



## SOILTAC®

### Letter of Introduction

Soilworks®, LLC is the innovator and manufacturer of **Soiltac®** soil stabilizer. Soiltac® is a polymer based emulsion used to stabilize all soils from dust and erosion. This revolutionary product is specifically engineered for large commercial projects down to smaller residential applications. It can be as simple to apply as watering the ground. Furthermore, Soiltac® is designed to work its way down into the soil to maximize the penetration depth. Once cured, Soiltac® becomes completely transparent, leaving the natural landscape to appear untouched.

Soiltac® results are based on the application rate used. Modest applications can create a light temporary surface crust that is permeable by water and is useful for dust control needs. On the other hand, heavy applications can generate results similar to the qualities of cement. Most importantly, Soiltac® is a truly biodegradable product that is completely environmentally safe to use.

Soiltac® was recently evaluated by the Army Engineering Research and Development Center against the industry's top performing soil stabilizers and dust control agents. As a result, the Department of Defense awarded Soilworks® with a contract to supply **Operation Iraqi Freedom** with Soiltac®.

Soilworks® is dedicated to economically solving soil stabilization challenges throughout the world's residential, commercial, industrial and military markets.

I would like to extend our product and services to your company to use, so that it may experience the benefits Soiltac® has to offer as the solution for your soil stabilization needs.

