

EK35®

Environmental Perspective

Midwest was founded in 1975 to deliver solutions to help customers solve environmental issues. Today, that mission continues but the emphasis has shifted. The environmental solutions start long before the application of the product, it starts in the lab. Product development starts with the environment in mind, continues with rigorous ecotoxicological impact testing, and finishes with flawless delivery and application.

Selection of the right product for your installation is more than looking at the lowest cost or best control performance. The selection process is different for every customer and every installation. Midwest takes a holistic approach to product selection. Performance, value, regulatory constraints, operational concerns, climate, customer preferences, environmental, health, and safety impact are all components of that decision.

There is no regulation that dictates what a dust suppressant should or should not contain. We do not feel that customers should rely on the “word” of the vendor that their product is “safe”. Midwest has sought out numerous regulatory bodies and experts on environmental impact to develop a best practice for determining potential environmental impact for chemical dust suppressants.

Best practices include understanding of site requirements, unblemished installation, and transparent knowledge of the product being applied. Part of the transparent knowledge is comprehensive ecotoxicity data, which includes:

- Safety Data Sheet (SDS) Review
- Bulk Analysis
 - Volatiles
 - Semi-Volatiles
- Toxicity Characteristics Leaching Procedure (TCLP)
 - Metals
 - Volatiles
 - Semi-Volatiles
 - Pesticides
 - Herbicides
- Aquatic Toxicity (Acute & Chronic)
 - Ceriodaphnia dubia (water flea)
 - Pimephales promelas (fathead minnow)
 - Mysidopsis bahia (shrimp)
 - Oncorhynchus mykiss (rainbow trout)

Midwest works with third party labs to perform testing on our products. All testing is completed on the “as received” chemical. The EPA has provided two methods to put the data into perspective - Regional Screening Level (RSL) tables for assessing Bulk Analysis and EPA guidelines for screening Aquatic Toxicity.

ABOUT EK35®

Chemically, EK35® is a patented synthetic fluid. It is produced by a reaction of specific purified chemical feedstock that is treated via extreme heat, pressure and catalyst during hydrocracking, hydrotreating and

hydroisomerization to create a synthetic iso-alkane. Further formulating and blending with naturally occurring rosins impart the rheological and cohesive properties unique to EK35®. EK35® is a non-aqueous liquid that is not water soluble or dilutable.

Application rates vary with soil type and properties and the desired result of the project. EK35® is applied with specially designed applicator trucks. It can be applied topically to the surface or applied to graded, loose material and blended and compacted into the roadbed.

SAFETY DATA SHEET

EK35® as a mixture has been evaluated in accordance with 29 CFR 1910.1200 and it has been determined that EK35® is not classified as a hazardous mixture.

PRODUCT	TEST	SPECIES	SCORE	EPA RESULT
EK35®	US EPA OCSPP 870.2500: Acute Skin Irritation	Rabbit	Primary Irritation Index = 0.8	EPA Toxicity Category IV: Slightly Irritating
EK35®	US EPA OCSPP 870.2400: Acute Eye Irritation	Rabbit	1-hr = 4.0; 24-hrs = 0.0; 48-hrs = 0.0; 72-hrs = 0.0	EPA Toxicity Category IV: Minimally Irritating
EK35®	US EPA OCSPP 870.2600: Skin Sensitization	Mouse	Stimulation Index < 3	Not a Sensitizer

BULK ANALYSIS

Constituents detected in Bulk Analysis are compared to levels in the tables of “United States Environmental Protection Agency, Regional Screening Levels for Chemical Contaminants at Superfund Sites” – <https://www.epa.gov/risk/regional-screening-levels-rsls>. The RSL tables compare the values of exposure of numerous hazardous chemicals in various media, such as residential soil, industrial soil, air, and drinking water. Midwest uses this data and compares it to Bulk Analysis results.

Bulk Analysis for volatiles and semi-volatiles has been performed on EK35® in the “as received” form. No analytes were detected.

TOXIC CHARACTERISTIC LEACHING PROCEDURE (TCLP)

TCLP is designed to determine the mobility of both organic and inorganic analytes present in a product. It simulates landfill conditions. Over time water and other liquids percolate through the soil and the resultant leachate may pose environmental or human health risks. The EPA determines which contaminants to test for that may pose a risk and the level at which the constituent is hazardous.

Constituent Detected	EK35® Result (mg/L)	TCLP Regulatory Level (mg/L)
Barium	0.151	100

The detected constituent was detected at levels 600 times or more lower than the cited regulatory levels. Volatiles, semi-volatiles, pesticides, and herbicides were not detected.

AQUATIC TOXICITY

EPA guidelines for LC₅₀, which represent the concentration of product that would be expected to cause 50% mortality, is used to suggest toxicity criteria for products.

Aquatic Species	EK35® Acute LC ₅₀ (mg/L)	EK35® Chronic IC ₅₀ (mg/L)
Ceriodaphnia dubia (water flea)	93.61	50
Pimephales promelas (fathead minnow)	> 100	100
Mysidopsis bahia (shrimp)	> 1000	100
Oncorhynchus mykiss (rainbow trout)	70.71	50

Aquatic Toxicity testing was performed on “as received” EK35®. Aquatic toxicity testing of EK35® shows a range of toxicity from practically non-toxic to slightly toxic depending on the species and the exposure time.

In conclusion, this information is designed to inform customers about the products they are using for dust control. Full test reports are available upon request. Every site and application are unique. If you have questions or require additional information, please contact your Midwest Industrial Supply sales representative.

Thank you,



Debra Heeter
Director, Product Development

Reference documents:

EK35 Cardinal Environmental Laboratories TCLP & Bulk Analysis 2021
EK35 Enviroscience Aquatic Toxicity 2021
EK35 Stillmeadow Skin Sensitization 2025
EK35 Stillmeadow Skin Irritation 2025
EK35 Stillmeadow Eye Irritation 2025
EK35 SDS

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