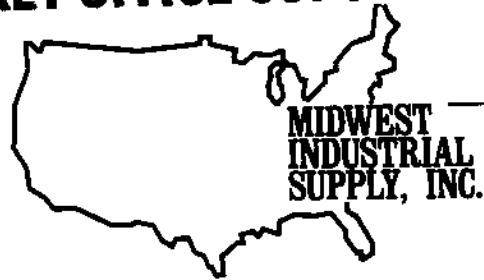


DOCKET OFFICE COPY



January 9, 1991

Dr. Richard Niemeier
Division of Standards Development and Technology Transfer
NIOSH
4676 Columbia Parkway
Cincinnati, OH 45226

Dear Dr. Niemeier:

In response to the request for comments concerning the health and safety aspects of occupational exposure to coal dust which may occur during mining or use of coal, we enclose our product information which are reasonable control technologies to control exposure of personnel to coal dust. We would appreciate being kept current on any findings which you may develop as part of your work.

Sincerely,

MIDWEST INDUSTRIAL SUPPLY, INC.

A handwritten signature in cursive script that reads "Robert Vitale".

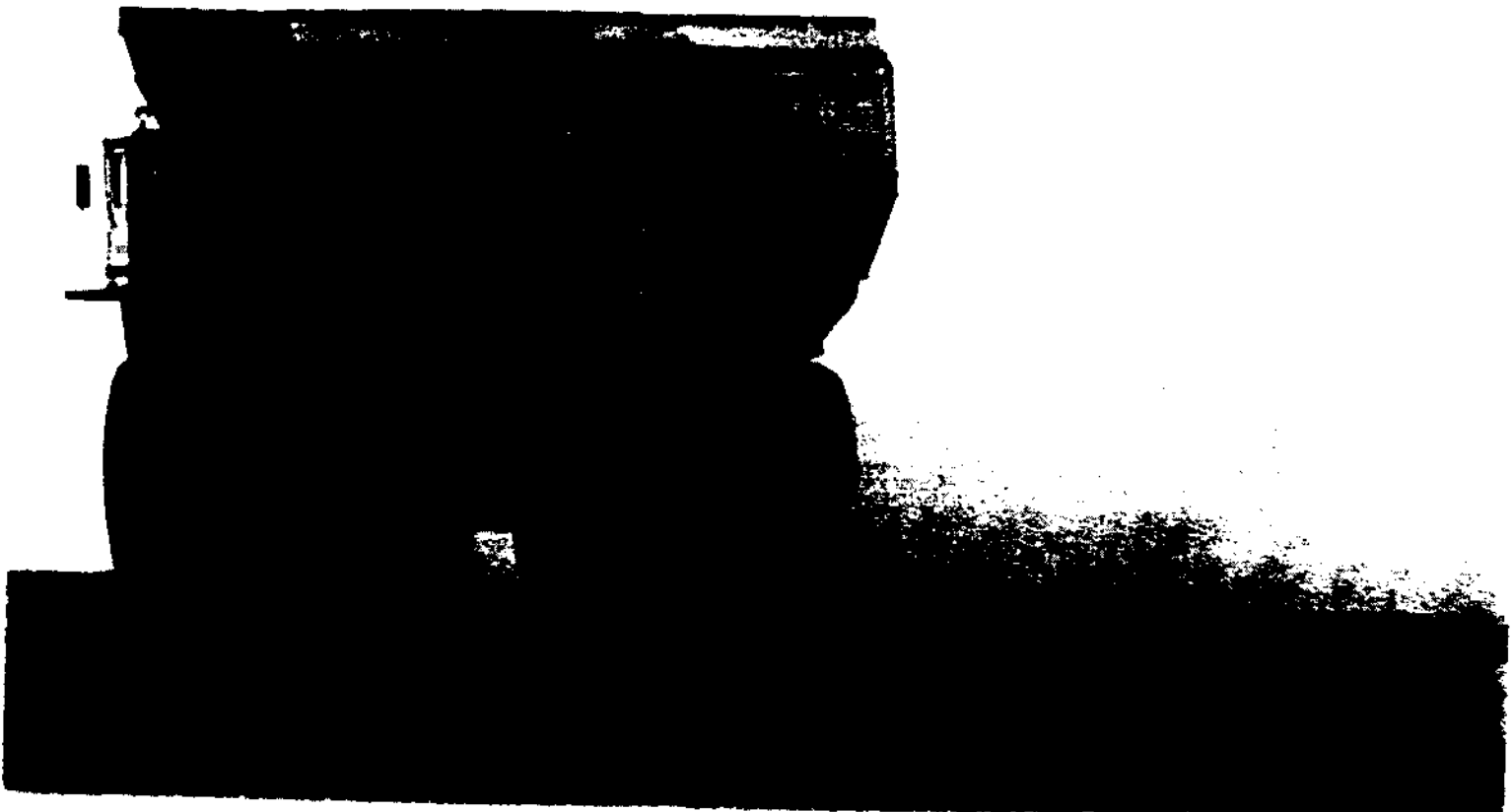
Robert Vitale
President

Enclosures
RV0398

**FUGITIVE
DUST A
PROBLEM?**

**Soil~
Sement[®]**
Dust Retardant

THE ANSWER....



Control Fugitive Dust with

Soil-Sement[®]

Dust Retardant

Soil-Sement[®] has been tested and proven effective in controlling total particulate (TP) and PM₁₀ fugitive emissions. PM₁₀ is the basis for the newly promulgated rules of the National Ambient Air Quality Standards for particulate matter.

Soil-Sement[®] is a powerful binding and cohesive concentrate that is mixed with water and applied to haul roads, unpaved plant roadways, road berms, yard areas, parking lots, ash, tailings, and intermodal yards which:

- penetrates, saturates and bonds surface dust and aggregate in the road surface together, and
- cements this to the subbase to create a complete, hard, dust-free, water-resistant and resilient surface.

Soil-Sement[®] is dust control for a cost-effective dust-control program.

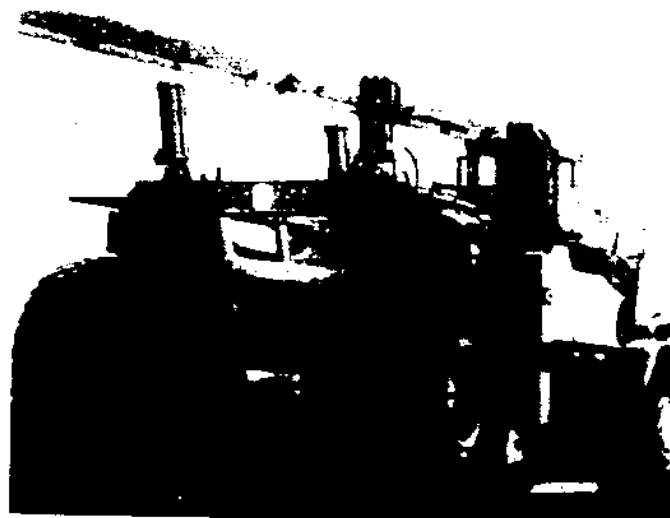
Soil-Sement Why it works

Soil-Sement's[®] unique effectiveness is the result of the length and strength of its polymer molecules and their ability to bond with road materials.

Soil-Sement's[®] chemical structure is made of molecules linked in chains or grids that may be 1,000,000 molecules long. (It is a true giant compared to the much smaller molecular structure of oil, calcium, petroleum resin and asphalt emulsion products which range from 100 to 10,000 molecules.)

Soil-Sement's[®] molecules are attached in relatively straight chains and then cross-link between other chains. As a result, Soil-Sement[®] can be as strong as steel, or as resilient as tire rubber.

Soil-Sement[®] ... Easy to use ... Cost effective



Cost Effectiveness is Priority =

Hour after Hour. Day after Day. Mining and heavy industry roadways are asked to withstand relentless stress and punishment. Soil-Sement[®] gives them the cost effective resilience needed to stand up to traffic, loading abuses, very hot or cold temperatures while controlling dust.

Soil-Sement[®] bonds with surface material molecules and eliminates TSP and PM₁₀ particulate matter.

Soil-Sement[®] performs the vital function of bonding dust particles and aggregate into a cohesive, ductile, firm, smooth dust-free surface. Dust is really an important part of unpaved surfaces. Dust gives the surface stability. It acts as the binder agent to keep unpaved surfaces dense and compacted. When this condition exists, the surface is stable. If not stable, the surface shifts, breaks up, sinks and blows when acted upon by vehicles or wind. Soil-Sement[®] will not leech out of the surface as calcium, brine, and lignin sulfonate solutions or become brittle and rut and pothole as with asphaltic emulsions.

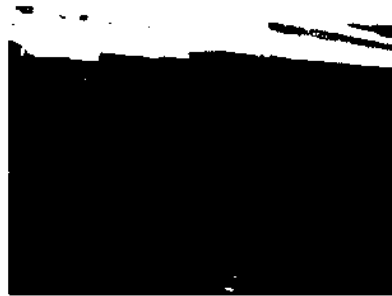
Soil-Sement[®] prevents water from seeping into treated surfaces which destabilize roads. Soil-Sement[®] — Toughness, Tenacity, Ductility in Eliminating Fugitive Dust



A Partial List of Customers:

Abitibi-Price Corp.
Alabama Power Company
Algoma Steel Corp. Ltd.
Allied Chemical Corp.
Aloe Coal Company
Aluminum Company of America
Andrew Corp.
Appalachian Power Company
Asarco, Inc.
Babcock & Wilcox
Bethlehem Steel Corp.
Board of Public Utilities
Board of Water & Light
Boise Cascade
Brunswick Mining & Smelting Corp.
Carolina Power & Light
Cincinnati Gas & Electric Co.
Cleveland Electric Illuminating Co.
Commonwealth Edison Company
Consumers Power Company
Cornell University
Dept. of Public Utilities
Duke Power Company
E. I. DuPont deNemours & Co.
Ford Motor Company
FMC Corp.
General Motors Co.
General Electric Co.
Holmes Limestone Co.
Inco Metals Company
Indianapolis Power & Light
Interstate Power Company
Kansas City Power & Light
Mantino Limestone Co.
Marquette Cement Mfg. Co.
Martin Marietta Cement
McIntyre Mines Ltd.
Ministry of Natural Resources
Monsanto Co.
Norando Mines Ltd.
Ohio Edison Company
Ohio Power Company
Pacific Power & Light
Republic Steel Corp.
Southern Ohio Coal Co.
Stelco Inc.
Tennessee Chemical Co.
U.S. Steel Corp.