Respectfully,

Chad Falkenberg  
President



# SOILTAC®

## Applications & Uses Examples



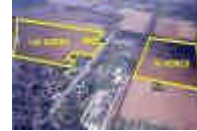
Unpaved Dirt Roads



Construction Sites



Unpaved Heavy  
Haul Roads



Land Development



Road Bed Sub-Base



Unpaved Driveways



Aircraft Runways



Helicopter Landing  
Pads & Zones



Aircraft Aprons &  
Taxiways



Recycled Asphalt  
Millings



Forestry & Logging  
Roads



Agricultural Access  
Roads



Mine Tailing Ponds



Stock Piles



Solar Power  
Generating Plants



Border Patrol Roads



Hydroseed &  
Hydromulch



Construction Trailer  
Parking



Unpaved Event  
Parking Lots



Highway & Road  
Shoulders



Slopes, Berms &  
Banks



Military Operations



Field Compound  
Areas



Military Training  
Grounds



Aircraft Ramp Up  
Areas



Bicycle Paths



Golf Course Cart  
Paths



Landfill Cells



Trails, Walks &  
Paths



Parks & Recreation



# SOILTAC®

## Standard Application Coverage Rates

Description	Application Rates (Concentrate)						Parts Water	Application Rates (Dilution)						Coats	
	ft <sup>2</sup> /gal.	gal./ft <sup>2</sup>	yd <sup>2</sup> /gal.	gal./yd <sup>2</sup>	gal./m <sup>2</sup>	gal./acre		ft <sup>2</sup> /gal.	gal./ft <sup>2</sup>	yd <sup>2</sup> /gal.	gal./yd <sup>2</sup>	gal./m <sup>2</sup>	gal./acre	Avg. #	gal./yd <sup>2</sup> /Coat
(Topical Only)															
Pond Lining	20	0.050	2.2	0.450	0.539	2,180	3	5	0.20	0.6	1.80	2.15	8,710	6	0.30
Aircraft Runways (Heavy use)	35	0.029	3.9	0.257	0.306	1,240	5	6	0.17	0.6	1.54	1.84	7,470	5	0.31
Aircraft Runways (single engine)	50	0.020	5.6	0.180	0.215	870	7	6	0.16	0.7	1.44	1.72	6,970	4	0.36
Helicopter Landing Pads (Heavy Craft)	35	0.029	3.9	0.257	0.306	1,240	4	7	0.14	0.8	1.29	1.53	6,220	4	0.32
Helicopter Landing Pads (Light Craft)	70	0.014	7.8	0.129	0.153	620	9	7	0.14	0.8	1.29	1.53	6,220	4	0.32
Heavy Haul Roads	50	0.020	5.6	0.180	0.215	870	7	6	0.16	0.7	1.44	1.72	6,970	4	0.36
Parking Lots (heavy vehicles)	50	0.020	5.6	0.180	0.215	870	7	6	0.16	0.7	1.44	1.72	6,970	4	0.36
Parking Lots (light vehicles)	60	0.017	6.7	0.150	0.180	730	8	7	0.15	0.7	1.35	1.62	6,530	4	0.34
Unpaved Roads	60	0.017	6.7	0.150	0.180	730	8	7	0.15	0.7	1.35	1.62	6,530	4	0.34
Residential Driveway	60	0.017	6.7	0.150	0.180	730	8	7	0.15	0.7	1.35	1.62	6,530	4	0.34
Trails and Paths	70	0.014	7.8	0.129	0.153	620	9	7	0.14	0.8	1.29	1.53	6,220	4	0.32
Slope Erosion Control (Average)	150	0.007	16.7	0.060	0.072	290	12	12	0.09	1.3	0.78	0.93	3,780	2	0.39
Slope Erosion Control (Light)	400	0.003	44.4	0.023	0.027	110	30	13	0.08	1.4	0.70	0.84	3,380	2	0.35
Stock Pile Capping (Average)	200	0.005	22.2	0.045	0.054	220	15	13	0.08	1.4	0.72	0.87	3,480	2	0.36
Stock Pile Capping (Light)	600	0.002	66.7	0.015	0.017	70	30	19	0.05	2.2	0.47	0.54	2,250	1	0.47
Dust Control Crust (no traffic/12 month/Average)	150	0.007	16.7	0.060	0.072	290	15	9	0.11	1.0	0.96	1.15	4,650	2	0.48
Dust Control Crust (no traffic/12 month/light)	290	0.003	32.2	0.031	0.037	150	15	18	0.06	2.0	0.50	0.59	2,400	1	0.50
Dust Control Crust (no traffic/6 months)	430	0.002	47.8	0.021	0.025	100	15	27	0.04	3.0	0.33	0.40	1,620	1	0.33
Dust Control Crust (no traffic/<3 months)	750	0.001	83.3	0.012	0.015	60	30	24	0.04	2.7	0.37	0.46	1,800	1	0.37
Hydroseed & Hydromulch Tackifier (Average)	430	0.002	47.8	0.021	0.025	100	15	27	0.04	3.0	0.33	0.40	1,620	1	0.33
Hydroseed & Hydromulch Tackifier (Light)	880	0.001	97.8	0.010	0.012	50	30	28	0.04	3.2	0.32	0.38	1,530	1	0.32
(Mixed-in / Processed)															
Base Stabilization Light (2"-4" deep)	45	0.022	5.0	0.200	0.240	970									
Base Stabilization Average (2"-4" deep)	35	0.029	3.9	0.257	0.306	1,240									
Base Stabilization Heavy (2"-4" deep)	25	0.040	2.8	0.360	0.430	1,740									
Base Stabilization Light (4"-6" deep)	35	0.029	3.9	0.257	0.306	1,240									
Base Stabilization Average (4"-6" deep)	25	0.040	2.8	0.360	0.430	1,740									
Base Stabilization Heavy (4"-6" deep)	15	0.067	1.7	0.600	0.717	2,900									

Dilution rates must be calculated from the site specific optimum moisture level

**\*\*Coverage and dilution rates will vary depending on traffic volume, traffic weight, soil type, weather conditions, soil moisture levels and compaction.**



## SOILTAC®

### General Topical Application Overview (Method A: for traffic areas)

#### 1.) Prepare the Site:

- Dry Soil:** The site must be completely dry free from water.
- Weather:** The site must be free from rain for a minimum of 72 hours after the application. Temperature must be at least 40°F (4°C).
- Compaction:** Compact the site to a minimum of 95% (per ASTM D 698 D 1557 modified Proctor Density).
- Drainage:** Contour or crown the site to provide for proper drainage.
- Loose Aggregate:** Remove any loose aggregate from the treatment area.

#### 2.) Prepare Application Equipment

- Spray Nozzles:** Set spray nozzles to the desired width, height and output rate. Test equipment (off-site) if necessary.
- Coverage:** The spray nozzles should provide an even coat over the treatment area with each pass.
- Spray Rate:** Set the spray rate high enough to allow even coverage with multiple coats and low enough to prevent material from draining away from the treatment area.

#### 3.) Prepare the Soiltac Dilution:

- Water:** Fill the application equipment with the recommended volume of water. Reference the "application coverage rates" chart.

