

# Advanced Soil Technology

2613 Mountain Oak Rd.  
Bakersfield, Ca. 93311  
(661) 809-8525/ (661) 472-7281/ (661) 331-5588

To Whom It May Concern:

We would like to thank you for your time, and the opportunity to present you with some information on how Advanced Soil Technology can assist you with dust and erosion control on location. The products we apply are 100% environmentally safe and completely biodegradable. Included with this information you will find the MSDS sheets, and pictures showing the effectiveness of soil-binders applied to heavily traveled unpaved roadways.

The soil-binders we apply are an Acrylic Copolymer emulsion. The soil-binder, when applied to the surface or mixed in with any soil, will penetrate and extend down into the soil to create a tough layer of protection. Upon drying, the emulsion binds the soil's particles together by forming a clear plastic and resin bond.

We are local in the Kern County Area and specialize in dust abatement and erosion control in Central California. Advanced Soil Technology recognizes the current needs for dust abatement and erosion protection due to the San Joaquin Valley Air District's enacted regulations for dust and sediment control. Advanced Soil Technology currently provides services within the oil/gas industry, the power/utilities industry, the agriculture industry, and for the California Dept. of Forestry/Cal Fire.

One of our most recent projects occurred on the Coles Levee Ecosystem Preserve. The project consisted of applying soil-binder to approximately 3.5 miles of unpaved roadway, as well as stabilizing and striping a dirt parking area for the employees of the expansion process for the plant. The biologists would only allow the use of water for dust abatement on location until Advanced Soil Technology offered an environmentally safe solution to their dust issues.

Should you have any questions, please do not hesitate to contact us at the numbers listed below:

Thank you for your time:

Kenny Oliver (661)-809 8525  
Hank Gorman (661) 331-5588  
Clay Lomax (661) 472-7281

## Envirotac II®

### Material Safety Data Sheet (page 1/4)

Vinyl Acetate / Acrylic Copolymer

#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Envirotac II® Soil Stabilizer / Dust Palliative

MSDS Date: 3/22/00

COMPANY IDENTIFICATION Vermillion's Environmental Products & Applications, Inc. (EP&A, Inc.)  
 PO Box 786, Gilbert, Arizona 85299-0786

Envirotac® is a registered trademark of Vermillion's Environmental Products and Applications, Inc.

EMERGENCY TELEPHONE NUMBERS HEALTH EMERGENCY.....(760) 774-8375  
 SPILL EMERGENCY.....(760) 774-8375

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

No.		CAS REG NO	WEIGHT (%)
1	Acrylic copolymer	Not Hazardous	39-43
2	Individual residual monomers	Not Required	<0.1
3	Aqua ammonia	1336-21-6	<1.0
4	Water 7732-18-5	57-61	

See SECTION 8, Exposure Controls / Personal Protection

#### 3. HAZARDS IDENTIFICATION

Primary Routes of Exposure..... Inhalation, Eye Contact and Skin Contact

Inhalation Inhalation of vapor or mist can cause the following: -headache -nausea -irritation of nose, throat, and lungs

Eye Contact..... Direct contact with material can cause the following: -slight irritation

Skin Contact..... Prolonged or repeated skin contact can cause the following: -slight skin irritation

#### 4. FIRST AID MEASURES

Inhalation..... Move subject to fresh air.

Eye Contact..... Flush eyes with water. Consult a physician if irritation persists.

Skin Contact..... Wash affected skin area thoroughly with soap and water. Consult a physician if irritation persists.

Ingestion..... If swallowed, give 2 glasses of water to drink. Consult a physician. Never give anything by mouth to an unconscious person.

#### 5. FIRE FIGHTING MEASURES

Flash Point..... Noncombustible

Auto-ignition Temperature..... Not Applicable

Lower Explosive Limit..... Not Applicable

Upper Explosive Limit..... Not Applicable

Unusual Hazards..... Material can splatter above 100C/212F. Dried product can burn.

Extinguishing Agents..... Use extinguishing media appropriate for surrounding fire.

Personal Protective Equipment..... Wear self-contained breathing apparatus (pressure-demand NIOSH approved or equivalent) and full protective gear.

#### 6. ACCIDENTAL RELEASE MEASURES

Personal Protection..... Appropriate protective equipment must be worn when handling a spill of this material. See SECTION 8, Exposure Controls/Personal Protection, for recommendations. If exposed to material during clean-up operations, see SECTION 4, First Aid Measures, for actions to follow.

Procedures..... Keep spectators away. Floor may be slippery; use care to avoid falling. Contain spills immediately with inert materials (e.g. sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.

CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

## Envirotac II®

### Material Safety Data Sheet (page 2/4)

#### 7. HANDLING AND STORAGE

Storage Conditions..... Keep from freezing; material may coagulate. The minimum recommended storage temperature for this material is 1C/34F. The maximum recommended storage temperature for this material is 49C/120F.