Soil-Sement[®]



Midwest Drum
55 Gallons

\$232
Gal

**Bulk in
Tank
Trucks**

\$149
Gal



**SPECIAL
Mine-Pak
Test Kit**

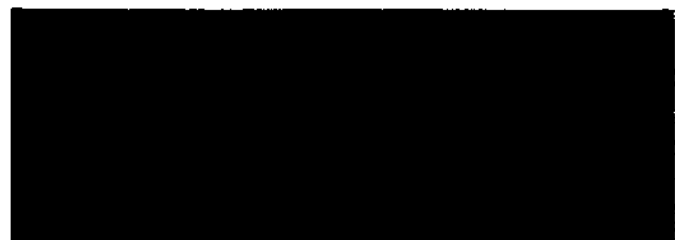
\$2950
complete

**Prove that
Soil-Sement[®]
Works**

Test Kit provides
5 Gallons of
Soil-Sement[®]



See for
yourself.



Terms: 1% 10 Days net 30 days. F.O.B. Canton, Ohio



Serving America's Coal Mining Industry & Its Customers

100% Effective for Dust & Erosion Control

Soil-Sement[®] dust retardant produces a solid, cohesive, integral road surface which reduces tire wear, reduces maintenance costs for power train, suspension, and brake systems. The Soil-Sement[®] surface cuts rolling resistance and results in increased productivity and reduced fuel consumption.

Typical Surfaces Realized



Heavy Traffic

Use a 1 to 9 mix ratio to maintain the level of fugitive dust control desired. Spraying "a little bit often rather than all at once" is recommended where vehicle traffic frequency and loads are severe.



Road Berm, Ash, Tailings

Use a 1 to 9 mix ratio for control and dust-free condition lasting 6 months to 1 year, through rain and shine. Apply yearly.



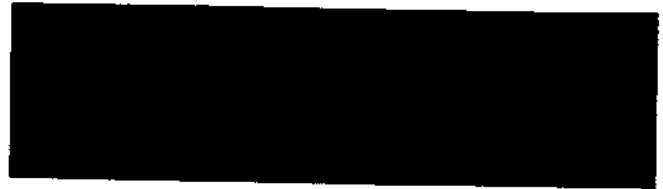
Stockpiles

Use a 1 to 9 or 1 to 30 mix ratio as required to achieve the fugitive dust control desired.

Use a 1 to 5 or 1 to 9 mix ratio for erosion or moisture control. Apply yearly.



**100% Effective
On Fly Ash and
Tailings**



On Stockpiles



BEFORE



AFTER

Dust Control

Coal 0" - 1/2"
Sprayed @ 1 Gal./100 Sq. Ft.
Ratio: 1 Gal. Soil-Sement[®]
with 9 Gal. water



BEFORE



AFTER

Erosion Control

Coal 0" - 1/2"
Sprayed @ 1 Gal./50 Sq. Ft.
Ratio: 1 Gal. Soil-Sement[®]
with 9 Gal. water

Soil-Sement[®] reduces or eliminates pile fires.

Soil-Sement[®] prevents moisture penetration of storage piles.

Mix Soil-Sement[®] with Water & Spray

Where surface dust and loose material is excessive, mix 1 gallon Soil-Sement[®] with 9 gallons of water.
 For erosion control on Coal Storage Piles, use 1 gallon Soil-Sement[®] per 50 sq. ft.
 For dust elimination, use 1 gallon of Soil-Sement[®] per 100 sq. ft.

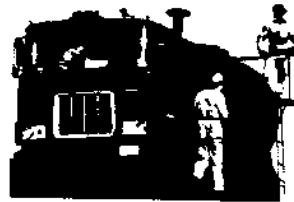
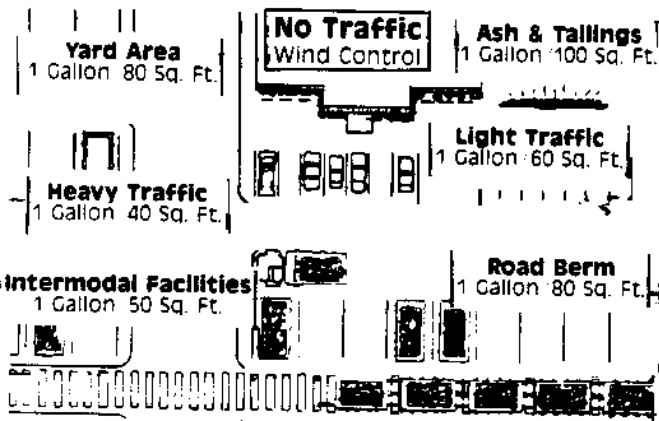
More water or less water can be added depending on application. Our Soil-Sement[®] representative can advise you on any recommended variations.

Soil-Sement[®]: Low Cost, Effective Dust Control!

Soil-Sement[®] solution is applied to roadways, etc., using a spreader truck equipped with a spray bar or similar equipment.



Soil-Sement[®] is to be used in:



Soil-Sement[®] solution is applied to ash and tailings, or coal storage piles using a hydro-seeder truck or a water truck equipped with a pump, hose and firehose-type nozzle.



Recommended Applications of Soil-Sement[®]

| UNPAVED SURFACES | | COAL PILE | | ASH & TAILINGS | | SOIL | |
|-----------------------------------|--|-----------------------------------|---|-----------------------------------|---------------------|-----------------------------------|------------------------------|
| Sq. Ft. per Gallon of Soil-Sement | Site of Application | Sq. Ft. per Gallon of Soil-Sement | Site of Application | Sq. Ft. per Gallon of Soil-Sement | Site of Application | Sq. Ft. per Gallon of Soil-Sement | Site of Application |
| 20 - 80 | Heavy Traffic—Steel Mill, Heavy Industrial, Haul Roads, Mining, Intermodal, Trucking, Power Plants | 100 - 200 | Dust | 60 - 300 | Inactive | 100 - 800 | Soil Stabilization |
| 60 - 120 | Light Traffic | 80 - 400 | Wind Erosion | 80 - 160 | Active | 50 - 100 | Slope Erosion |
| 80 - 400 | Streets, Parking Lots | 20 - 50 | Rain Erosion—Washouts, Rutting, Moisture Penetration Prevention | | | 400 - 900 | Establish Vegetation |
| 80 - 250 | No Traffic—Wind Control | | | | | 250 - 900 | Mulch, Straw, Fiber Tacifier |
| 80 | Berms | | | | | 100 | Surf |
| 80 - 300 | Maintenance Application | | | | | | |

Recommended application technique is to "apply a little bit often rather than all of it at once."

The Soil-Sement[®] plus water solution should be sprayed onto the roadway or other surfaces only at the rate it can be absorbed. Water is used to spread Soil-Sement[®] and get penetration and saturation of fugitive dust and substrata. When water evaporates, Soil-Sement[®] sets. All dust and particles are combined with the base in a dust-free, bound surface.

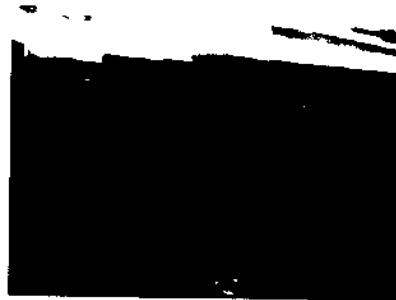
Frequency of application and total number of applications are dictated by local conditions: initial amount of surface dust, soil or aggregate type, subbase stability, traffic frequency, load weights, temperatures, rainfall, drainage conditions, and dust and dirt dropped onto roadways from trucks working in the area.

Serving America's Coal Mining Industry & Its Customers

Partial List of Customers:

Abitibi-Price Corp.
 Alabama Power Company
 Algoma Steel Corp. Ltd.
 Allied Chemical Corp.
 Aloe Coal Company
 Aluminum Company of America
 Andrew Corp.
 Appalachian Power Company
 Asarco, Inc.
 Babcock & Wilcox
 Bethlehem Steel Corp.
 Board of Public Utilities
 Board of Water & Light
 Boise Cascade
 Brunswick Mining & Smelting Corp.
 Carolina Power & Light
 Cincinnati Gas & Electric Co.
 Cleveland Electric Illuminating Co.
 Commonwealth Edison Company
 Consumers Power Company
 Cornell University
 Dept. of Public Utilities
 Duke Power Company
 E. I. DuPont deNemours & Co.
 Ford Motor Company
 FMC Corp.
 General Motors Co.
 General Electric Co.
 Holmes Limestone Co.
 Inco Metals Company
 Indianapolis Power & Light
 Interstate Power Company
 Kansas City Power & Light
 Martino Limestone Co.
 Marquette Cement Mfg. Co.
 Martin Marietta Cement
 McIntyre Mines Ltd.
 Ministry of Natural Resources
 Monsanto Co.
 Norando Mines Ltd.
 Ohio Edison Company
 Ohio Power Company
 Pacific Power & Light
 Republic Steel Corp.
 Southern Ohio Coal Co.
 Stelco Inc.
 Tennessee Chemical Co.
 U.S. Steel Corp.

Soil-Sement[®]



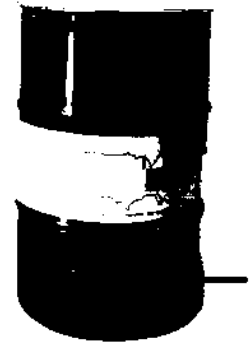
Midwest Drum

55 Gallons

\$232
Gai

**Bulk in
Tank
Trucks**

\$149
ca



SPECIAL Mine-Pak Test Kit

\$2950
complete

**Prove that
Soil-Sement[®]
Works**

Test Kit provides
5 Gallons of
Soil-Sement[®]



See for
yourself.