**Example:** Haul road rate (50ft<sup>2</sup>/gal.), 4,000 gallon water truck, 7 parts water.  
**Calculation:** 7+1 = 8 parts dilution total.  
 4,000 gallons / 8 parts = 500 gallons per part  
 Volume of Water: 500 gal. X 7 parts = 3,500 gallons of water  
 Volume of Soiltac: 500 gal. X 1 part = 500 gallons of Soiltac concentrate  
 Volume of Dilution: 500 gal. X 8 parts = 4,000 gallons of Soiltac dilution

- Soiltac:** Fill the application equipment with the recommended volume of Soiltac concentrate.
- Foaming:** To prevent foaming, add the Soiltac concentrate last, directly into the water (submerge the Soiltac feeder hose below the waterline in the equipment to prevent air from mixing into the dilution).

#### 4.) Apply the Soiltac Dilution

- Multiple Coats:** Apply the Soiltac dilution at the recommended number of coats over the treatment area.

**Example:** (See Above) Haul road requires 4 coats.  
 500 gal. (concentrate) / 4 coats = 125 gallons (concentrate) per coat  
 4,000 gal. (dilution) / 4 coats = 1,000 gallons (dilution) per coat  
 500 gal. (concentrate) X 50 ft<sup>2</sup>/gal. = 25,000 ft<sup>2</sup> treatment area per water truck

- Drying:** Each successive coat of Soiltac dilution should be applied in a timely manor to ensure that the surface always stays wet with the Soiltac dilution. DO NOT allow the Soiltac dilution to dry in between the application coats. Failure to do so will result in an underperforming "skin" layer rather than a penetrating layer.

#### 5.) Clean the Application Equipment

- Rinse:** Rinse off all application equipment thoroughly with water until clean. If Soiltac is allowed to dry and cure, use a pressure washer or steam washer to remove residue.
- Traffic:** Prevent any human activity over the treated area until the site has cured.
- Curing:** Allow the treated area to dry and cure for approximately 24 hours (@70°F).



## SOILTAC®

### General Topical Application Overview (Method B: for non-traffic areas & slopes)

#### 1.) Prepare the Site:

**Dry Soil:** The site must be completely dry free from water.

**Weather:** The site must be free from rain for a minimum of 72 hours after the application. Temperature must be at least 40°F (4°C).

**Compaction:** Compaction is not required but is recommended for optimal longevity. If possible, compact the site to a minimum of 95% (per ASTM D 698 D 1557 modified Proctor Density).

**Drainage:** Contour or crown the site to provide for proper drainage.

#### 2.) Prepare Application Equipment

**Spray Nozzles:** Set spray nozzles to the desired width, height and output rate. Test equipment (off-site) if necessary.

**Coverage:** The spray nozzles should provide an even coat over the treatment area with each pass.

**Spray Rate:** Set the spray rate high enough to allow even coverage with multiple coats and low enough to prevent material from draining away from the treatment area.

#### 3.) Prepare the Soiltac Dilution:

**Water:** Fill the application equipment with the recommended volume of water. Reference the "application coverage rates" chart.

**Example:** Dust Control crust (no traffic / 12 months / average) rate (290 gal./acre)(150 ft<sup>2</sup>/gal.)  
 4,000 gal. water truck, 15 parts water

**Calculation:** 15+1 = 16 parts dilution total.

4,000 gallons / 16 parts = 250 gallons per part

Volume of Water: 250 gal. X 7 parts = 3,750 gallons of water

Volume of Soiltac: 250 gal. X 1 part = 250 gallons of Soiltac concentrate

Volume of Dilution: 250 gal. X 16 parts = 4,000 gallons of Soiltac dilution

**Soiltac:** Fill the application equipment with the recommended volume of Soiltac concentrate.

**Foaming:** To prevent foaming, add the Soiltac concentrate last, directly into the water (submerge the Soiltac feeder hose below the waterline in the equipment to prevent air from mixing into the dilution).

#### 4.) Apply the Soiltac Dilution

**Multiple Coats:** Apply the Soiltac dilution with the recommended number of coats over the treatment area. On slopes, greater the degree of slope, the greater need for more coats (to prevent run-off and increase penetration depth).

