
| Pounds per Gallon | 16.273     |

Chemical Analysis

|                           |         |
|---------------------------|---------|
| Arsenic Acid, $H_3AsO_4$  | 77.0 %  |
| Calc. to $As_2O_5$        | 62.35 % |
| Arsenous Oxide, $As_2O_3$ | 0.50 %  |
| Nitric Acid, $HNO_3$      | None    |
| Copper as Cu              | 0.02 %  |
| Lead as Pb                | 0.08 %  |
| Iron as Fe                | 0.05 %  |
| Aluminum as Al            | 0.01 %  |
| Antimony as Sb            | 0.60 %  |

\*Liquid, hazy, varying from off white depending on raw material sources.  
Not clarified for bulk shipments in tank car or tank truck quantities.

**SHERWIN-WILLIAMS**

**PIGMENT,**

**COLOR &**

**CHEMICAL**

**DEPARTMENT**

# SPECIFICATION

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

ARSENIC ACID

$\text{H}_3\text{AsO}_4$

BD-1083

Special Grade

Serial No. 83

Issued November 1, 1968

## Miscellaneous Properties

|                   |                                       | <u>Method</u> |
|-------------------|---------------------------------------|---------------|
| Appearance        | Liquid water white to<br>slight green | 70a           |
| Specific Gravity  | 1.95 - 2.05                           | 70b           |
| Pounds per Gallon | 16.27 - 17.10                         | 70c           |

## Chemical Analysis

|                                                |                |     |
|------------------------------------------------|----------------|-----|
| Arsenic Acid, $\text{H}_3\text{AsO}_4$         | 77.00 - 81.20% | 70A |
| Calc. to $\text{As}_2\text{O}_5$               | 62.4 - 65.8%   | 70A |
| Arsenous Oxide, $\text{As}_2\text{O}_3$ , Max. | 0.35%          | 70B |
| Nitric Acid, $\text{HNO}_3$                    | None           | 70C |

0007-PMC-000000606

SHERWIN-WILLIAMS

PIGMENT,

COLOR &

CHEMICAL

DEPARTMENT

# TYPICAL PROPERTIES

AUXILIARIES DEPARTMENT  
CHICAGO 28, ILLINOIS

ARSENIC ACID  
 $\text{H}_3\text{AsO}_4$   
BD-1083  
Special Grade

Issued November 1, 1968

## Miscellaneous Properties

Appearance  
Specific Gravity  
Pounds per Gallon

Water white to slight green  
2.00  
16.69

## Chemical Analysis

Arsenic Acid,  $\text{H}_3\text{AsO}_4$   
Arsenic Acid Calc. to  $\text{As}_2\text{O}_5$

79.16 %  
64.10 %

Arsenous Oxide  $\text{As}_2\text{O}_3$

0.25 %

Nitric Acid,  $\text{HNO}_3$

None

Copper as Cu

0.001%

Lead as Pb

0.010%

Iron as Fe

0.010%

Aluminum, as Al

0.001%

Antimony as Sb

0.100%

0007-PMC-000000607