MIDWEST INDUSTRIAL SUPPLY, INC.
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EK35®

MATERIAL SAFETY DATA SHEET

SECTION I -- IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

TRADE NAME:	EK35® SYNTHETIC ORGANIC DUST CONTROL® *advanced environmental performance solution*
CHEMICAL NAME:	ISOALKANE AND BINDER SYSTEM
SYNONYMS:	DUST RETARDANT AND STABILIZATION AGENT
CHEMICAL FAMILY:	FORMULATED ISOALKAND AND BINDER (Patents #7,081,270 and #7,074,266)
CAS REGISTRY NO.:	PRODUCT A BLEND - NO NUMBER ASSIGNED

SECTION II -- COMPOSITION/INFORMATION ON INGREDIENTS

NAME	**%**	**CAS REG. NO.**
Severely hydrotreated, high viscosity synthetic iso-alkane	30 – 70 %	Non-hazardous
Carboxylic Acids (fatty acids)	30 – 70 %	Non-hazardous

SECTION III -- HAZARDS IDENTIFICATION

Synthetic Isoalkane — May be irritating to breathing passages upon excessive heating, otherwise this product is essentially non-hazardous.
Mist 8 hour TLV-TWA = 5mg/m^3 (ACGIH)

HMIS : Health 1 Fire Hazard 1 Reactivity 0 PPE D

SECTION IV -- FIRST AID MEASURES

EYES: Flush eyes with flowing water at least 15 minutes, get medical attention. Do not use any eye ointment. Remove contact lenses.

INHALATION: Move subject to fresh air. If victim is not breathing perform artificial respiration. Administer oxygen if available. Keep victim warn and at rest. Seek medical attention as soon as possible.

SKIN: Flush with large amount of water or wash with soap and water. Seek medical attention if irritation persists.

INGESTION: DO NOT induce vomiting because of aspiration into the lungs. EK®35 has a laxative effect and will be eliminated quickly. Seek medical attention.

NEVER GIVE FLUIDS OR INDUCE VOMITING IF PATIENT IS UNCONSCIOUS OR HAVING CONVULSIONS.

NOTE TO PHYSICIAN: Monitor respiratory distress. If cough or difficulty breathing develops, evaluate for respiratory tract irritation, bronchitis or pneumonitis.

SECTION V -- FIRE FIGHTING MEASURES

FLAMMABILITY:	Nonflammable, but will burn on prolonged exposure to flame or high temperature.
FLASH POINT (TEST METHOD):	>284^{0}F (>140^{0}C), open cup, ASTM D92, Cleveland
AUTOIGNITION TEMPERATURE:	>455^{0}F (235^{0}C)
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Do not cut, weld, heat of drill or pressurize empty container.
MATERIALS TO AVOID:	Low fire hazard. Must be moderately heated before ignition will occur. Avoid contact with strong oxidizing agents, including peroxides, chlorine and strong acids.
PRODUCTS OF COMBUSTION:	Carbon dioxide, carbon monoxide, smoke and irritating fumes as products of incomplete combustion.

EXTINGUISHING MEDIA AND INSTRUCTIONS:

If a tank, railcar of tank truck is involved in a fire isolate for 0.5 miles in all directions. Shut off fuel to fire if it is possible to do so without hazard. If this is impossible, withdraw from the area and let the fire burn itself out under controlled conditions. Withdraw immediately in case of rising sound from venting safety device or any discoloration of the tank due to fire. Cool containing vessels with water spray in order to prevent pressure build-up, autoignition or explosion.

SMALL FIRE: use dry chemicals, foam, CO_2.

LARGE FIRE: use water spray, fog of foam. For small outdoor fires portable extinguishers may be used SCBA (self contained breathing apparatus) may not be required. For all indoor fires and any significant outdoor fires SCBA if required. Respiratory and eye protection are required for firefighting personnel.

SECTION VI - ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK PROCEDURES:

ELIMINATE ALL IGNITION SOURCES. Stop leak without risk and contain spill. Absorb with inert absorbent materials such as clay or sand. Place absorbent in closed metal containers for later disposal or burn in appropriate facility. Keep spills out of sewers and open bodies of water.

SECTION VII -- HANDLING AND STORAGE

STORAGE:	Keep in a cool, dry, ventilated storage area and in closed containers. Keep away from sources of ignition and oxidizing materials.
HANDLING:	KEEP AWAY FROM SOURCES OF IGNITION. Do not reuse empty containers. Practice good hygiene. Wash hands before eating. Launder clothes before reuse. Discard saturated leather goods.

SECTION VIII -- EXPOSURE CONTROL/PERSONAL PROTECTION

RESPIRATORY PROTECTION:	None required if good ventilation is maintained**.** If mist is generated by heating or spraying use a NIOSH approved organic respirator with a mist filter.
VENTILATION:	Under normal handling conditions special ventilation is not necessary. If operation generates mist or fumes use ventilation of keep exposure to airborne contaminants below exposure limits.
EYE PROTECTION:	Chemical splash, goggles recommended.
PROTECTIVE CLOTHING:	Clothing to minimize skin contact, long sleeves, boots or shoes. For casual contact PVC gloves are suitable, for prolonged contact use neoprene or nitrile gloves.
PPE LEVEL:	D