**Example:** (See Above) Dust Control crust (no traffic / 12 months / average) requires 2 coats

250 gal. (concentrate) / 2 coats = 125 gallons (concentrate) per coat

4,000 gal. (dilution) / 2 coats = 2,000 gallons (dilution) per coat

250 gal. (concentrate) X 150 ft<sup>2</sup>/gal. = 37,500 ft<sup>2</sup> (0.86 acres) treatment area per water truck

**Drying:** On slopes, each successive coat of Soiltac dilution should be applied in a timely manor to ensure that the surface always stays wet with the Soiltac dilution. DO NOT allow the Soiltac dilution to dry in between the application coats. Failure to do so will result in an underperforming "skin" layer rather than a penetrating layer.

#### 5.) Clean the Application Equipment

**Rinse:** Rinse off all application equipment thoroughly with water until clean. If Soiltac is allowed to dry and cure, use a pressure washer or steam washer to remove residue.

**Traffic:** Prevent any human activity over the treated area until the site has cured.

**Curing:** Allow the treated area to dry and cure for approximately 24 hours (@70°F).



## SOILTAC®

### General Mixed-In/Processed Application Overview (Method C: for 4-6" depth)

#### 1.) Prepare the Site:

**Dry Soil:** The site must be completely dry and free from water.

**Weather:** The site must be free from rain for a minimum of 72 hours after the application. Temperature must be at least 40°F (4°C).

#### 1.) Scarification:

**Scarification:** Scarify or till the soil to the recommended depth of 4-6".

**Large Aggregate:** Remove any large aggregate (4"+) that could effect the final compaction process.

#### 2.) Prepare Application Equipment

**Spray Nozzles:** Set spray nozzles to the desired width, height and output rate. Test equipment (off-site) if necessary.

**Coverage:** The spray nozzles should provide an even coat over the treatment area with each pass.

**Spray Rate:** Set the spray rate high enough to allow even coverage with multiple coats and low enough to prevent material from draining away from the treatment area.

#### 3.) Prepare the Soiltac Dilution:

**Water:** Fill the application equipment with the recommended volume of water. Test the soil on site to determine optimum moisture levels and current moisture content. Use this data to calculate the dilution rate to achieve optimum moisture.

**Example:** Base Stabilization Average (4"-6" deep) rate (25 ft<sup>2</sup>/gal.),

4,000 gal. water truck, 3 parts water (calculated) dilution rate

**Calculation:** 3+1 = 4 parts dilution total.

4,000 gallons / 4 parts = 1,000 gallons per part

Volume of Water: 1,000 gal. X 3 parts = 3,000 gallons of water

Volume of Soiltac: 1,000 gal. X 1 part = 1,000 gallons of Soiltac concentrate

Volume of Dilution: 1,000 gal. X 4 parts = 4,000 gallons of Soiltac dilution

For best results, testing the native soil for optimum moisture levels to determine the exact parts water to use is highly recommended. [not enough water will generate dry spots / too much water will create mud or "pumping"] [optimum moisture is critical when compacting for maximum compressive strength]

**Soiltac:** Fill the application equipment with the recommended volume of Soiltac concentrate.

**Foaming:** To prevent foaming, add the Soiltac concentrate last, directly into the water (submerge the Soiltac feeder hose below the waterline in the equipment to prevent air from mixing into the dilution).

#### 4.) Apply & Process the Soiltac Dilution

**Application:** Apply the Soiltac dilution evenly over the scarified treatment area.

**Example:** (See Above) Base Stabilization Average (4"-6" deep) rate (25 ft<sup>2</sup>/gal.),

1,000 gal. (concentrate) X 25 ft<sup>2</sup>/gal. = 25,000 ft<sup>2</sup> treatment area per water truck

**Processing:** Till, disc or manipulate the treated soil until the dilution is uniformly distributed into the soil.

**Grading:** Contour, shape and crown the site to provide for proper drainage.

**Compaction:** Compact the site to a minimum of 95% (per ASTM D 698 D 1557 modified Proctor Density).

#### 5.) Clean the Application Equipment

**Rinse:** Rinse off all application equipment thoroughly with water until clean. If Soiltac is allowed to dry and cure, use a pressure washer or steam washer to remove residue.