Terms: 1% 10 Days net 30 days. F.O.B. Canton, Ohio

**MIDWEST
INDUSTRIAL
SUPPLY, INC.**

Serving America's Coal Mining Industry & Its Customers

Soil-Sement[®]

Dust Retardant

Outstanding Features

- Controls TSP and PM₁₀ fugitive particulate matter.
- Stops dust, dust clouds, dust nuisance.
- Reduces rutting, sinking, and overall road surface deterioration.
- Increases load-bearing strength of all types of soils.
- Effective as oil . . . the best replacement for oil.
- Adds traction and safety . . . minimizes mud conditions.
- Maximum weatherability to rain, ultraviolet light and wind.
- Cumulative effect from each application.
- Ecologically safe.
- Does NOT leach or wash away.
- Does NOT track. is NOT carried away on tires.
- Does NOT become brittle and pothole.
- Will NOT pollute underground water supply.
- Does NOT corrode or pit metal and equipment.
- Clean . . . easy clean-up.
- Economical: At 9 to 1 mix ratio, working solution costs only 15¢ per gallon.

Soil-Sement[™]

Unconditional Guarantee

Every product you purchase from Midwest is covered by our world famous no-risk "Satisfaction Guaranteed" policy. You must be completely satisfied with each purchase of any Midwest product or your purchase price will be refunded. If you are not satisfied, notify us within 30 days for a complete refund or credit.

Order your Supply today!

Midwest Industrial Supply, Inc.

P.O. Box 8431, Canton, OH 44711

For fast service
or a discussion of your requirements,

Call: Bob Vitale, Pete Spilios,
Lynn Edwards, Shannon Noble,
Brian Janes, Jon Carroll
or Steve Mathews

216-456-3121

OR TOLL-FREE 1-800-321-0699

FAX 216-456-3247

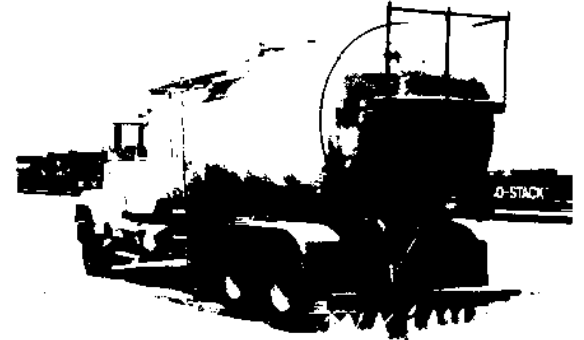
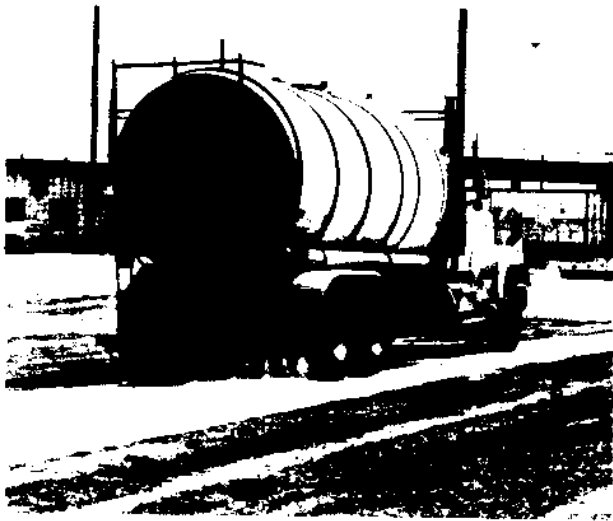


**MIDWEST
INDUSTRIAL
SUPPLY, INC.**

Serving America's Coal Mining Industry & Its Customers

© 1980-1981-1983-1988 Midwest Industrial Supply, Inc.

Let Midwest's Application Service Take the Responsibility for Controlling PM10 Emissions from Your Unpaved Areas . . .



. . . with **Soil-Sement**[®]
Dust Retardant
and Our Equipment
and Experienced Personnel

- We have the Product • We have the Knowledge and Experience
 - We have the Personnel and Equipment
- *We can give you a Turn-Key Operation!*

Order Your Supply
TODAY!

Midwest Industrial Supply, Inc.

P.O. Box 8431 • Canton, Ohio 44711

For recommendations and quotations
for a **COMPLETE** turn-key dust control operation,

Call: Bob Vitale, Pete Spilios, Lynn Edwards, Shannon Noble,
Brian Janes, Jon Carroll or Steve Mathews

216-456-3121

OR TOLL-FREE 1-800-321-0699

FAX 216-456-3247



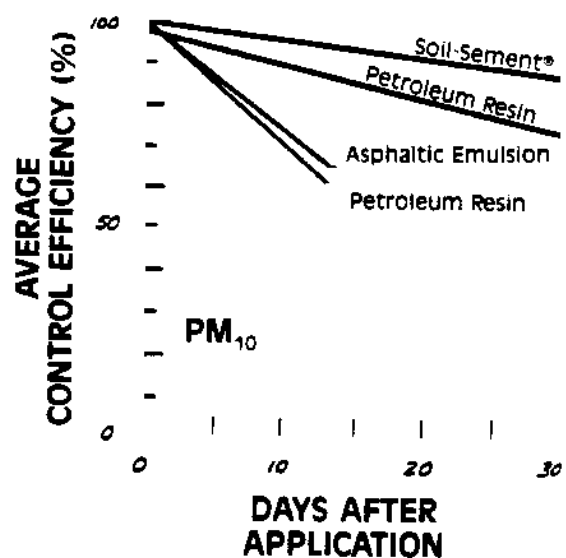
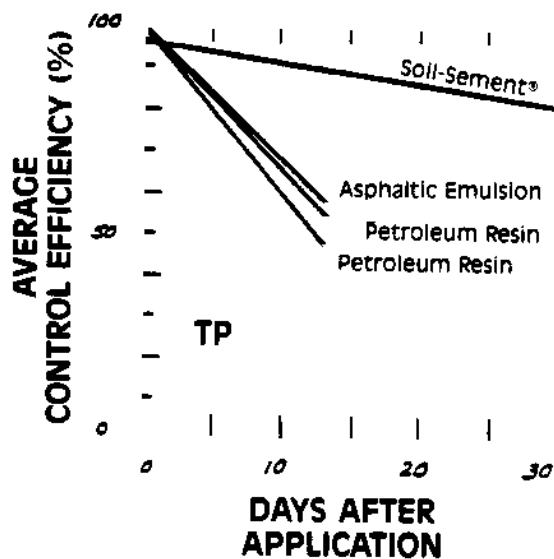
Serving America's Coal Mining Industry and Its Customers

Soil-Sement[®]

Dust Retardant

WORKS!

Average control efficiency (%) graphs over 30 days for TP and PM₁₀ using 3 basic dust suppressant types from "The most comprehensive study of Dust Control for unpaved roads in the iron and steel industry to date." (Source: Evaluation of the Effectiveness of Chemical Dust Suppressants on Unpaved Roads. Prepared for USEPA by MRI Kansas City, MO. Dated Nov. '87)



"The report gives results of measurements of the long-term effectiveness of five unpaved road chemical dust suppressants. All chemicals were tested on the same road with each chemical used on separate abutting road segments. Traffic parameters were typical of the steel industry. Control effectiveness for all chemicals was greater than 95% immediately after chemical application or reapplication. Over a 30-day period, control effectiveness of each chemical decreased: in some cases by as much as 50%, (*asphalt emulsion and petroleum resins*)* and in others by as little as 10% (*Soil-Sement[®]*)*"

(Excerpt from the REPORT ABSTRACT)

Soil-Sement[®]
Dust Retardant



*Italicized items added by Midwest Industrial Supply, Inc.

Serving America's Coal Mining Industry and Its Customers.

**LET US CONTROL
YOUR STORAGE PILE
DUST & EROSION PROBLEMS!**

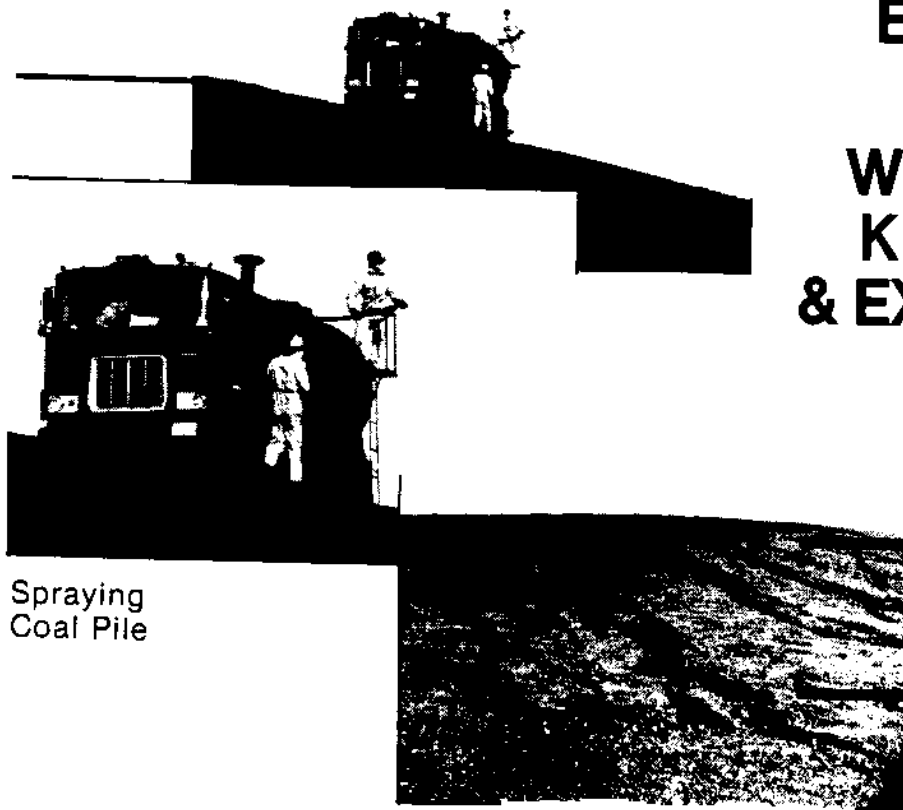
**WE HAVE
THE PRODUCT...**

Soil-Sement[®]

Dust Retardant

**WE
HAVE THE
EQUIPMENT!**

**WE HAVE THE
KNOWLEDGE
& EXPERIENCE!**



Spraying
Coal Pile

Top portion of
Coal Pile is treated
with SOIL-SEMENT[®]
dust retardant,

Bottom portion
without
SOIL-SEMENT[®],
is eroding.