SECTION IX -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING/MELTING POINT @ 760 mm Hg:	>493°F (>256^{0}C)
VAPOR PRESSURE mm Hg @ 20°C:	negligible at ambient temperature
SPECIFIC GRAVITY OR BULK DENSITY:	0.85 – 1.00
SOLUBILITY IN WATER:	insoluble in water
APPEARANCE:	viscous, brown colored liquid
ODOR:	woody, musty odor
FREEZING POINT:	Does not freeze
VISCOSITY (Brookfield):	150 – 250 cps @ 20^0 C 550 – 650 cps @ 0^0 C 750 – 850 cps @ -5^0 C
pH:	N/A, not an aqueous solution or emulsion
ACIDITY:	none
ALKILINITY:	none

SECTION X – STABILITY AND REACTIVITY

STABILITY:	Stable under normal handling conditions. Stable stored at temperatures between – 55^0 F and + 180^0 F
CHEMICAL INCOMPATIBILITY:	Can react with strong organic oxidizing materials.
HAZARDOUS DECOMPOSITION PRODUCTS:	Thermal decomposition in the presence of air may yield carbon monoxide and/or carbon dioxide, smoke, hydrocarbons and irritating fumes.
HAZARDOUS POLYMERIZATION:	Does not occur under normal industrial conditions.
CONDITIONS TO AVOID:	Excessive heat and flame.
CORROSIVE TO METAL:	No

SECTION XI -- TOX ICOLOGICAL INFORMATION

EFFECTS OF OVEREXPOSURE

INHALATION: Inhalation is highly unlikely. However prolonged or repeated inhalation of fumes or mists may cause irritation to the respiratory tract. Product deposits in lungs may lead to fibrosis and reduced pulmonary function.

SKIN: It is not a skin irritant However prolonged or repeated contact may cause skin irritation, dermatitis or oil acne.

EYES: Prolonged or repeated contact may be irritating to eyes. Will not cause permanent damage.

INGESTION: Relatively non toxic to digestive tract.

MUTAGENIC: Mutagenic activity test are negative toward: Salmonella Typhimurium, Salmonella-Eschrichia coli and Chinese Hamster ovary.

REPRODUCTIVE TOXICITY: Based on data to date it does not pose a reproductive risk.

CARCINOGENICITY:

Based on studies to date EK35® is not known to be carcinogenic to humans

ACGIH (mists) - Based on available human studies, exposure to product mist alone has not demonstrated to cause human effects at levels below 5 mg/m^3.
IARC - IARC group 3; cannot be classified as to carcinogenicity to humans.
NTP - No studies were found.
IRIS - No studies were found.
OSHA - OSHA PEL (8 hour TWA) = 5 mg/m^3 for synthetic product mists

SECTION XII -- ECOLOGICAL INFORMATION

EK35 Aquatic Toxicity Test Results

*Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms, EPA/600/4-90/027F.

*Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, EPA/600/4-91/002.

*Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms, EPA/600/4-91/003.

	Ceriodaphnia dubia	Fathead minnow	Americamysis bahia	Rainbow Trout
ACUTE/SURVIVAL (mg/L)				
LC50	>1000	271	111	--
NOEC	1000	125	63	--
LOEC	>1000	250	130	--
CHRONIC/SURVIVAL (mg/L)				
LC50	>1000	97.3	58.6	23
NOEC	500	31.3	25	10
LOEC	1000	62.5	50	20
CHRONIC/GROWTH/ REPRODUCTION (mg/L)				
LC50	375	114	>50	>10
NOEC	250	31.3	50	10
LOEC	500	62.5	>50	>10

See attached test results:
1. ABC Laboratories, Inc. Americamysis bahia, Fathead minnow, Ceriodaphnia dubia.
2. ABC Laboratories, Inc. Rainbow Trout

LC50 -Lethal Concentration, 50%
NOEC - No Observable Effects Concentration
LOEC - Lowest Observable Effects Concentration

The LC_{50} level is the lethal concentration of the chemical under test that kills 50% of the test organisms in the specified amount of time. According to the EPA-540-9-85-006, suggested toxicity criteria for materials are listed in the table below. Comparison of the EPA guidelines to the LC_{50} of EK35® show a range of toxicity from practically non-toxic to moderately toxic depending on the species and the exposure time. When used and applied properly EK35® is not known to pose any ecological problems.

SECTION XIII -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Consult your local authorities for regulations. Preferred waste management: recycle or reuse, incinerate with energy recovery, disposal in a licensed facility. Disposal facility should be compliant with state, local and federal government regulations.

SECTION XIV -- TRANSPORTATION INFORMATION

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):	Non-regulated
D.O.T. PLACARDS REQUIRED:	None
POISON CONSTITUENT (49CFR173.343):	N/A
BILL OF LADING DESCRIPTION:	Dust control agent
C NO.:	N/A
UN/NA CODE:	N/A

SECTION XV-- REGULATORY INFORMATION

EPA SARA Title III hazard class:	None
OSHA HCS hazard class:	Non-OSHA hazardous (29CFR1910.1200)
EPA SARA Title III Section 313 (40CFR372) Toxic Chemicals present in quantities greater than the "de minimus" level are:	None
Canadian WHMIS:	This product is not a "controlled product" under the Canadian Workplace Hazardous Material Information System (WHMIS)
Canadian DSL:	All components of this product are listed on DSL (Domestic Substance List).
California Proposition 65:	Does not contain any Prop 65 chemicals.

SECTION XVI -- OTHER INFORMATION

ABBREVIATIONS AND SYMBOLS:

N.D. - Not Determined
N.A. - Not Applicable
N.T. - Not Tested
< - LESS THAN
> - MORE THAN