**Traffic:** Prevent any human activity over the treated area until the site has cured.

**Curing:** Allow the treated area to dry and cure for approximately 72 hours (@70°F).



## **SOILTAC®**

### Frequently Asked Questions

<b>Prices</b>	Soiltac prices are available upon request.
<b>Discounts</b>	Prices decrease with volume.
<b>Payment Terms</b>	COD/Prepaid or Net 30 Days upon approved credit.
<b>Payment Method</b>	Cash, Check, Visa, MasterCard, American Express, Procurement Cards & Wire Transfer.
<b>Bids / Proposals</b>	Formal bids and proposals are available upon request.
<b>Minimum Order</b>	5 gallons (1 square pail).
<b>Availability</b>	40,000+ gallons are stocked and available on an immediate basis.
<b>Turn-Around</b>	Same day or next day shipments upon order.
<b>Large Volumes</b>	3-14 day turn-around for single order shipments of 100,000+ gallons.
<b>Limits</b>	Soiltac can be manufactured rapidly in unlimited volumes.
<b>Cure Time</b>	2-24 hours depending on the temperature for topical applications.
<b>Penetration Depth</b>	1/8 <sup>th</sup> " to 2" deep for topical applications.
<b>Cold Weather</b>	Cold weather will increase cure times.
<b>Freezing</b>	Do Not Freeze uncured product. Cured product is unaffected by cold temperatures.
<b>Shipping</b>	National & International. Non-Toxic and Non-Regulated.
<b>Normal Life Span</b>	Topical treatments average 12-24 months before maintenance coat is needed.
<b>Shelf Life</b>	12 months.
<b>Maintenance</b>	Approximately 30% the original volume used after 12 months.
<b>Soil Type</b>	Any.
<b>Salt Water Dilution</b>	Can be used. Do not store Soiltac with salt water dilution over 24 hours.
<b>Rain / Precipitation</b>	Once cured, the treated surface will not dissipate or wash away with water.
<b>Cleaning</b>	Rinse equipment immediately after use with water. Pressured hot water recommended.



## SOILTAC®

### Application Equipment Examples



Highway Accessible  
Water Trucks  
(3,000-5,000 gallons)



All Wheel Drive  
Water Trucks  
(3,000-5,000 gallons)



Standard  
Water Truck  
(1,000-3,000 gallons)



Water Wagons  
"Water Pulls"  
(5,000-8,000 gallons)



Articulated  
Water Tanker  
(6,000-10,000 gallons)



Mining Water Trucks  
"Mining Pigs"  
(5,000-30,000 gallons)



Heavy Expanded Mobility  
Tactical Truck Tankers  
(HEMTT)  
(2,250-3,000 gallons)



Flat Bed Trailer Tanks &  
Pumps  
(1,000-6,000 gallon)



In-place recycler / road  
soil stabilization reclaimer  
(1,000-10,000 gallon)



Computerized Rate  
Control Distributor Trucks  
(1,000-4,000 gallon)



Truck Mounted  
Hydroseeders &  
Hydromulchers  
(1,000-3,500 gallons)



Trailer Mounted  
Hydroseeders &  
Hydromulchers  
(500-2,000 gallons)



Agricultural Truck  
Sprayers  
(1,500-2,500 gallons)



Agricultural Towable Tank  
Sprayer  
(500-3,000 gallon)



Truckbed Water Tank  
& Spray Booms  
(100-500 gallons)



Towable Spray Tank  
"Water Buffalo"  
(300-1,000 gallons)



Truckbed Water Tank  
"Skid Sprayer"  
(50-500 gallons)



Standard Hose & Pump  
Hand Spraying  
(any volume)



Airplane Sprayers  
"Crop Duster"  
(100-800 gallons)



Helicopter Sprayers  
"Crop Dusters"  
(100-400 gallon)



Helicopter  
"Water Drop"  
(250-2,500 gallons)



ATV Towable Tank  
Sprayers  
(50-30 gallon)



ATV Mounted  
Tank Sprayers  
(20-50 gallons)



Towable Tank & Spray  
Boom  
(50-300 gallons)

Anything capable of spraying water can be used to apply Soiltac®.