For more information or rates please call:
MIDWEST INDUSTRIAL SUPPLY, INC.

P.O. Box 8431 • Canton, Ohio 44711

- ★ BOB VITALE
- ★ LYNN EDWARDS
- ★ BRIAN JANES
- ★ PETE SPILIOS
- ★ R.R. (REG) WOODS
- ★ JON CARROLL

Toll-Free **1-800-321-0699**
or 216-456-3121, FAX 216-456-3247

MIDWEST'S
Soil~Sement[®]

Dust Retardant

holds
sand
in

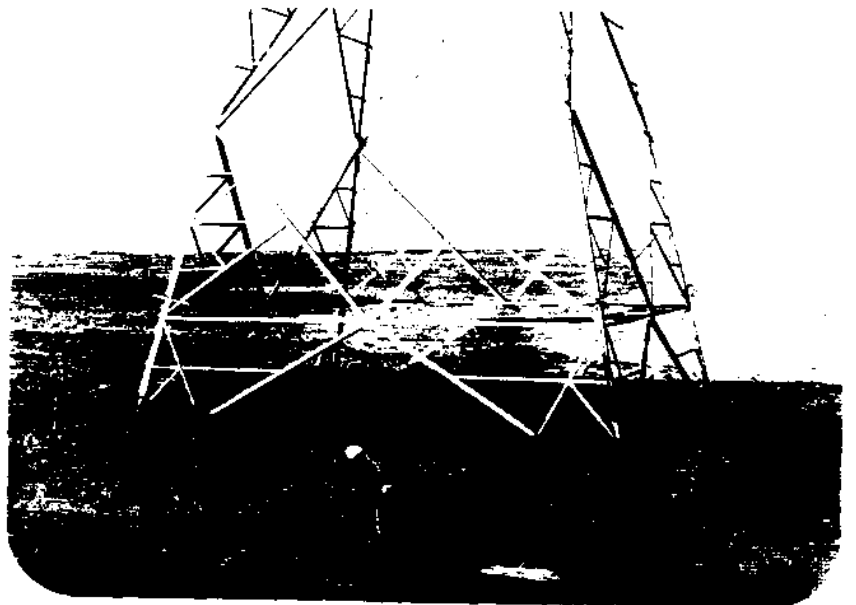
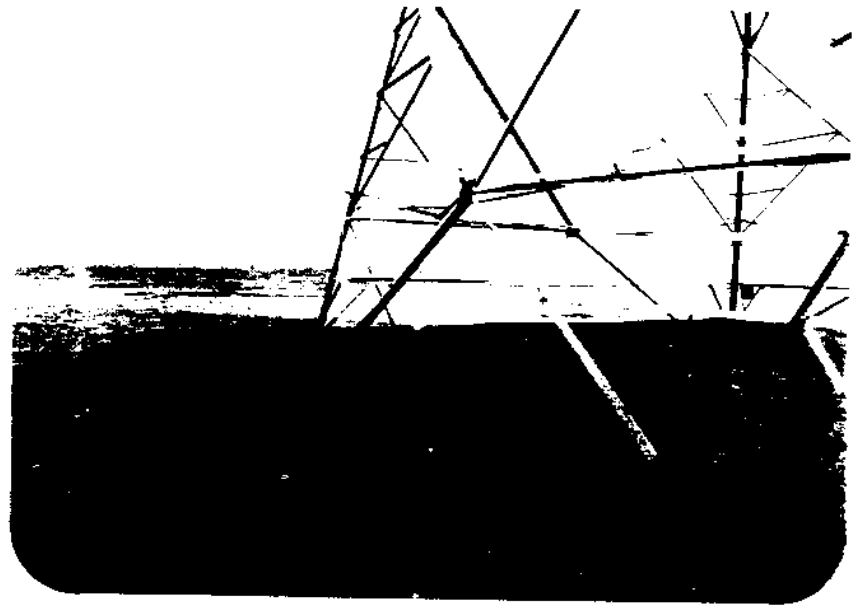
Strong desert winds

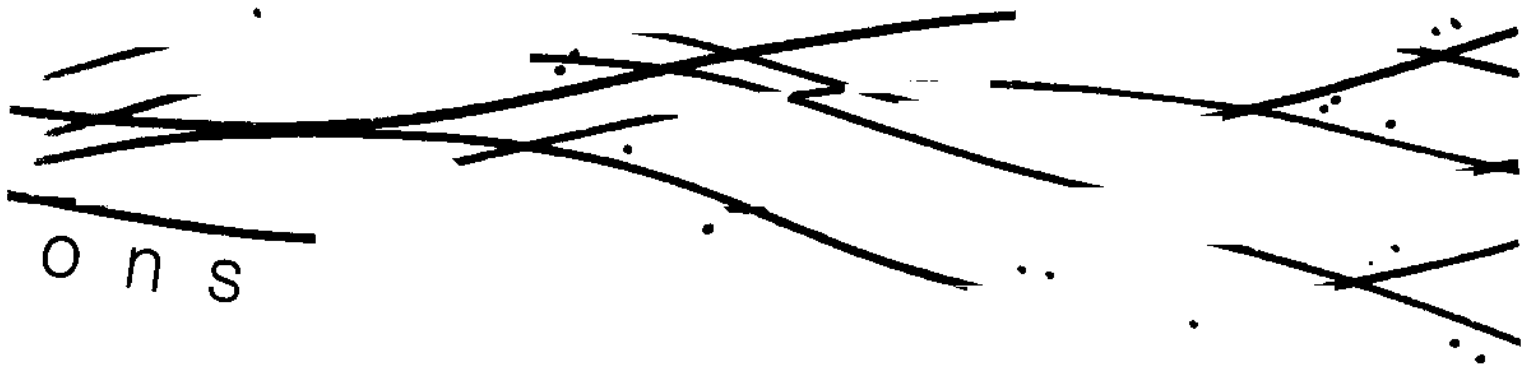


strong desert condi

can't
erode tower
foundations.
They're protected
with

Soil-Sement
DUST RETARDANT

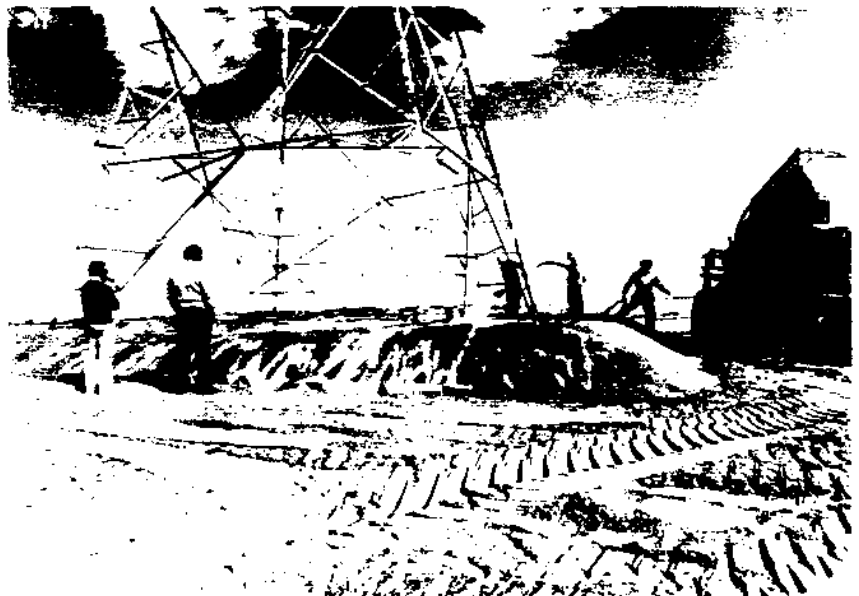




OTHER USES OF SOIL-SEMENT®

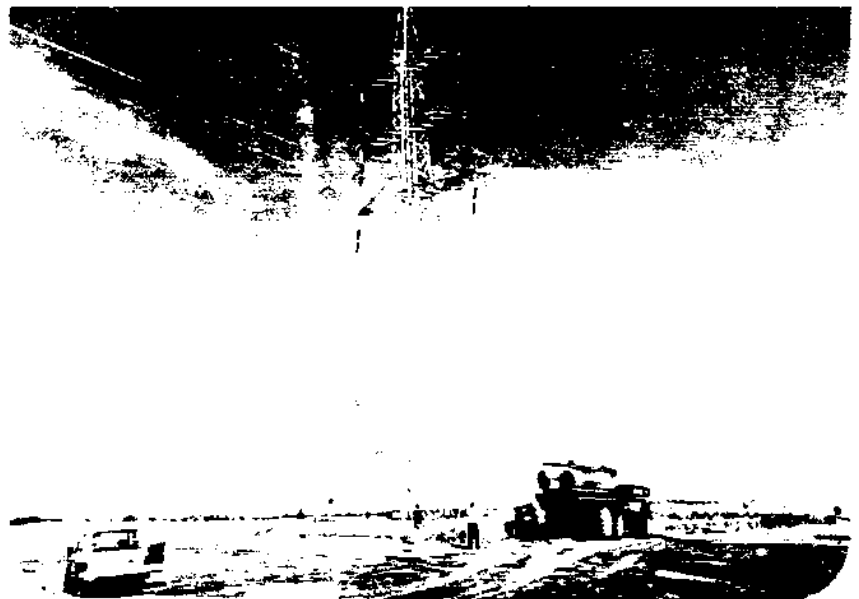
SOIL-SEMENT® dust retardant will overcome dust problems, water erosion and other stabilizing problems.