Handling Procedures..... Monomer vapors can be evolved when material is heated during processing operations. See SECTION 8, Exposure Controls/Personal Protection, for types of ventilation required.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Exposure Limit Information

No.		CAS REG NO	WEIGHT (%)
1	Acrylic copolymer	Not Hazardous	39-43
2	Individual residual monomers	Not Required	<0.1
3	Aqua ammonia	1336-21-6	<1.0
4	Water	7732-18-5	57-61

Comp. No.	Units	EP&A. Inc.		OSHA		ACGIH	
		TWA	STEL	TWA	STEL	TWA	STEL
1		None	None	None	None	None	None
2		a	a	a	a	a	a
3	ppm	25 b	35 b	None	35 b	25 b	35 b
4		None	None	None	None	None	None

a... Not Required  
 b... As Ammonia

Respiratory Protection..... A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in 'Exposure Limit Information'. For airborne concentrations up to 10 times the exposure limit, wear a properly fitted NIOSH approved (or equivalent) half-mask, air-purifying respirator. Air purifying respirators should be equipped with NIOSH approved (or equivalent) ammonia/methylamine cartridges and N95 filters. If oil mist is present, use R95 or P95 filters.

Eye Protection..... Use safety glasses with side shields (ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

Hand Protection..... The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection: - Neoprene

Engineering Controls (Ventilation)..... Use Local exhaust ventilation with a minimum capture velocity of 100 ft/min. (0.5 m/sec.) at the point of vapor evolution. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Other Protective Equipment:..... Facilities storing or utilizing this material should be equipped with an eyewash facility.

## Envirotac II®

### Material Safety Data Sheet (page 3/4)

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance.....	Milky
Color.....	White
State.....	Liquid
Odor Characteristic.....	Ammonia odor
PH.....	5.0 to 9.5
Viscosity.....	1500 CPS Maximum
Specific Gravity (Water = 1).....	1.0 to 1.2
Vapor Density (Air = 1).....	<1 Water
Vapor Pressure.....	17 mm Hg @ 20°C/68°F Water
Melting Point.....	0°C/32°F Water
Boiling Point.....	100°C/212°F Water
Solubility in Water.....	Dilatable
Percent Volatility.....	57 to 61% Water
Evaporation Rate (Bac = 1).....	<1 Water

The physical and chemical data given in Section 9 are typical values for this product and are not intended to be product specifications.

See Section 5, Fire Fighting Measures

#### 10. STABILITY AND REACTIVITY

Instability.....	This material is considered stable. However, avoid temperatures above 177C/350F, the onset of polymer decomposition. Thermal decomposition is dependent on time and temperature.
Hazardous Decomposition Products.....	Thermal decomposition may yield acrylic monomers.
Hazardous Polymerization.....	Product will not undergo polymerization.
Incompatibility.....	There are no known materials which are incompatible with this product.

#### 11. TOXICOLOGICAL INFORMATION

Acute Data	No Toxicity data are available for this material.
	The information shown in SECTION 3, Hazards Identification, is based on the toxicity profiles for a number of acrylic emulsions that are compositionally similar to this product. Typical data are:
	Oral LD50..... rat..... >5000 mg/kg
	Dermal LD..... rabbit..... >5000 mg/kg
	Skin irritation..... rabbit..... practically non-irrupting
	Eye irritation..... rabbit..... inconsequential irrational

#### 12. ECOLOGICAL INFORMATION

No Applicable Data

#### 13. DISPOSAL CONSIDERATIONS

Procedure Coagulate the emulsion by the stepwise addition of ferric chloride and lime. Remove the clear supernatant and flush to a chemical sewer.

Landfill or incinerate remaining solids in accordance with local, state and federal regulations.

#### 14. TRANSPORT INFORMATION

US DOT Hazard Class.....NONREGULATED

## Envirotac II®

### Material Safety Data Sheet (page 4/4)

#### 15. REGULATORY INFORMATION

- Workplace Classification... This product is considered non-hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200).
- This product is not a 'controlled product' under the Canadian Workplace Hazardous Materials Information System (WHMIS).
- SARA TITLE 3: Section 311/312 Categorizations (40CFR 370)..... This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA
- SARA TITLE 3: Section 313 Information (40CFR 372)..... This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.
- CERCLA Information (40CFR 302.4)..... Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.
- Waste Classification..... When a decision is made to discard this material as supplied, it does not meet RCRA's characteristic definition of ignitability, corrosively, or reactivity, and is not listed in 40 CFR 261.33. The toxicity characteristic (TC), however, has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).
- United States..... All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
- Pennsylvania..... Any material listed as "Not Hazardous" in the CAS REG NO. column of SECTION 2, Composition/Information On Ingredients, of this MSDS is a trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.

#### 16. OTHER INFORMATION

- HMIS Hazard Ratings..... HEALTH = 1, FLAMMABILITY = 0, REACTIVITY = 0.  
 PERSONAL PROTECTION: See Section 8, Exposure Controls/Personal Protection for recommended handling of material as supplied; check with supervisor for your actual use condition.  
 Scale: 0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Severe  
 \* = Chronic Effects (See Section 3, Hazards Identification)  
 HMIS is a registered trademark of the National Paint and Coatings Association.

ABBREVIATIONS	
ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety and Health Administration
TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
TWA	Time Weighted Average
STEL	Short-Term Exposure Limit
BAC	Butyl acetate
	Bar denotes a revision from previous MSDS in this area

The information contained herein relates only to the specific material identified. Vermillion's Environmental Products and Applications, Inc. believes that such information is accurate and reliable as of the date of this material safety data sheet, but no representation, guarantee or warranty, expressed or implied, is made as to the accuracy, reliability, or completeness of the information. Vermillion's Environmental Products and Applications, Inc. urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application.