# SOILTAC®

## Volume Discount Price Schedule

					
	<b>Pail</b>	<b>Drum</b>	<b>IBC Tote</b>	<b>Tanker</b>	<b>Bulk*</b>
	5 gallons	55 gallons	275 gallons	5,000 gallons	Any Volume
Size (in.)	20"x10"x20"	24"x24"x36"	40"x48"x46"	N/A	N/A
Weight (lbs)	50 lbs	510 lbs	2,600 lbs	44,000 lbs	N/A
= 1,100 gallons	<p>Please Contact Soilworks for a  <b>Current Price Schedule</b>            (800) 545-5420 toll free            (480) 545-5454            (760) 345-0771            (480) 545-5454 fax            (602) 758-5454 after hours  <a href="mailto:Info@Soilworks.com">Info@Soilworks.com</a></p>				
1,101 – 4,999 gallons					
5,000 – 20,000 gallons					
>20,000 gallons					

Prices do not include delivery. \*Client supplied container filled @ Soilworks, LLC, Gilbert, AZ USA. (N/A = Not Available)  
 \*\*Price ranges are based on % active solids content and application type.



# MATERIAL SAFETY DATA SHEET

## SECTION 1 - MATERIAL IDENTIFICATION

**PRODUCT NAME** **SOILTAC\***  
 \*SOILTAC is a registered trademark of Soilworks, LLC.

**MANUFACTURER** Soilworks, LLC.  
 681 North Monterey Street, Suite 101  
 Gilbert, Arizona 85233-8318 USA  
[www.soilworks.com](http://www.soilworks.com)

**TELEPHONE NUMBER** 800-545-5420

**ONLINE INFORMATION** [www.Soiltac.com](http://www.Soiltac.com)

**EMERGENCY TELEPHONE NUMBERS** 800-545-5420 (National & International)

**REVISION DATE** September 2004

## EMERGENCY OVERVIEW

**PHYSICAL FORM** Mobile liquid

**COLOR** White (transparent once cured)

**ODOR** Mild

**HAZARDS** There are no known health hazards.

**EXTINGUISHING MEDIA** The product will only burn after the water it contains is driven off.

**C.A.S. CHEMICAL NAME** Mixture

**SYNONYMS** Soil stabilizer, soil solidifier, soil crusting agent, dust palliative, dust suppressant, dust retardant

**CHEMICAL FAMILY** Vinyl Acetate Copolymer Emulsion

**EMPIRICAL FORMULA** Mixture

**INTENDED USE** Soil Stabilization, Soil Solidification, Dust Control, Dust Suppression and Erosion Control

**REVISION NOTES** None

## SECTION 2 - INGREDIENTS

	%	CAS Number and Chemical Name
1.	50-60	Vinyl Acetate Copolymer Emulsion
2.	50-40	7732-18-5 Water

The remaining components are trade secret.

### OSHA (ACGIH) EXPOSURE LIMITS

	TWA		STEL		CEILING	
	ppm	mg/m3	ppm	mg/m3	ppm	mg/m3
1.	OSHA N/E	N/E	N/E	N/E	N/E	N/E
	ACGIH N/E	N/E	N/E	N/E	N/E	N/E
2.	OSHA N/E	N/E	N/E	N/E	N/E	N/E
	ACGIH N/E	N/E	N/E	N/E	N/E	N/E

N/E = Not Established.

## SECTION 3 - HEALTH HAZARDS

### ROUTES OF EXPOSURE

Eye Contact  
 Skin Contact  
 Ingestion  
 Inhalation

### EXPOSURE STANDARDS

See Section 2 for exposure standards on ingredients. Maintain air contaminant concentrations in the workplace at the lowest feasible levels. Minor components will migrate into the container headspace. Levels in excess of the TLV's or PEL's can accumulate in non-vented container headspaces. Open drums in a well ventilated space. The principal volatile component is water. Minor volatile components are identified in Section 2 "Ingredients".

### HEALTH HAZARDS

There are no known health hazards.

### TARGET ORGANS

None known

### SIGNS AND SYMPTOMS OF EXPOSURE (Acute effects)



There are no known signs or symptoms of exposure.

**SIGNS AND SYMPTOMS OF EXPOSURE (Possible Longer Term Effects)**

No known effects

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE**

None known

**CARCINOGENS UNDER OSHA, ACGIH, NTP, IARC**

This product contains no listed carcinogens in concentrations of 0.1 percent or greater.