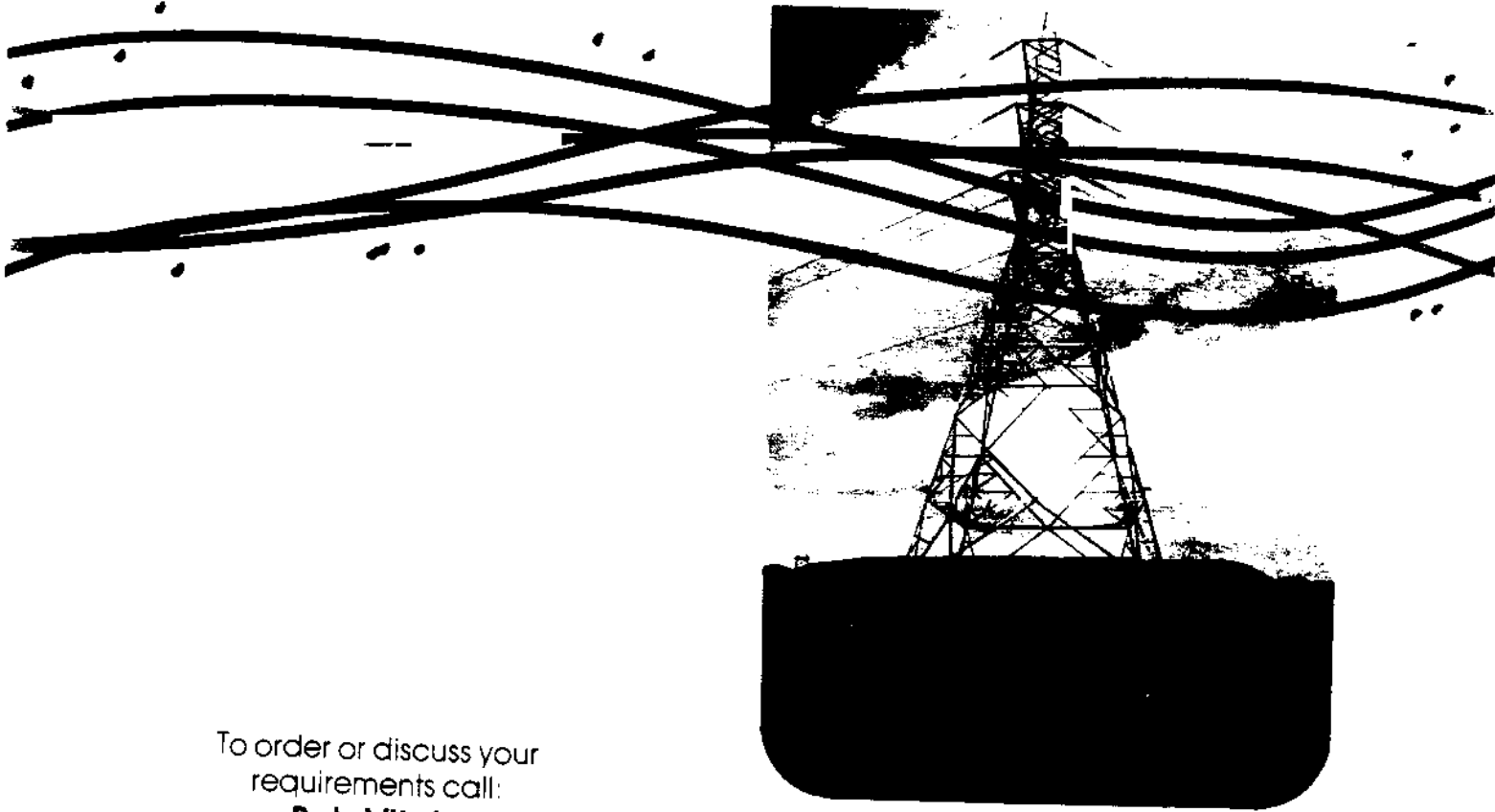
SOIL-SEMENT® dust retardant is applied to haulage roads, road berms, yard areas, parking lots, ash and tailings.



Outstanding features of SOIL-SEMENT®

- Stops dust, dust clouds, dust nuisance.
- Reduces rutting, sinking and overall road surface deterioration.
- Increases load-bearing strength of all types of soils.
- Effective as oil...the best replacement for oil.
- Adds traction and safety...minimizes mud conditions.
- Maximum weatherability to rain, wind and ultraviolet light.
- Cumulative effect from each application.
- Ecologically safe.
- Does NOT leach or wash away.
- Does NOT track, is NOT carried away on tires.
- Clean...easy clean-up.





To order or discuss your
requirements call:

Bob Vitale

216-456-3121

or write to:



P.O. Box 8431
Canton, Ohio 44711

Midwest Industrial Supply, Inc.
P.O. Box 8431, Canton, Ohio 44711
Material Safety Data Sheet

SECTION I

TRADE NAME: SOIL-SEMENT™
CHEMICAL NAME: POLYMER EMULSION
SYNONYMS: DUST RETARDANT
CHEMICAL FAMILY:
MOLECULAR WEIGHT: N/A
FORMULA: Aqueous acrylic vinyl acetate emulsion.
CAS REGISTRY NO.: Product a blend - No number assigned.

SECTION II - INGREDIENTS

| NAME | CAS REG. NO. | WT. % | TWA/TLV* | |
|--------------------------------|---------------|-------|----------|--------|
| | | | OSHA | ACGIH |
| Acrylic Vinyl Acetate Emulsion | NON-HAZARDOUS | 5-50 | NE | NE |
| Residual Monomer | NOT REQUIRED | 0.02 | NR | NR |
| Ammonia | 7664-41-7 | 0.05 | 50 | 25 ppm |
| Water | NON-HAZARDOUS | 50-95 | NE | NE |

SECTION III - PHYSICAL DATA

Boiling/Melting Point @ 760 mm Hg: 212°F
Vapor Pressure mm Hg @ 20°C: 17
Specific Gravity or Bulk Density: 1.01 to 1.15
Solubility in Water: Dilutable
Appearance: Milky White Liquid
Odor: Characteristic Acrylic odor
pH: 4.0 to 9.5

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD): Non-Combustible

AUTOIGNITION TEMPERATURE: 800°F

EXTINGUISHING MEDIUM:

SPECIAL FIREFIGHTING PROCEDURES: N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS: Material can splatter above 212°F.
Dried polymer film can burn but will not support combustion.

EMERGENCY TELEPHONE NUMBER:

216-456-3121 (PLANT)

216-453-0666 (IF NO ANSWER AT PLANT)

This number is available days, nights, weekends, and holidays.

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE Acrylate Monomer 10 PPM

EFFECTS OF OVEREXPOSURE

INHALATION: Vapor from stored, undiluted product can cause headache and nausea.

SKIN: Stored, undiluted product is slightly irritating to skin.

EYES: Slightly Irritating to eyes.

FIRST AID PROCEDURES

EYES: Flush with flowing water at least 15 minutes, get medical attention.

INHALATION: Move subject to fresh air.

SKIN: Flush with large amount of water or wash with soap and water.

Never give fluids or induce vomiting if patient is unconscious or having convulsions.

SECTION VI - REACTIVITY DATA

STABILITY: Stable

CHEMICAL INCOMPATIBILITY: No hazardous reactions are expected to occur under normal industrial conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition in the presence of air may yield carbon monoxide and/or carbon dioxide and traces of monomer.

HAZARDOUS POLYMERIZATION: Does not occur

CONDITIONS TO AVOID: N/A

CORROSIVE TO METAL: No

OXIDIZER: No

SECTION VII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: None required if good ventilation is maintained.

VENTILATION: Mechanical exhaust at point of contaminant.

EYE PROTECTION: Chemical splash, goggles recommended.

PROTECTIVE CLOTHING: Impervious gloves recommended.

OTHER: Under normal handling conditions, the risk of exposure to residual monomer is negligible.

SECTION VIII - ENVIRONMENTAL DATA

SPILL AND LEAK PROCEDURES:

Dike and control spill. Transfer liquid to containers for recovery or disposal. Keep spills out of municipal sewers and open bodies of water.

WASTE DISPOSAL METHOD:

Coagulate the emulsion by the stepwise addition of ferric chloride and lime. Remove the clear supernatant liquid and flush to a chemical sewer or landfill. Incinerate solids and the contaminated diking material according to local, state and federal regulations.

CONTAINER DISPOSAL:

Do not re-use containers. Do not weld on metal containers.

SECTION IX - SHIPPING DATA

D.O.T. PROPER SHIPPING NAME (49CFR172.101): None

HAZARDOUS SUBSTANCE (40CFR116): N/A

REPORTABLE QUANTITY (RQ): N/A

D.O.T. HAZARD CLASSIFICATION (49CFR172.101):

PRIMARY: None

SECONDARY: N/A

D.O.T. LABELS REQUIRED (49CFR172.101): None

D.O.T. PLACARDS REQUIRED: None

POISON CONSTITUENT (49CFR173.343): N/A

BILL OF LADING DESCRIPTION: Liquid plastic, NOI

C NO.:

UN/NA CODE:

