



Environmental Technology Verification (ETV) Program ~ Technology Fact Sheet

Soil-Sement®

Midwest Industrial Supply Inc.

Performance Claim

Midwest Industrial Supply Inc.'s Soil-Sement®, when applied in accordance with the manufacturer's instructions, will:

1. on unpaved roadways in California's San Joaquin Valley,
 - a. achieve at least 95% suppressant efficiency on fugitive dust (PM_{10}) for three months after application and at least 80% after 11 months, and
 - b. increase the R-value in the range of 30-40% when measured by ASTM Test Protocols D1883 and D2844, and calculated in accordance with the AASHTO Guide for Design of Pavement Structures, 1986; and
2. in acute toxicity tests, yield LC_{50} 's for rainbow trout (96-hr) and *Daphnia magna* (48-hr) of at least 7,000 ppm and 21,000 ppm, respectively.

Description

Soil-Sement® is a polymer emulsion that is specially-formulated as a non-toxic erosion and dust control agent that requires no EPA reporting.

Application

Soil-Sement® is used in widely varying climatic conditions and soil types and in diverse industrial and commercial applications.

Technology Description

Midwest Industrial Supply Inc.'s

Soil-Sement® is a polymer emulsion that is specially-formulated as a non-toxic erosion and dust control agent for unpaved roadways and/or shoulders and other municipal/industrial exposed-earth sites. It requires no US EPA reporting since the formulation contains no heavy metals, pesticides/herbicides or other toxic compounds. The design concept also allows changing the application method, intensity or frequency to meet regulatory requirements while remaining within the customer's budget.

... to a mining haul road ...



Soil-Sement®
applied to a construction site ...



.....and to a landfill
at a steel mill.





Technology Application

Soil-Sement® is used in widely varying climatic conditions and soil types and in diverse industries, from landfills to mining, wineries to steel mills*, development/construction sites to power plants, and intermodal facilities to military installations. (A study conducted for the U.S. EPA on the effectiveness of dust suppressants on heavily used roads at two iron and steel plants indicated that **Soil-Sement®** outperformed the other suppressants tested, for all particle-size ranges analyzed.

Note: This study was not part of the performance claim and therefore has not been verified.)

Performance Conditions

The claim is considered valid when **Soil-Sement®** is applied in accordance with the manufacturer's instructions, to soils of the type found in the San Joaquin valley and on roads with traffic density in the order of 100 vehicles per day.

Verification

The verification of the performance claim was carried out by ESG International, of Guelph, Ontario using data from testing performed by: Desert Research Institute - suppressant efficiency; Western Technologies Inc. - R-value; and B.A.R. Environmental Inc. - toxicity.

The evaluation was conducted in accordance with the ETV Program's Air Emission Control Technology Verification Protocol.

For more information on Soil-Sement® please contact:

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What is the ETV Program?

The Environmental Technology Verification (ETV) Program is a joint Environment Canada - Industry Canada initiative delivered by ETV Canada Inc. The ETV Program is designed to support Canada's environment industry by providing credible and independent verification of technology performance claims.

For more information on the ETV Program, please contact:

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Limitation of Verification

ETV Canada and the Verification Entity believe that the vendor's technology can achieve the performance levels set out in this Verification Report. This belief is based on independent analyses of information and declarations provided by the vendor and of independently generated data, using verification protocols authorized for the ETV Program. No additional bench or field tests were carried out to corroborate the data provided. The verification is also based on a use of the technology in accordance with the specified operating conditions.

The Government of Canada, ETV Canada the Verification Entity make no express or implied guarantee or warranty as to the performance of the vendor's technology. Nor do they guarantee or warrant the vendor's technology to be free from any defects in workmanship, or the integrity or safety of the technology as a whole, or its compliance with such governmental codes, standards and regulations as may be applicable.





Environmental Technology Verification Program

— enhancing the credibility of environmental technologies

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License Number: ETV 99005
Issued to: Midwest Industrial Supply Inc.

Verified*
Performance
March 25, 1999


John McMullen
President & CEO



Canada

* Refer to Technology Fact Sheet for additional information on the verification of this performance claim.