**SECTION 4 - FIRST AID**

**EYE CONTACT**

Rinse immediately with plenty of water.

**SKIN CONTACT**

Remove contaminated clothing and shoes. Wash affected area with soap and water.

**INHALATION**

Move patient to fresh air. If breathing has stopped or is labored give assisted respiration (e.g. mouth-to-mouth). Supplemental oxygen may be indicated. Seek medical advice. Prevent aspiration of vomit. Turn victim's head to the side.

**INGESTION**

If swallowed, call a physician immediately. Remove stomach contents by gastric suction or induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person.

**SECTION 5 - FIRE AND EXPLOSION DATA**

**FLASH POINT (closed cup)**

No Data

**UPPER EXPLOSION LIMIT (UEL)**

No Data

**LOWER EXPLOSION LIMIT (LEL)**

No Data

**AUTOIGNITION TEMPERATURE**

No Data

**FIRE HAZARD CLASSIFICATION (OSHA/NFPA)**

Non-Combustible

**EXTINGUISHING MEDIA**

The product will only burn after the water it contains is driven off. For dry polymer use water or carbon dioxide. Product does not burn. Aqueous solution is not flammable.

**SPECIAL FIRE FIGHTING PROCEDURES**

No special procedures required. The product, as distributed, is noncombustible.

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

When dried polymer burns, water (H<sub>2</sub>O), carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO) and smoke are produced.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**CONTAINMENT TECHNIQUES (Removal of ignition sources, diking etc)**

Stop the leak, if possible. Ventilate the space involved.

**CLEAN-UP PROCEDURES**

If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an appropriate chemical waste container. Transfer to containers by suction, preparatory for later disposal. Place in metal containers for recovery or disposal. Flush area with water spray. Wash contaminated property (e.g., automobiles) quickly before the material dries. For large spills, recover spilled material with a vacuum truck.

**OTHER EMERGENCY ADVICE**

Spilled polymer emulsion is very slippery. Use care to avoid falls. A film will form on drying. Remove saturated clothing and wash contacted skin area with soap and water. Product imparts a milky white color to contaminated waters. Foaming may result. Sewage treatment plants may not be able to remove the white color imparted to the water.

**SECTION 7 - HANDLING AND STORAGE**

**STORAGE**

Keep away from: oxidizers. Avoid freezing temperatures during storage. Minimize contact with atmospheric air to prevent inoculation with microorganisms.

**HANDLING**

No special precautions required.

**OTHER PRECAUTIONS**

No special precautions required.

**SECTION 8 - PERSONAL PROTECTION / EXPOSURE CONTROLS**

**EYE PROTECTION**

Chemical safety glasses.

**HAND PROTECTION**

Rubber Gloves. The breakthrough time of the selected glove(s) must be greater than the intended use period.

**RESPIRATORY PROTECTION**

Not required under normal conditions in a well-ventilated workplace. An organic vapor respirator National Institute for Occupational Safety and Health (NIOSH) approved for organic vapors is recommended under emergency conditions.

**PROTECTIVE CLOTHING**



No specific recommendation.

**ENGINEERING CONTROLS**

Maintain air concentrations in work spaces in accord with standards outlined in Sections 2 and 3.

**WORK AND HYGIENIC PRACTICES**

None recommended

**SECTION 9 - TYPICAL PHYSICAL AND CHEMICAL PROPERTIES**

<b>PHYSICAL FORM</b>	Mobile liquid
<b>COLOR</b>	White (transparent once cured)
<b>ODOR</b>	
<b>pH</b>	4.0-6.0
<b>VAPOR PRESSURE (mm Hg at 21C (70F))</b>	18.62
<b>VAPOR DENSITY (Air = 1)</b>	of water vapor
<b>BOILING POINT</b>	>100.00 C (>212.00 F)
<b>MELTING POINT</b>	No Data
<b>SOLUBILITY IN WATER</b>	Completely (100%)
<b>SPECIFIC GRAVITY (Water = 1)</b>	1.04-1.10
<b>MOLECULAR WEIGHT</b>	Mixture

**SECTION 10 - STABILITY AND REACTIVITY**

**CHEMICAL STABILITY**

Stable at ambient temperatures. Coagulation may occur following freezing, thawing or boiling.