*FOOTNOTE TO SECTION II: NE = not established; NR = not required

*Just in Time*SM
DUST CONTROL SERVICE



**The
Answer to
Dust
Control
Problems!**

COMPARE DUST CONTROL EFFECTIVENESS

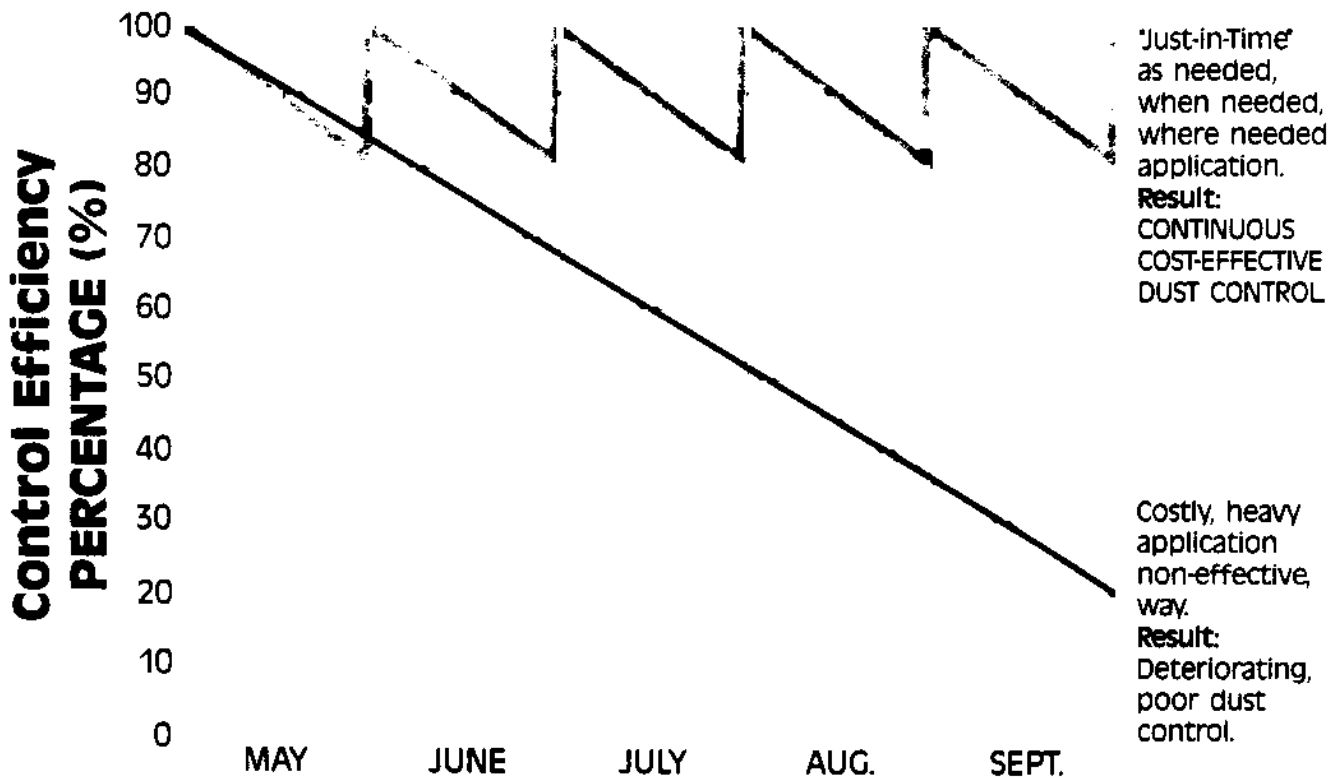
Present, Heavy Application Method

VS.

*Just in Time*SM
DUST CONTROL SERVICE

Present method of applying dust control agent is 1 or 2 heavy applications per year. This results in good dust control effectiveness for the first couple of weeks, but as time passes, control deteriorates, and unacceptable levels of dust exist.

Midwest's 'Just-in-Time' concept of applying Soil-Sement[®] as needed, when needed, where needed results in excellent dust control effectiveness every day, every month. In addition, by keeping the inventory of dust control agent in storage rather than keeping the inventory on the ground, you avoid excessive mess, tracking and product loss associated with the present, non-effective, costly method.



This chart reflects typical control efficiencies of the present non-effective application method versus Midwest's 'Just-in-Time' Cost Effective Application Service of the future.



Serving America's Coal Mining Industry and Its Customers

COMPARE DUST CONTROL COST

Present, Non-Effective, Costly Way

| APPLICATIONS | GALLONS PER APPLICATION | COST PER GALLON | COST OF APPLICATIONS |
|--------------|-------------------------|-----------------|----------------------|
| 1 | 138,000 | \$.145 | \$20,010 |
| 2 | 80,000 | \$.145 | 11,600 |

***TOTALS:**

2.....218,000.....\$31,610⁰⁰
 Applications Gallons Cost

- 1 or 2 Heavy Applications
- High Initial Cost
- Deteriorating, Non-Effective Dust Control
- Low Unit Price
- LARGER TOTAL COST!

Just in limeSM

DUST CONTROL SERVICE



| | | | |
|----|--------|-------|-----------|
| 1 | 25,000 | \$.19 | \$4750.00 |
| 2 | 16,000 | .19 | 3040.00 |
| 3 | 8,000 | .19 | 1520.00 |
| 4 | 8,000 | .19 | 1520.00 |
| 5 | 8,000 | .19 | 1520.00 |
| 6 | 8,000 | .19 | 1520.00 |
| 7 | 8,000 | .19 | 1520.00 |
| 8 | 8,000 | .19 | 1520.00 |
| 9 | 8,000 | .19 | 1520.00 |
| 10 | 4,000 | .19 | 760.00 |
| 11 | 7,000 | .19 | 1330.00 |
| 12 | 8,750 | .19 | 1662.50 |

***TOTALS:**

12.....116,750.....\$22,182⁵⁰
 Applications Gallons Cost

- Applications as Needed, when Needed, where Needed
- Continuously Effective Dust Control
- Complete Record Provided of Work Performed
- Higher Unit Price

BEST VALUE!

* Based on an actual comparison in Ohio during 1987 and 1988.

*Just in Time*SM
DUST CONTROL SERVICE



Midwest Industrial Supply, Inc.

P.O. Box 8431 • Canton, Ohio 44711

NEW
APPLICATION RECOMMENDATION!
see inside . . .

**Want your
road watering to
be twice as effective?**



HAUL ROAD DUST CONTROL[®]

DUST WETTING ADDITIVE

HAUL ROAD DUST CONTROL[®]

DUST WETTING ADDITIVE

A blend of special surfactant which increases the ability of water to wet and suppress road dust.

HAUL ROAD DUST CONTROL[®] has a cumulative effect in suppressing dust. Each new application of treated water receives a boost from the residual material of the previous application. The residual materials are also activated by very important rainfall and cause it to be absorbed by the roadbed and dust rather than running off or puddling.

HAUL ROAD DUST CONTROL[®] uses the best current technology available to maximize effectiveness of water in wetting and suppressing haul road dust.

HAUL ROAD DUST CONTROL[®] WORKS FOUR WAYS



- **HAUL ROAD DUST CONTROL[®]** increases the wetting and penetration ability of water a minimum of 100% so water spread is absorbed into surface dust and the roadbed rather than running off or laying in puddles.
- **HAUL ROAD DUST CONTROL[®]** causes a deep moisture penetration of dust and the roadbed which results in a much slower evaporation rate of the water.
- **HAUL ROAD DUST CONTROL[®]** reduces water's tension which causes water to spread in much smaller droplets, so the surface area of water coming in contact with small dust particles is significantly greater.
- **HAUL ROAD DUST CONTROL[®]** contains non-volatile materials which attract both dust particles and water; these non-volatile materials remain to attract dust particles even when almost all the water has evaporated.



Serving America's Coal Mining Industry and Its Customers



PARTIAL LIST OF CUSTOMERS

Allied Chemical Corp.
 Aloe Coal Co.
 Amax Coal Co.
 Amax Lead Co.
 Appalachian Power Co.
 Armco Steel Corp.
 Arch Minerals Corp.
 Alabama Power Co.
 Algoma Steel Ltd.
 American Coal Co.
 Baltimore Gas & Electric Co.
 Bethlehem Steel Corp.
 Bridger Coal Co.
 Central Illinois Public Service Co.
 Central Illinois Light Co.
 Champion Papers
 Cleancoal Terminals
 Cleveland Electric Illuminating Co.
 Commonwealth Edison Co.
 Consolidation Coal Co.
 Climax Molybdenum Co.
 Consumer Power Co.
 Citadel Cement Co.
 Detroit Edison Co.
 Drummond Co.
 Duke Power Co.
 Dundee Cement Co.
 Energy Development Co.
 Elkay Mining Co.
 E.I. DuPont DeNemours, Inc.
 Falcon Coal Co.
 Ford Motor Co.
 Georgia Power Co.
 Gibraltar Coal Corp.
 Greenwich Collieries
 General Motors Corp.
 Harlan Fuel Co.
 Helvetia Coal Co.
 Iowa Illinois Gas & Electric Co.
 Indiana Kentucky Electric
 Indianapolis Power & Light Co.
 Interstate Power Co.

Interlake Inc.
 Island Creek Coal Co.
 Iowa Southern Utilities Co.
 Inland Steel Co.
 Kaiser Steel Corp.
 Knife River Coal Mining Co.
 Kentucky Utilities, Inc.
 Kentucky Harlan Coal Co.
 Leckie Smokeless Coal Co.
 Missouri Mining Co.
 Minnesota Power & Light
 Monsanto Corp.
 Marquette Cement Corp.
 Monterey Coal Co.
 Martin Marietta Cement
 Montana-Dakota Utilities
 National Mines Corp.
 Northern Indiana Public Service Co.
 Ohio Edison Co.
 Ohio Power Co.
 Old Ben Coal Co.
 Olga Coal Co.
 Peabody Coal Co.
 Pacific Power & Light
 Pennsylvania Power & Light
 Pittsburg & Midway Coal Co.
 Public Service Co. Of New Mexico
 Plateau Mining Co.
 Public Service Co. of New Hampshire
 Rochester & Pittsburgh Coal Co.
 Southern Appalachian Coal Co.
 St. Joe Mineral Corp.
 Southern Utah Fuel
 Saginaw Mining Co.
 Tennessee Valley Authority
 Texasgulf, Inc.
 Texas Utilities Generating Station
 United States Steel Corp.
 United Coal Companies
 Union Electric Co.
 Universal Atlas Cement
 Valley Camp Coal Co.
 Wheeling & Pittsburgh Steel

PRICES & AVAILABILITY OF HAUL ROAD DUST CONTROL

55-GALLON DRUMS

1-2 \$4.25 per Gal.
 3-9 4.00 per Gal.
 10-24 3.90 per Gal.
 25 or more .. 3.75 per Gal.

Biggest Savings!
 4000 Gallon Bulk

\$285 per Gallon

TERMS:

1% 10 Days — Net 30 Days
 F.O.B. Canton, Ohio

Midwest Industrial Supply, Inc.
 P.O. Box 8431 • Canton, Ohio 44711

Order
 your supply
TODAY!

For **FAST** service or a discussion of your requirements
Call: Bob Vitale, Pete Spilios, Lynn Edwards,
 Shannon Noble, Brian Janes or Jon Carroll

216-456-3121
 or TOLL-FREE 1-800-321-0699
 FAX 216-456-3247



*Serving America's Coal Mining Industry
 and Its Customers*

HAUL ROAD DUST CONTROL UNCONDITIONAL GUARANTEE

Every product you purchase from Midwest is covered by our world famous no-risk "Satisfaction Guaranteed" policy. You must be completely satisfied with each purchase of any Midwest product or your purchase price will be refunded. If you are not satisfied, notify us within 30 days for a complete refund or credit.

Midwest Industrial Supply, Inc.
P.O. Box 8431, Canton, Ohio 44711
Material Safety Data Sheet

SECTION I

TRADE NAME: DUSTRACT™
CHEMICAL NAME: DIOCTYL SODIUM SULFOSUCCINATE AND SODIUM DIHEXYL
SULFOSUCCINATE IN SOLVENTS
SYNONYMS: DUST SUPPRESSION ADDITIVE
CHEMICAL FAMILY: ESTER
MOLECULAR WEIGHT: N/A CAS REGISTRY NO.: None Available
Product is a blend

SECTION II - INGREDIENTS

Listed Here Are Hazardous And Toxic Ingredients According To OSHA "HAZARD COMMUNICATIONS ACT 29 CFR 1910.1200"

| NAME | % | TLV | TOXICOLOGICAL DATA |
|---|----|----------------|---|
| ETHYL ALCOHOL (CAS Reg. # 000064-17-5) | 3% | 1000 PPM | |
| SODIUM DIHEXYL SULFOSUCCINATE (CAS Reg. # 3006-15-3) | | | Acute Oral LD ₅₀ 1.75g/kg (Rat) Acute Dermal LD ₅₀ 5.0g/kg (Rabbit) Primary Irritation |
| SODIUM DIOCTYL SULFOSUCCINATE (CAS Reg. # 000577-11-7) | | | Acute LD ₅₀ (Rat) 1900-4000 and (mouse) 2640mg/kg Acute Dermal LD ₅₀ 10,000mg/kg (Rabbit) |
| 2-BUTOXYETHANOL (CAS Reg. # 111-76-2) | | 25PPM 50PPM | ACGIH ASHA |

SECTION III - PHYSICAL DATA

Boiling/Melting Point @ 760 mm Hg: N/A
Vapor Pressure mm Hg @ 20°C: 50
Specific Gravity or Bulk Density: 1.13
Solubility in Water: Complete
Appearance: Clear liquid
Odor: Faint pH: N/A

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD): N/A
AUTOIGNITION TEMPERATURE: N/A
EXTINGUISHING MEDIUM: Water Fog, CO₂, Dry Chemical
SPECIAL FIREFIGHTING PROCEDURES: None
UNUSUAL FIRE AND EXPLOSION HAZARDS: None

EMERGENCY TELEPHONE NUMBER:
216-456-3121 (PLANT) 216-453-0666 (IF NO ANSWER AT PLANT)

This number is available days, nights, weekends, and holidays.

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: NOT DETERMINED

EFFECTS OF OVEREXPOSURE

INHALATION: OSHA Standard 50 PPM

INGESTION: Moderate single dose toxicity, LD 50 (Rats): 470 mg/kg;
(Rabbits): 320 mg/kg

EYE CONTACT: Slight pain, moderate irritation and corneal injury,
should heal with time.

SKIN CONTACT: Essentially non-irritating

SKIN ABSORPTION: Butoxyethanol penetrates skin readily. Signs and symptoms
of toxicity are similar to that of swallowing.

FIRST AID PROCEDURES

If swallowed, induce vomiting by giving 2 glasses of water and (A) stimulating back of throat with finger, or (B) giving syrup of ipecac, 1 oz. Never give anything by mouth or vomiting in an unconscious person. In case of skin contact, wash affected areas of skin with soap and water. Refer to a physician. In case of eye contact, immediately irrigate with plenty of water for 15 minutes. Refer to a physician if irritation persists.

SECTION VI - REACTIVITY DATA

STABILITY: Stable

CHEMICAL INCOMPATIBILITY: Keep away from strong acids and alkalies

HAZARDOUS DECOMPOSITION PRODUCTS: None

HAZARDOUS POLYMERIZATION: Does not occur

CORROSIVE TO METAL: No

OXIDIZER: No

SECTION VII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Not required

VENTILATION: Local exhaust: None required
Mechanical exhaust: None required

EYE PROTECTION: If splashing can occur, wear chemical goggles

PROTECTIVE CLOTHING: None required

OTHER: Eyewash station

SECTION VIII - ENVIRONMENTAL DATA

SPILL AND LEAK PROCEDURES:

Cover with inert absorbent material, sweep up and place in a waste disposal container. Flush area with water. Keep spills out of municipal sewers and open bodies of water.

WASTE DISPOSAL METHOD:

Bury in landfill

CONTAINER DISPOSAL: Do not re-use containers. Do not weld on metal containers.

SECTION IX - SHIPPING DATA

D.O.T. PROPER SHIPPING NAME (49CFR172.101): None

HAZARDOUS SUBSTANCE (40CFR116): N/A

REPORTABLE QUANTITY (RQ): N/A

D.O.T. HAZARD CLASSIFICATION (49CFR172.101):

PRIMARY: None

SECONDARY: None

D.O.T. LABELS REQUIRED (49CFR172.101): None

D.O.T. PLACARDS REQUIRED: None

POISON CONSTITUENT (49CFR173.343): N/A

BILL OF LADING DESCRIPTION: Liquid Solvent

CC NO:

UN/NA CODE:



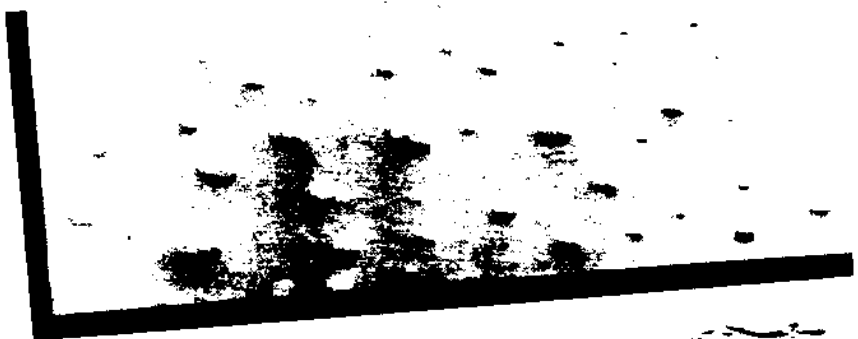
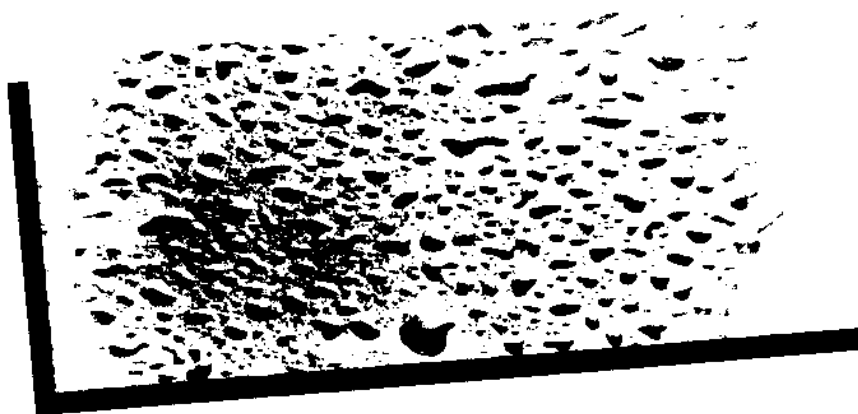
DUSTRACT[®] is the **FIRE**

★★★

★★★

★★★★★★★★★★★★★★★★★★★★

These comparisons show the effect Dustract[®] produces in water and demonstrates why Dustract with water is many times more effective than water in combating dust.



Dustract[®] dust suppressive additive, is injected into the water supply line at the ratio of one gallon per 2,000 gallons of water flow.

Top left: Water only—Water beads, leaving 60% of surface area not watered.

Middle left: Dustract[®] in water—Water film spreads over 100% of surface area.

Bottom left: Water on coal—Left: With Dustract, water film wets 100% of coal surface. Right: Without Dustract, water only beads with the result that 60% of the coal surface is not wet.

| QUANTITY | PRICE TERMS & AVAILABILITY | |
|------------|----------------------------|-----------------|
| | SIZE OF DRUM | PRICE OF GALLON |
| 1-2 | 55 Gal. | \$4.80 |
| 3-9 | 55 Gal. | \$4.65 |
| 10-24 | 55 Gal. | \$4.40 |
| 25 or more | 55 Gal. | \$4.15 |

TERMS: 1% 10 days, net 30 days.
F.O.B. Carbon, Ohio

POWER^{***} to fight DUST

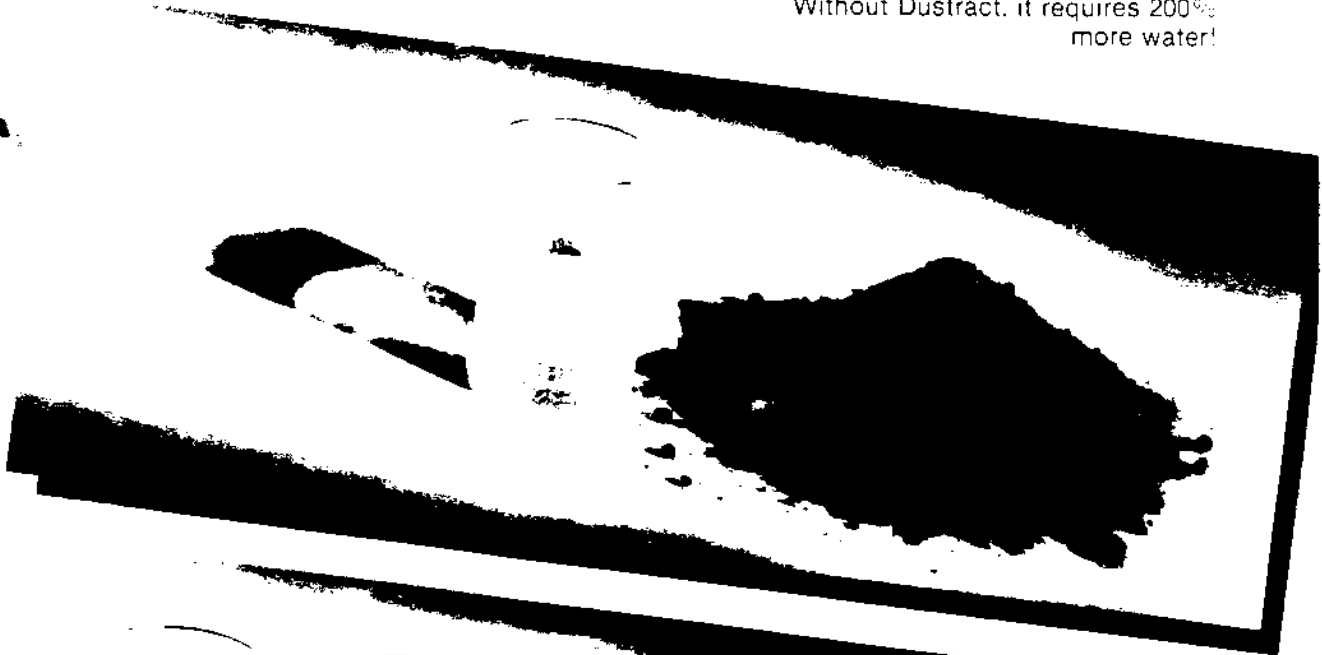


Comparison of water required to wet a specific volume of fly ash.