**CONDITIONS TO AVOID (if unstable)**

Not applicable

**INCOMPATIBILITY (Materials to Avoid)**

Mineral acids (i.e. sulfuric, phosphoric, etc.). Alkalis (i.e. Sodium or Potassium Hydroxide etc.).

**HAZARDOUS DECOMPOSITION PRODUCTS (from burning, heating, or reaction with other materials).**

Depending upon formulation conditions (such as pH>7), the level of acetaldehyde may increase as a result of hydrolysis of residual vinyl acetate monomer. Carbon Monoxide in a fire. Carbon Dioxide in a fire. Acetic Acid.

**HAZARDOUS POLYMERIZATION**

Will not occur

**CONDITIONS TO AVOID (if polymerization may occur)**

Not applicable

**SECTION 11 - TOXICOLOGICAL PROPERTIES**

**ACUTE ORAL TOXICITY (LD50, RAT)**

No Data

**ACUTE DERMAL TOXICITY (LD50, RABBIT)**

No Data

**ACUTE INHALATION TOXICITY (LC50, RAT)**

No Data

**OTHER ACUTE EFFECTS**

No Data

**IRRITATION EFFECTS DATA**

No Data

**CHRONIC/SUBCHRONIC DATA**

This product has been tested and shown not to cause mild sensitization in guinea pigs.

**SECTION 12 - ECOLOGICAL INFORMATION**

No Data

**ECOTOXICITY**

No Data

**ENVIRONMENTAL FATE**

No Data

**ADDITIONAL INFORMATION**

No Data

**SECTION 13 - DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL**

Comply with all Federal, State and Local Regulations. For small quantities (less than 100 gallons): Disposal to municipal or industrial wastewater treatment plants is normally acceptable. Obtain approval from these authorities before disposal. The product does impart a white, milky color to water, which may not be removed or sufficiently diluted by the treatment facility. The product may also



cause foaming when agitated. The product can be chemically or biologically degraded. For large quantities: Disposal through licensed waste disposal facilities is suggested. The product can be incinerated, though chemical or biological treatment is sufficient. Chemical precipitation/coagulation can be used to facilitate removal of solids (consult manufacturer for detailed procedure). NOTE: As supplied or diluted, product material (foam included), when splashed on automobiles or other personal property, is difficult to remove if allowed to dry.

**SECTION 14 - TRANSPORT INFORMATION**

**DOT NON-BULK SHIPPING NAME** RESIN COMPOUND - Not DOT Regulated // Keep From Freezing  
**DOT BULK SHIPPING NAME** Refer to Bill of Lading.  
**IMO SHIPPING DATA** Refer to Bill of Lading.  
**ICAO/IATA SHIPPING DATA** RESIN COMPOUND - Not IATA Regulated // Keep From Freezing

**SECTION 15 - REGULATORY INFORMATION**

**US FEDERAL REGULATIONS**

**TOXIC SUBSTANCES CONTROL ACT (TSCA)-**  
 All components are included in the EPA Toxic Substances Control Act (TSCA) Chemical Substance Inventory.  
**TOXIC SUBSTANCE CONTROL ACT (TSCA) 12(b) COMPONENT(S)**  
 None  
**OSHA Hazard Communication Standard (29CFR1910.1200) hazard class(es)**  
 None  
**EPA SARA Title III Section 312 (40CFR370) hazard class**  
 None  
**EPA SARA Title III Section 313 (40CFR372) toxic chemicals above "de minimis" level are**  
 None

**STATE REGULATIONS**

**PROPOSITION 65 SUBSTANCES (component(s) known to the State of California to cause cancer and/or reproductive toxicity and subject to warning and discharge requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986")** None.

**SECTION 16 - INTERNATIONAL REGULATIONS**

**CANADA**

**DSL**  
 Included on Inventory.  
**WHMIS HAZARD CLASSIFICATION**  
 None  
**WHMIS INGREDIENT DISCLOSURE LIST**  
 None  
**WHMIS SYMBOLS**  
 None

**EUROPEAN ECONOMIC COMMUNITY (EEC)**

**EINECS/ELINCS MASTER INVENTORY**  
 Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer.  
**EEC RISK (R) PHRASES**  
 There are no known health hazards (R00).  
**EEC SPECIAL PHRASES**  
 Keep liquid above freezing. Safety data sheet available for professional user on request.