Top right: Dustract[®] in water—Only one beaker is required to wet this fly ash.

Bottom right: Water only—three beakers are required to wet this fly ash.

Without Dustract, it requires 200% more water!

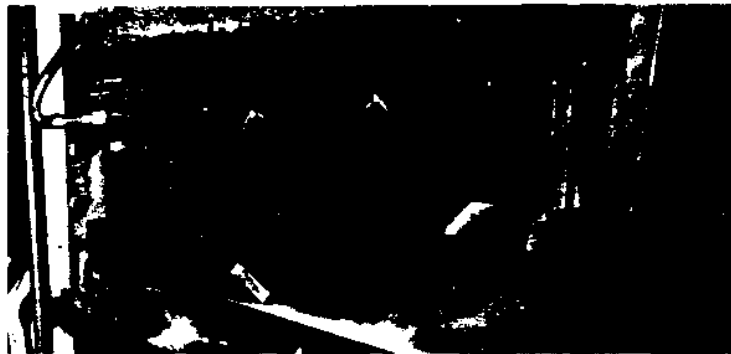


FIGHT DUST



An example of simple,
inexpensive Dustract[®]
injection water spray
system designed and
installed by Midwest
Industrial Supply, Inc.

*It's dust free
and clean!*





Stop fugitive dust escape at ash silo loadout with Dustract® dust suppression additive in a water curtain.

Dustract® is injected into a water line which creates a wall of water and prevents dust from escaping. One gallon Dustract is injected per 2000 gallon water flow



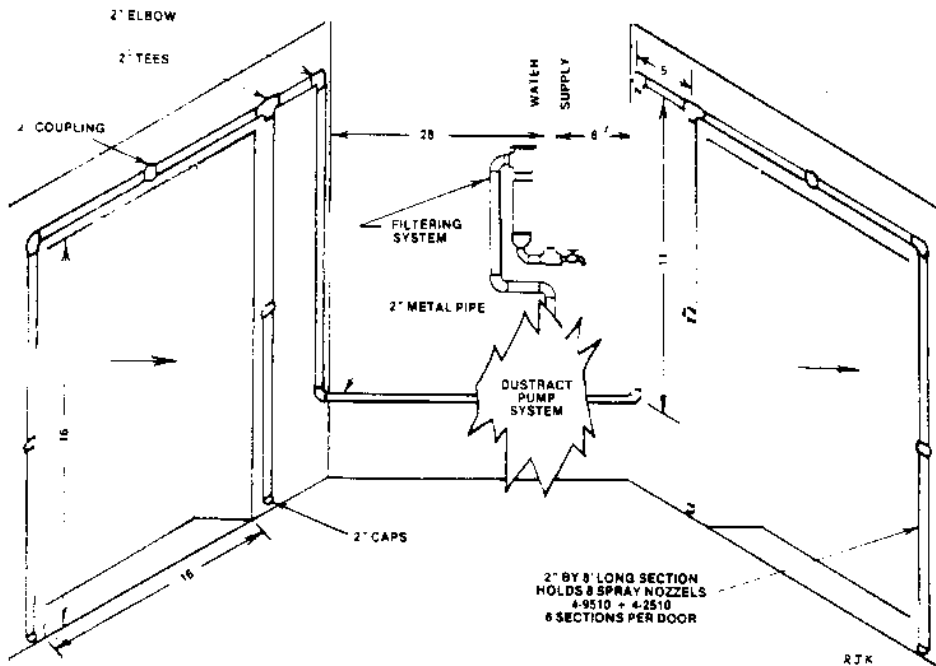
Water curtain before loading.



Water curtain during loading.



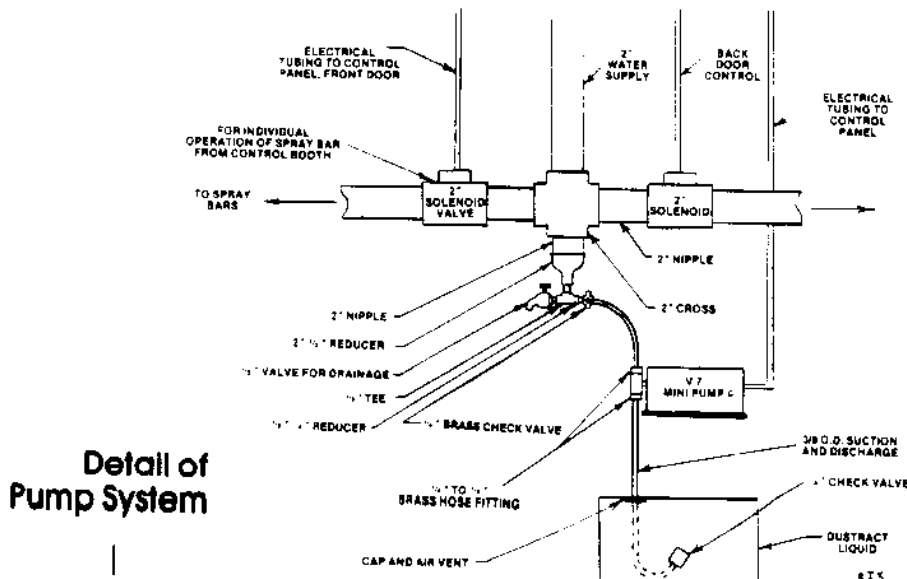
Diagram of typical ash silo water curtain installation and Dustract® Pump System.



For quotation covering your specific requirements, contact Midwest Industrial Supply, Inc.

Call toll-free
1-800-321-0699
 in Continental U.S.
 (Except Ohio)

In Ohio and Canada
216-456-3121



P.O. Box 8431
 Canton, Ohio 44711

SECTION I

TRADE NAME: HAUL ROAD DUST CONTROL™
CHEMICAL NAME:
SYNONYMS: DUST WETTING ADDITIVE
CHEMICAL FAMILY:
MOLECULAR WEIGHT: N/A
CAS REGISTRY NO.: Product a blend - No number assigned.
FORMULA:

SECTION II - INGREDIENTS

| NAME | % | TLV | TOXICOLOGICAL DATA |
|-------------------------|---|-----|--------------------|
| ALKYL PHENOL ETHOXYLATE | | | Irritant |

SECTION III - PHYSICAL DATA

Boiling/Melting Point @ 760 mm Hg: N/A
Vapor Pressure mm Hg @ 20°C: N/A
Specific Gravity or Bulk Density: 1.04 Store above 40°F
Solubility in Water: complete
Appearance: clear pink liquid
Odor: odorless
pH: 11

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD): Over 500°F
AUTOIGNITION TEMPERATURE: N/A
EXTINGUISHING MEDIUM: Dry Chemical, Use Water Spray
SPECIAL FIREFIGHTING PROCEDURES: N/A
UNUSUAL FIRE AND EXPLOSION HAZARDS: None
EMERGENCY TELEPHONE NUMBER:
216-456-3121 (PLANT) 216-453-0666 (IF NO ANSWER AT PLANT)

This number is available days, nights, weekends, and holidays.

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE

INHALATION: N/A

SKIN: Wash with plenty of soap and water

EYES: Severe eye irritation may occur

FIRST AID PROCEDURES

EYES: Flush with plenty of clean water for at least 15 minutes. If irritation persists, seek medical attention.

Never give fluids or induce vomiting if patient is unconscious or having convulsions.

SECTION VI - REACTIVITY DATA

STABILITY: STABLE

CHEMICAL INCOMPATIBILITY: N/A

HAZARDOUS DECOMPOSITION PRODUCTS: N/A

HAZARDOUS POLYMERIZATION: Does not occur

CONDITIONS TO AVOID: N/A

CORROSIVE TO METAL: YES

OXIDIZER: NO

SECTION VII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: N/A

VENTILATION: Mechanical (General): General Room Ventilation

EYE PROTECTION: Wear safety glasses

PROTECTIVE CLOTHING: Use rubber gloves

OTHER: N/A

SECTION VIII - ENVIRONMENTAL DATA

DEGRADABILITY AQUATIC TOXICITY: BOD: N/A
TOXICITY: N/A
OCTANOL/WATER PARTITION COEFFICIENT: Not Determined

SPILL AND LEAK PROCEDURES: N/A

WASTE DISPOSAL METHOD: Disposer must comply with federal, state and local disposal or discharge laws.

CONTAINER DISPOSAL: N/A

SECTION IX - SHIPPING DATA

D.O.T. PROPER SHIPPING NAME (49CFR172.101): None

HAZARDOUS SUBSTANCE (40CFR116): N/A

REPORTABLE QUANTITY (RQ):

D.O.T. HAZARD CLASSIFICATION (49CFR172.101):

PRIMARY: None

SECONDARY: N/A

D.O.T. LABELS REQUIRED (49CFR172.101): None

D.O.T. PLACARDS REQUIRED: None

POISON CONSTITUENT (49CFR173.343): N/A

BILL OF LADING DESCRIPTION: Liquid Dust Suppressant

CC NO.

UN/NA CODE: