



# Letter of Introduction

Soilworks<sup>®</sup>, LLC is the innovator and manufacturer of Soiltac<sup>®</sup> soil stabilizer and dust control agent. Soiltac<sup>®</sup> is an eco-safe, biodegradable, liquid copolymer used to stabilize and solidify any soil or aggregate as well as erosion control and dust suppression.

Soilworks'<sup>®</sup> recent advances in simulation, chemistry, processing techniques, and analytical instrumentation have allowed a whole host of new types of polymer particles and polymer nanotechnology applications to be realized. These advances led to the revolutionary development of nanotechnology into Soiltac's<sup>®</sup> superior performance.

Once applied to the soil or aggregate, the copolymer molecules coalesce forming bonds between the soil or aggregate particles. The key advantage of Soiltac® originates with its long, nanoparticle molecular structure that link and cross-link together. As the water dissipates from the soil or aggregate, a durable and water resistant matrix of flexible solid-mass is created. Once cured, Soiltac® becomes completely transparent, leaving the natural landscape to appear untouched.

Soiltac<sup>®</sup> results are based on the application rate used. Modest application rates are useful for dust suppression and erosion control by creating a three-dimensional cap or surface crust. Heavier rates can generate qualities similar to cement; useful for soil solidification and stabilization found in road building. By adjusting the application rate, Soiltac<sup>®</sup> can remain effective from weeks to several years. Most importantly, Soiltac<sup>®</sup> is a truly biodegradable product that is completely environmentally safe to use.

Soiltac<sup>®</sup> has been rigorously evaluated and its performance verified by the U.S. Army Engineering Research and Development Center (ERDC) against the industry's traditional top performing soil stabilizers and dust control agents. As a result, the Department of Defense continues to award Soilworks<sup>®</sup> with contracts to supply Operation Iraqi Freedom, Enduring Freedom and the on-going Iraq rebuilding efforts with Soiltac<sup>®</sup>. Its success with the U.S Military and Allied Forces has led to Soilworks<sup>®</sup> GSA contract (# GS-07F-5364P) and a complete listing of National Stock Numbers for the U.S. Department of Defense warehouses.

Soiltac's<sup>®</sup> advanced nanotechnology is modernizing the way we stabilize soils and aggregates in addition to controlling dust and erosion for a whole new generation. Soiltac<sup>®</sup> applications are extensive ranging from simple backyard trails and construction sites to heavy-lift military cargo runways and global transportation infrastructure.

Soilworks<sup>®</sup> is dedicated to economically solving soil stabilization challenges throughout the world's residential, commercial, industrial and military markets. For more information about Soiltac<sup>®</sup>, please visit us online at www.soilworks.com or call 1-800-545-5420.

Respectfully.

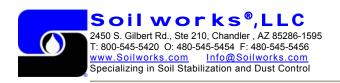
Chad Falkenberg

President









# Applications & Uses Examples



Unpaved Dirt Roads
Road Dust Control
Erosion Control
Road Stabilization



Construction Sites
Fugitive Dust Control
Erosion Control
Road Stabilization



Heavy Haul Roads Road Dust Control Erosion Control Road Stabilization



Land Development
Fugitive Dust Control
Erosion Control
Silt Loading Control



Road Base & Sub-Base Road Base Stabilization Sub-Base Stabilization Mud Suppression



Unpaved Driveways
Driveway Dust Control
Erosion Control
Soil Stabilization



Aircraft Runways
Runway Dust Control
FOD Control
Runway Stabilization



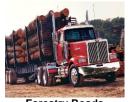
Helipads & FARPs Helipad Dust Control LZ FOD Control Pad Stabilization



Airport Taxiways
Airfield Dust Control
Airport FOD Control
Soil Stabilization



Recycled Asphalt Road Dust Control Road Reclamation Milling Stabilization



Forestry Roads
Road Dust Control
Erosion Control
Road Stabilization



Agricultural Roads Road Dust Control Erosion Control Road Stabilization



Mine Tailings
Tailings Dust Control
Tailings Erosion Control
Tailings Reclamation



Storage & Stock Piles Stock Pile Dust Control Stock Pile Capping Stock Pile Stabilization



Power Plants
Facility Dust Control
Stock Pile Capping
Road Dust Control



Border Patrol Roads Road Dust Control Erosion Control Road Stabilization



Hydroseeding
Hydroseed Tackifier
Hydromulch Tackifier
Erosion Control



Construction Parking Parking Lot Dust Control Haul Road Dust Control Parking Lot Solidification



Event Parking Lots
Parking Lot Dust Control
Event Dust Control
Parking Lot Stabilization



Road Shoulders Shoulder Dust Control Shoulder Erosion Control Shoulder Stabilization



Slopes & Berms Slope Erosion Control Slope Stabilization Silt Containment



Military Operations
Dust Suppression
Soil Solidification
Road Stabilization



Defense Compounds Suppress Fugitive Dust Soil Stabilization Dust Prevention



Military Training Sites FARP Dust Control Road Dust Suppression Land Target Coloration



Airport Infields Infield Dust Retardant Shoulder FOD Control Infield Dust Stabilization









# Standard Application Coverage Rates

	Undiluted Concentrate						Dilution							
	Standard Metric						a a a			hs)				
(Topical Only)	al.	/#²	gal.	yd²	acre	gal	'm²	٦	η²	Parts Water	Traffic Area	gal./Acre	gal./SY	Life (months)
	ft²/gal.	gal./ft²	yd²/gal.	gal./yd²	gal./acre	m²/gal	gal./m²	m²/L	L/m²	Рац	Tra	gal.	ga	Life
Water Retention Basin & Pond Lining	20	0.0500	2.2	0.450	2,178	1.9	0.538	0.5	2.04	2	No	6,534	1.35	12-24
Aircraft Runways (Heavy use)	35	0.0286	3.9	0.257	1,245	3.3	0.308	0.9	1.16	4	Yes	6,223	1.29	12-24
Aircraft Runways (single engine)	50	0.0200	5.6	0.180	871	4.6	0.215	1.2	0.81	6	Yes	6,098	1.26	12-24
Helicopter Landing Pads (Heavy Craft)	45	0.0222	5.0	0.200	968	4.2	0.239	1.1	0.91	5	Yes	5,808	1.20	12-24
Helicopter Landing Pads (Light Craft)	70	0.0143	7.8	0.129	622	6.5	0.154	1.7	0.58	8	Yes	5,601	1.16	12-24
Heavy Haul Roads & Mining Roads	60	0.0167	6.7	0.150	726	5.6	0.179	1.5	0.68	6	Yes	5,082	1.05	12-24
Military Convoy & Supply Roads	65	0.0154	7.2	0.138	670	6.0	0.166	1.6	0.63	6	Yes	4,691	0.97	12-24
Roads (High Traffic)	65	0.0154	7.2	0.138	670	6.0	0.166	1.6	0.63	6	Yes	4,691	0.97	12-24
Residential Driveways	65	0.0154	7.2	0.138	670	6.0	0.166	1.6	0.63	6	Yes	4,691	0.97	12-24
Parking Lots	65	0.0154	7.2	0.138	670	6.0	0.166	1.6	0.63	6	Yes	4,691	0.97	12-24
Roads (Light Traffic)	70	0.0143	7.8	0.129	622	6.5	0.154	1.7	0.58	7	Yes	4,978	1.03	12-24
Golf Course Bunker Liner	50	0.0200	5.6	0.180	871	4.6	0.215	1.2	0.81	5	Yes	5,227	1.08	12-24
Golf Course Cart Paths	80	0.0125	8.9	0.113	545	7.4	0.135	2.0	0.51	8	Yes	4,901	1.01	12-24
Walking Trails and Paths	100	0.0100	11.1	0.090	436	9.3	0.108	2.5	0.41	10	Yes	4,792	0.99	12-24
Road Sealer over Soiltac Stabilized Base	100	0.0100	11.1	0.090	436	9.3	0.108	2.5	0.41	4	Yes	2,178	0.45	12-24
BMX Tracks	120	0.0083	13.3	0.075	363	11.1	0.090	2.9	0.34	10	Yes	3,993	0.83	9-16
Temporary Parking Lots	120	0.0083	13.3	0.075	363	11.1	0.090	2.9	0.34	10	Yes	3,993	0.83	1-3
Temporary Roads & Detours	150	0.0067	16.7	0.060	290	13.9	0.072	3.7	0.27	13	Yes	4,066	0.84	1-3
Road Shoulders	160	0.0063	17.8	0.056	272	14.9	0.067	3.9	0.25	14	Yes	4,084	0.84	12-24
Slope Erosion Control (Steep Slope)	100	0.0100	11	0.090	436	9	0.108	2	0.41	5	No	2,614	0.54	12-24
Slope Erosion Control (Average Slope)	180	0.0056	20	0.050	242	17	0.060	4	0.23	10	No	2,662	0.55	12-24
Slope Erosion Control (Light Slope)	220	0.0045	24	0.041	198	20	0.049	5	0.19	12	No	2,574	0.53	12-24
Stock Pile Dust Capping (Steep Slope) Stock Pile Dust Capping (Average Slope)	220	0.0045	24	0.041	198	20	0.049	5	0.19	9	No	1,980	0.41	12-24
Stock Pile Dust Capping (Average Slope)  Stock Pile Dust Capping (Light Slope)	270	0.0037	30	0.033	161	25	0.040	7	0.15	12	No	2,097	0.43	12-24
Hazardous Material Capping & Sealing	320 160	0.0031 0.0063	36 18	0.028 0.056	136 272	30 15	0.034	8	0.13	14 8	No No	2,042	0.42	12-24 12-24
Landfill Capping & Reclamation	360	0.0063	40	0.056	121	33	0.030	9	0.25	10	No	2,450 1,331	0.51	12-24
Odor & Vapor Suppression	360	0.0028	40	0.025	121	33	0.030	9	0.11	20	No	2,541	0.28	12-24
Mine Tailings Capping & Reclamation	450	0.0028	50	0.023	97	42	0.030	11	0.11	12	No	1,258	0.33	12-24
Coal Rail Car Capping	1.000	0.0022	111	0.020	44	93	0.024	25	0.09	29	No	1,307	0.20	12-24
Dust Control (30 Days)	1,250	0.0010	139	0.003	35	116	0.009	31	0.03	34	No	1,220	0.25	1+
Dust Control (90 days)	795	0.0003	88	0.007	55	74	0.003	20	0.05	21	No	1,205	0.25	3+
Dust Control (6 Months)	580	0.0017	64	0.011	75	54	0.019	14	0.07	15	No	1,202	0.25	6+
Dust Control (12 Months)	415	0.0024	46	0.022	105	39	0.026	10	0.10	11	No	1,260	0.26	12+
Dust Control (12-24 Months)	320	0.0031	36	0.028	136	30	0.034	8	0.13	8	No	1,225	0.25	12-24
Hydroseed & Hydromulch Tackifier	1,740	0.0006	193	0.005	25	162	0.006	43	0.02	40	No	1,026	0.21	3-6
,	.,			xed-in / Pi								,,,,,		
Base Stabilization Light (4"-10cm deep)	45	0.0222	5.0	0.200	968	4.2	0.239	1.1	0.91					
Base Stabilization Average (4"-10cm deep)	35	0.0286	3.9	0.257	1,245	3.3	0.308	0.9	1.16					
Base Stabilization Heavy (4"-10cm deep)	25	0.0400	2.8	0.360	1,742	2.3	0.431	0.6	1.63	**				
Road Pot Hole Repair (4"-10cm deep)	25	0.0400	2.8	0.360	1,742	2.3	0.431	0.6	1.63					
Adobe Blocks & Earth Blocks (6"-15cm Tall)	35	0.0286	3.9	0.257	1,245	3.3	0.308	0.9	1.16					
Base Stabilization Light (6"-15cm deep)	35	0.0286	3.9	0.257	1,245	3.3	0.308	0.9	1.16					
Base Stabilization Average (6"-15cm deep)										Ī				
Dasc Glabilization 7 volage (o Tochi accp)	25	0.0400	2.8	0.360	1,742	2.3	0.431	0.6	1.63					

<sup>\*\*</sup>Dilution rates for mix-in/processed applications are based on the difference between optimum moisture and in-situ moisture levels.

Please consult with your local Soiltac® representative to calculate recommended dilution rates for all mix-in applications.

Application coverage and dilution rates may vary depending on traffic volume, load bearing capacity, soil type, weather conditions, soil moisture levels and compaction. All Mixed-in/Processed applications require laboratory and on-site testing to determine optimal application and dilution rates.







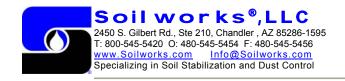


# Unique Product Advantages

Dries Flexible
Biodegradable
Simple and Easy to Apply
Dries Transparent / Clear
Dries Completely Odorless
Non-Flammable & Non-Volatile
Non-Hazardous
Non-Corrosive & Safe for All Equipment
Non-Slippery & Safe to Walk and Drive on
Non-Regulated for Transportation (land/Ocean/Air)
Ecologically & Environmentally Safe
Cumulative Effect with Maintenance
Dyes & Pigments can be Added for Color
Human, Animal, Marine Life and Vegetation Safe
Water Resistant (will not break down with water)
Non-Tracking & Non-Transferable (will not be picked up onto vehicles)
Non-Leaching (will not continue to seep into the soil)
Ultraviolet Ray Resistant (will not break down in sunlight)
Non-Dissipating (will not wash away with water once cured)
Alkaline Soil Resistant (will not break down in alkaline soils)
Self Mixes with Water for Diluting (prior to applying to the soil)
PM <sub>10</sub> & PM <sub>2.5</sub> Compliant (stops hazardous dust particles of 2.5+ microns in size)







# Frequently Asked Questions

**Prices** Current Soiltac<sup>®</sup> pricing is based on volume and is available upon request.

**GSA Schedule** Soiltac<sup>®</sup> is available for wholesale through our Federal GSA contract (#GS07F5364P).

**Payment Terms** Prepaid or Net 30 Days upon approved credit.

Payment Method Cash, Check, Visa, MSTC, AMEX, Letter of Credit, Govt. Cards & Wire Transfer.

**Bids / Proposals** Formal bids and proposals are available upon request.

Minimum Order 5 gallons square poly pail (one liter test samples are available).

**Availability** 40,000+ gallons (150,000 liters) are stocked and available on an immediate basis.

**Turn-Around** < 48 hours after order is placed and sales terms fulfilled.

**Large Volumes** 3-14 day turn-around for single order shipments of 100,000+ gallons (400,000+ liters).

**Production Limits** None. Soiltac<sup>®</sup> can be manufactured rapidly in unlimited volumes worldwide.

Prime Material

Unlike traditional stabilizers, Soiltac<sup>®</sup> is a "Prime" material, not blended or recycled.

By-Products

Unlike traditional stabilizers, Soiltac<sup>®</sup> is not an ultra-filtrate, by-product or off-grade.

Curing

Unlike cement, Soiltac<sup>®</sup> does not cure chemically, it cures as the water evaporates.

Cure Time Topically, 24 hours (@70°F/21°C) is normal. Primary factors include temperature and humidity.

Penetration Depth 1/8<sup>th</sup>" to 2" deep for topical applications. Soil type & compaction are the primary factors.

Cold Weather Will significantly increase cure time. The lower the temperature the longer the cure time.

**Freezing** Do not freeze uncured Soiltac<sup>®</sup>. Cured Soiltac is unaffected by freezing temperatures

Shipping National & International. Non-Hazardous and Non-Regulated. Worldwide production.

**Guarantee** Soilworks<sup>®</sup> guarantees that each batch of Soiltac<sup>®</sup> meets the stated specifications

**Normal Life Span** Indefinitely with maintenance. Topically, 12-24 months prior to first maintenance coat.

**Shelf Life** 12 Months. If stored for longer than 12 months, agitation may be required.

Maintenance Approximately 30% the original volume used after the first 12-24 months. Cumulative.

Soil Type Any. Best with non-plastic materials with a well graded grain size distribution and fines.

Rain / Precipitation
 Uncured Cleaning
 Cured Cleaning
 Difficult to remove. Use hot water pressure washer with scrub brush and solvents.

**Gray Water Dilution** Soiltac® can be diluted with almost any water including grey water.

**Sea Water Dilution** Soiltac<sup>®</sup> can be diluted with sea salt water. Do not store sea salt water dilution over 8hrs.

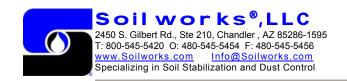
Performance Factors Application rate, soil type, dilution, compaction, traffic, penetration, climate & others

**Harmonized Code** The International Tariff Code for Soiltac<sup>®</sup> is 3905.21.00.00.







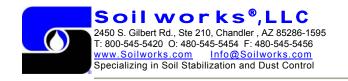


# Standard Container & Shipping Options

Image	Description	Maximum Volume	Dimensions (LxWxH)	Weight (gross)
	Sample Bottle	½ gallon 1 liter	4"x4"x12" 10x10x31cm	3 lbs 1.3 kg
	Square Poly Pail	5 gallons 19 liters	11"x11"x14" 28x28x36cm	50 lbs 22.7 kg
	Poly Drum NSN: 6850-01-519-4706	55 gallons 208 liters	24"x24"x36" 61x61x91cm	540 lbs 245 kg
	Standard IBC Tote (Steel Cage & Poly) NSN: 6850-01-519-4708	275 gallons 1,041 liters	40"x48"x46" 101x121x117cm	2,600 lbs 1,180 kg
	Bulk Tanker (U.S. Only)	5,000 gallons 18,927 liters	Variable	45,000 lbs 20,412 kg
Fra TRC BLA	53' Box Van with 80 <b>Poly Drums</b>	4,400 gallons 16,656 liters	Variable	44,400 lbs 20,140 kg
A DESCRIPTION OF THE PERSON OF	53' Box Van with 17 <b>Standard IBC Totes</b>	4,675 gallons 17,697 liters	Variable	44,200 lbs 20,049 kg
	48' Flatbed with 84 <b>Poly Drums</b> 21 <b>Pallets</b>	4,620 gallons 17,488 liters	Variable	46,620 lbs 21,146 kg
	48' Flatbed with 18 <b>Standard IBC Totes</b>	4,950 gallons 18,737 liters	Variable	46,800 lbs 21,228 kg
Golfer-	20' Ocean Container with 40 <b>Poly Drums</b>	2,200 gallons 8,328 liters	Variable	22,200 lbs 10,070 kg
N.S.	20' Ocean Container with 14 <b>Standard IBC Totes</b>	3,850 gallons 14,573 liters	Variable	35,000 lbs 15,875 kg





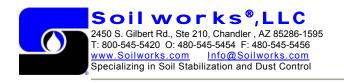


# Product Selection Guide Chart

Drainet Doggiirements					Soilworks <sup>®</sup> Complete Product Line Recommendations				
Project Requirements						Soiltac <sup>®</sup>	Powdered Soiltac <sup>®</sup>	Gorilla- Snot <sup>®</sup>	Durasoil <sup>®</sup>
	Non-Traffic	Non-Water Resistant / Solidification				YES	YES	YES	NO
		Water Resistant / Solidification	Short	YES	YES	Best	NO		
			Short & L	Best	Best	NO	NO		
	Vehicle / Aircraft / Foot Traffic Areas	Tracked Vehicles, Skid Steers or Forklifts (No Solidification)			NO	NO	NO	Best	
Dust Control		Equestrian / Livestock / Animals ( <u>No Solidification</u> )			NO	NO	NO	Best	
			Uncompacted or Loose Soil / Aggregate / Gravel ( <u>No Solidification</u> )			NO	NO	NO	Best
		Rubber Tire / Foot Traffic Only	95% Compacted & No Loose Gravel / Aggregate (Solidification)	Non-Water Resistant		YES	YES	YES	NO
				Water Resistant	Short Term	YES	YES	Best	NO
					Short & Long Term	Best	Best	NO	NO
Soil Stabilization Erosion Control	Water Resistant				Best	Best	NO	NO	
	Non-Water Resistant					YES	YES	YES	NO
	Water	Short Term			YES	YES	Best	NO	
	Resistant	Short & Long Term			Best	Best	NO	NO	
	Non-Water Resistant				YES	YES	YES	NO	







# Application Equipment Examples



Highway Accessible Water Trucks



All Wheel Drive Water Trucks



Water Wagons "Water Pulls"



Mining Water Trucks
"Mining Pigs"



Heavy Expanded Mobility Tactical Truck Tankers



Flat Bed Trucks with Tanks & Pumps



In-situ road reclaimers In-situ soil stabilizers



Computerized Rate
Control Distributor Trucks



Truck Mounted Hydroseeders



Trailer Mounted Hydroseeders



Agricultural Tractors with Towable Spray Bars



Agricultural Tractors with Towable Spray Booms



Water Trucks with Gravity Feed Spray Bars



Single Axle Water Trucks



Military "DAV"
(Dust Abatement Vehicle)



Pick-up Trucks with IBC Tote & Pumps



Towable Spray Tanks
"Water Buffalo"



Truckbed Water Tanks "Skid Sprayers"



Standard Hose & Pump Hand Spraying



Airplane Sprayers "Crop Duster"



Helicopters "Water Drop"



ATV Towable Tank Sprayers



ATV Mounted Tank Sprayers



Watering Cans

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









# Price Schedule



Please contact us or your local distributor today for our current price schedule.

1-800-545-5420 U.S. Toll Free 001-480-545-5454 International info@soilworks.com









Topical Traffic & Non-Traffic Application Overview (for 1-Liter Sample Bottle Test Plot)

# 1.) Prepare the Site:

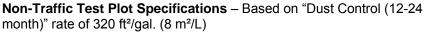
Dry Soil: The test plot should be completely dry and free from water.

**Weather**: The test plot must be free from rain for a minimum of 72 hours after the application. Temperature must be at least  $40^{\circ}F$  ( $4^{\circ}C$ ).

**Compaction**: Compact the test plot to a minimum of 95%. (Optional for No-Traffic test plot)

**Drainage**: Contour and crown the test plot to provide for proper drainage. **Loose Aggregate**: Remove any loose aggregate, soil or debris from the test plot. (Optional for No-Traffic)

**Pre-Wetting** *(Optional)*: Optimally, pre-wet the test plot with water (only) at a rate of 100 ft²/gal. (2 m²/L) to break the surface tension and increase penetration depth.



Test Plot Size = 85 ft<sup>2</sup> (8 m<sup>2</sup>) = 110"x110" (280cm x 280cm)

Optional Water Only Pre-Wet = 0.85 gallons or 14 cups (4 liters)

Water to Soiltac<sup>®</sup> Ratio = 14 Parts Water = 3.7 gallons or 60 cups (14 liters) Total Soiltac<sup>®</sup> Dilution = 4 gallons or 64 cups (15 liters)

**Traffic Area Test Plot Specifications** – Based on "Roads (high traffic)" rate of 65 ft²/gal. (1.6 m²/L)

Test Plot Size = 17 ft<sup>2</sup> (1.6 m<sup>2</sup>) = 50"x50" (130cm x 130cm)

Optional Water Only Pre-Wet = 0.17 gallons or 3 cups (0.65 liters)

Water to Soiltac<sup>®</sup> Ratio = 6 Parts Water = 1.6 gallons or 26 cups (6 liters)

Total Soiltac<sup>®</sup> Dilution = 1.85 gallons or 30 cups (7 liters)

# 2.) Prepare the Soiltac® Dilution:

**Water**: Fill the application equipment with the recommended volume of water (see above).

**Soiltac**<sup>®</sup>: Fill the application equipment with the recommended volume of Soiltac<sup>®</sup> concentrate (see above).

# 3.) Apply the Soiltac® Dilution

**Multiple Coats**: Apply the Soiltac<sup>®</sup> dilution in (1-2 coats for non-traffic) or (4-5 coats for traffic) onto the test plot.

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

### 4.) Clean the Application Equipment

Rinse: Rinse off the application equipment thoroughly with water until clean.

# 5.) Finish - Allow Site to Dry/Cure

**Curing**: Allow the test plot to dry and cure for a minimum of 24 hours  $(@70^{\circ}F/21^{\circ}C)$ .

**Non-Traffic Test Area**: Prevent any human activity over the test plot . **Traffic Test Area**: Prevent any human activity over the test plot until it has completely cured.









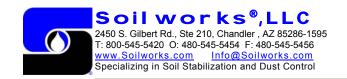












# Topical Traffic Area Application Overview

## 1.) Prepare the Site:

**Dry Soil**: The site should 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). (varies by location)

**Compaction**: Compact the site to a minimum of 95%.

(per ASTM D 698 D 1557 modified Proctor Density).

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

Loose Aggregate: Remove any loose aggregate, soil or debris 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.

**Pre-Wetting (Optional)**: Optimally, pre-wet the treatment area with water (only) to break the surface tension and increase penetration depth. Pre-wet at a rate of 100 SF/gallon (2.5m²/liter) of water.

Release Agent (Optional): Optionally, a form release agent (like Durasoil®) can be sprayed onto the equipment to prevent Soiltac® overspray from adhering onto the outside of the equipment

# 3.) Prepare the Soiltac® Dilution:

Water: Fill the application equipment with the recommended volume of water.

Reference the "application coverage rates" chart.

**Example**: Roads (Light Traffic) = 70 ft<sup>2</sup>/gallons (1.7m<sup>2</sup>/liter) +7 parts water.

Equipment: 4,000 gallon (15,142 liters) water truck

Calculation: 7+1 = 8 parts dilution total.

4,000 gallons / 8 parts = 500 gallons (1,893 liters) per part

Volume of Water: 500 gallons X 7 parts = 3,500 gallons (13,249 liters) of water

Volume of Soiltac<sup>®</sup>: 500 gallons X 1 part = 500 gallons (1,893 liters) of Soiltac<sup>®</sup> concentrate Volume of Dilution: 500 gallons X 8 parts = 4,000 gallons (15,142 liters) of Soiltac<sup>®</sup> dilution

**Soiltac**<sup>®</sup>: Fill the application equipment with the recommended volume of Soiltac<sup>®</sup> concentrate.

**Foaming**: To prevent foaming, add the Soiltac® concentrate last, directly into the water.

# 4.) Apply the Soiltac® Dilution

**Multiple Coats**: Apply the Soiltac® dilution in coats over the treatment area.

**Example**: (See Above) Roads (Light Traffic) typically require a minimum of 4 even coats.

500 gallons / 4 coats = 125 gallons (473 liters) (Soiltac<sup>®</sup> concentrate) per coat. 4,000 gallons / 4 coats = 1,000 gallons (3,785 liters) (Soiltac<sup>®</sup> dilution) per coat.

500 gallons (Soiltac<sup>®</sup> concentrate) X 70 ft²/gal. = 35,000 ft² (3,252 m²) treatment per water truck

**Drying**: Each successive coat of Soiltac<sup>®</sup> dilution should be applied in a timely manner to ensure that the surface always stays wet with the Soiltac<sup>®</sup> dilution. DO NOT allow the Soiltac<sup>®</sup> dilution to dry 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<sup>®</sup> is allowed to dry and cure use a hot pressure washer or steam cleaner and brush to remove residue.

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









# Topical Non-Traffic & Slope Area Application Overview

## 1.) Prepare the Site:

Dry Soil: The site should 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 (Optional)**: Compaction is not required but is recommended for optimal longevity. A minimum of 95% density is recommended (per ASTM D 698 D 1557 modified Proctor Density).

**Drainage**: Optimally, contour the site to provide for proper drainage to prevent channeled water flow.

# 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.

**Pre-Wetting (Optional)**: Optimally, pre-wet the treatment area with water (only) to break the surface tension and increase penetration depth. Pre-wet at a rate of 100 SF/gallon (2.5m²/liter) of water.

Release Agent (Optional): Optionally, a form release agent (like Durasoil®) can be sprayed onto the equipment to prevent Soiltac® overspray from adhering onto the outside of the equipment

# 3.) Prepare the Soiltac® Dilution:

Water: Fill the application equipment with the recommended volume of water.

Reference the "application coverage rates" chart.

Example: 6 Month Dust Control (no traffic)=75 gal./acre=580 ft²/gal.)(2.5m²/liter) + 15 parts water

Equipment: 4,000 gallon (15,142 liters) water truck

Calculation: 15+1 = 16 parts dilution total.

4,000 gallons / 16 parts = 250 gallons (946 liters) per part

Volume of Water: 250 gallons X 15 parts = 3,750 gallons (14,195 liters) of water

Volume of Soiltac<sup>®</sup>: 250 gallons X 1 part = 250 gallons (946 liters) of Soiltac<sup>®</sup> concentrate Volume of Dilution: 250 gallons X 16 parts = 4,000 gallons (15,142 liters) of Soiltac<sup>®</sup> dilution

**Soiltac**: Fill the application equipment with the recommended volume of Soiltac<sup>®</sup> concentrate. **Foaming**: To prevent foaming, add the Soiltac<sup>®</sup> concentrate last, directly into the water.

# 4.) Apply the Soiltac® Dilution

**Multiple Coats**: Apply the Soiltac<sup>®</sup> dilution in coats over the treatment area. On slopes, the steeper the slope, the need for more coats (to prevent run-off and increase penetration depth).

**Example**: (See Above) 6 Month Dust Control Rate (no traffic) typically requires 1-2 Coats 250 gallons / 2 coats = 125 gallons (473 liters) (Soiltac® concentrate) per coat.

4,000 gallons / 2 coats = 2,000 gallons (7,571 liters) (Soiltac<sup>®</sup> dilution) per coat.

250 gallons (Soiltac<sup>®</sup> concentrate) / 75 gal./acre = 3⅓ acre (13,489 m²) treatment per water truck

**Drying**: On slopes, each successive coat of Soiltac<sup>®</sup> dilution should be applied in a timely manor to ensure that the surface always stays wet with the Soiltac<sup>®</sup> dilution. On slopes, DO NOT allow the Soiltac<sup>®</sup> 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<sup>®</sup> is allowed to dry and cure, use a pressure washer or steam cleaner and a brush to remove residue.

**Traffic**: Prevent any human activity over the treated area.







# SOILTAC®

Mixed-In (2-6"↔5-15cm Deep) Soil Stabilization Application Overview

## 1.) Prepare the Site:

**Dry Soil**: The site and must be below the optimum moisture level

(minimally low enough to reach optimum with the addition of Soiltac<sup>®</sup> at a 1:1 water ratio).

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 completely (without clods) to the recommended depth.

Large Aggregate: Remove any large aggregate (4"+/10cm+) that could effect the final compaction.

### 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.

Release Agent (Optional): Optionally, a form release agent (like Durasoil®) can be sprayed onto the equipment to prevent Soiltac® overspray from adhering onto the outside of the equipment

## 3.) Prepare the Soiltac® Dilution:

Water: Fill the application equipment with the recommended volume of water.

Dilution Calculation: The amount of water required to achieve optimum moisture must be field determined by comparing the in place moisture content to the optimum moisture content (determined by a laboratory proctor test ASTM D2216-92). The in place moisture content can be determined by the average of four in place readings with a nuclear density gauge. Testing the native soil for optimum moisture levels is required to determine the exact parts of water to use for diluting Soiltac® properly. 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.

Example: Base Stabilization Average (6"/15cm deep) rate (25 ft²/gal.)(1.63L/m²),

4,000 gallon (15,142 liter) water truck, 4 parts water (laboratory & field calculated) dilution rate

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

4,000 gallons / 4 parts = 1,000 gallons (3,785 liters) per part

Volume of Water: 1,000 gal. X 3 parts = 3,000 gallons (11,356 liters) of water

Volume of Soiltac: 1,000 gal. X 1 part = 1,000 gallons (3,785 liters) of Soiltac<sup>®</sup> concentrate Volume of Dilution: 1,000 gal. X 4 parts = 4,000 gallons (15,142 liters) of Soiltac<sup>®</sup> dilution

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

**Foaming**: To prevent foaming, add the Soiltac<sup>®</sup> concentrate last, directly into the water.

## 4.) Apply and Process the Soiltac® Dilution

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

**Example**: (See Above) Base Stabilization Average (6"/15cm deep) rate (25 ft²/gal.) (1.63L/m²), 1,000 gallons (Soiltac<sup>®</sup> concentrate) X 25 ft²/gal.= 25,000 ft² (2,323 m²) treatment 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). Optimally, use a pneumatic compactor for initial compaction to prevent soil adhering to the drum and finishing with a vibratory smooth steel drum compactor.

#### 5.) Clean the Application Equipment

**Rinse**: Rinse off all application equipment thoroughly with water until clean. If Soiltac<sup>®</sup> is allowed to dry and cure use a hot pressure washer or steam cleaner and brush to remove residue.

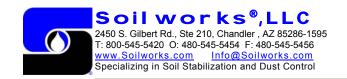
**Traffic**: Prevent any human activity over the treated area until the site has completely cured. **Curing**: Allow the treated area to dry and cure for approximately 24 hours (@70°F/21°C).

**Topical Wear Coarse:** If the mix-in/processed area is not going be covered with an alternate topical wear coarse (example: asphalt, concrete, chip-seal, etc.), then a topical application of Soiltac<sup>®</sup> must be applied as a topical road sealer and surface wear coarse (see our "Standard Application Coverage Rates" for details).









# Topical Water Retention Basin & Pond Lining Application Overview

## 1.) Prepare the Site:

**Dry Soil**: The site should 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).

**Compaction**: Compact the site to a minimum of 95%.

(per ASTM D 698 D 1557 modified Proctor Density).

Loose Aggregate: Remove any loose aggregate, soil or debris 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.

Release Agent (Optional): Optionally, a form release agent (like Durasoii®) can be sprayed onto the equipment to prevent Soiltac® overspray from adhering onto the outside of the equipment

# 3.) Prepare the Soiltac<sup>®</sup> Dilution:

Water: Fill the application equipment with the recommended volume of water.

Reference the "application coverage rates" chart.

**Example**: Water Retention Basin & Pond Lining = 20 ft²/gallons (0.5m²/liter) +2 parts water.

Equipment: 4,000 gallon (15,142 liters) water truck

Calculation: 2+1 = 3 parts dilution total.

4,000 gallons / 3 parts = 1,333 gallons (5,050 liters) per part

Volume of Water: 1,333 gallons X 2 parts = 2,670 gallons (10,100 liters) of water

Volume of Soiltac<sup>®</sup>: 1,333 gallons X 1 part = 1,333 gallons (5,050 liters) of Soiltac<sup>®</sup> concentrate Volume of Dilution: 1,333 gallons X 3 parts = 4,000 gallons (15,142 liters) of Soiltac<sup>®</sup> dilution

**Soiltac**<sup>®</sup>: Fill the application equipment with the recommended volume of Soiltac<sup>®</sup> concentrate.

**Foaming**: To prevent foaming, add the Soiltac® concentrate last, directly into the water.

# 4.) Apply the Soiltac® Dilution

**Multiple Coats**: Apply the Soiltac<sup>®</sup> dilution in coats over the treatment area.

**Example**: (See Above) Water Retention & Pond Lining typically require a minimum of 6 coats.

1,333 gallons / 6 coats = 222 gallons (840 liters) (Soiltac® concentrate) per coat.

4,000 gallons / 6 coats = 667 gallons (2,520 liters) (Soiltac® dilution) per coat.

1,333 gallons (Soiltac® concentrate) X 20 ft²/gal. = 26,667 ft² (2,480 m²) treatment per water truck

**Drying**: Each successive coat of Soiltac<sup>®</sup> dilution should be applied in a timely manner to ensure that the surface always stays wet with the Soiltac<sup>®</sup> dilution. DO NOT allow the Soiltac<sup>®</sup> dilution to dry 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 hot pressure washer or steam cleaner and brush to remove residue.

**Traffic**: Prevent any human activity over the treated area.









# Topical Golf Course Bunker Stabilization Application Overview

## 1.) Prepare the Site:

**Dry Soil**: The site should 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).

Compaction: Compact the site to a minimum of 95%.

(per ASTM D 698 D 1557 modified Proctor Density).

**Drainage**: Contour the site and drainage channels to provide for proper drainage. For optimal results, steep slopes must be aerated (with a pitchfork or similar) to maximize penetration depth and serve as stabilization anchor points.

Loose Aggregate: Remove any loose aggregate, soil or debris 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.

**Pre-Wetting (Optional)**: Optimally, pre-wet the treatment area with water (only) to break the surface tension and increase penetration depth. Pre-wet at a rate of 100 SF/gallon (2.5m²/liter) of water.

Release Agent (Optional): Optionally, a form release agent (like Durasoil®) can be sprayed onto the equipment to prevent Soiltac® overspray from adhering onto the outside of the equipment

## 3.) Prepare the Soiltac® Dilution:

Water: Fill the application equipment with the recommended volume of water.

Reference the "application coverage rates" chart.

**Example**: Golf Course Bunker Liner = 50 ft²/gallons (1.2m²/liter) +5 parts water.

Equipment: 4,000 gallon (15,142 liters) water truck

Calculation: 5+1 = 6 parts dilution total.

4,000 gallons / 6 parts = 667 gallons (2,520 liters) per part

Volume of Water: 667 gallons X 5 parts = 3,333 gallons (12,620 liters) of water

Volume of Soiltac<sup>®</sup>: 667 gallons X 1 part = 667 gallons (2,520 liters) of Soiltac<sup>®</sup> concentrate Volume of Dilution: 667 gallons X 6 parts = 4,000 gallons (15,142 liters) of Soiltac<sup>®</sup> 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.

# 4.) Apply the Soiltac® Dilution

Multiple Coats: Apply the Soiltac® dilution in coats over the treatment area.

**Example**: (See Above) Golf Corse Bunker typically require a minimum of 3 even coats.

667 gallons / 3 coats = 222 gallons (840 liters) (Soiltac® concentrate) per coat. 4,000 gallons / 4 coats = 1,000 gallons (3,785 liters) (Soiltac® dilution) per coat.

667 gallons (Soiltac® concentrate) X 50 ft²/gal. = 33,333 ft² (3,100 m²) treatment per water truck

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

**Drainage Systems**: For optimal results, Soiltac<sup>®</sup> must be applied prior to installing a drainage system to completely seal the bunker (and seal the drainage channels). If the bunker has an existing drainage system, DO NOT apply Soiltac<sup>®</sup> over the existing drainage areas or allow any Soiltac<sup>®</sup> to run-off into the drainage areas.

## 5.) Clean the Application Equipment

**Rinse**: Rinse off all application equipment thoroughly with water until clean. If Soiltac<sup>®</sup> is allowed to dry and cure use a hot pressure washer or steam cleaner and brush to remove residue.

**Traffic**: Prevent any human activity over the treated area until backfilled and covered with sand.







# MATERIAL SAFETY DATA SHEET

**SECTION 1 - MATERIAL IDENTIFICATION** 

PRODUCT NAME SOILTAC<sup>1</sup>

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

**MANUFACTURER** Soilworks, LLC.

2450 South Gilbert Road, Suite 210 Chandler, Arizona 85286-1595 USA

www.soilworks.com

TELEPHONE NUMBER 800-545-5420 ONLINE INFORMATION www.Soiltac.com

**EMERGENCY TELEPHONE NUMBERS** 800-545-5420 (National & International) **REVISION DATE** November 2006 (supersedes March 2006)

PHYSICAL FORM Mobile liquid

COLOR Milky White (transparent once cured) **ODOR** Mild / Slight (no odor once cured)

C.A.S. CHEMICAL NAME Mixture

**SYNONYMS** Soil stabilizer, soil stabilization agent, soil solidifier, soil amendment, soil additive, soil crusting agent, dust

control agent, dust inhibitor, dust palliative, dust suppressant, dust retardant

**CHEMICAL FAMILY** Vinyl Copolymer Emulsion

**EMPIRICAL FORMULA** Mixture

INTENDED USE Soil stabilization, soil solidification, fugitive dust control, dust suppression, dust abatement, tackifier, dust

abatement, PM<sub>10</sub> and PM<sub>2.5</sub> air quality control and erosion control

SECTION 2 - INGREDIENTS						
	%	CAS Number	Chemical Name			
1.	50-60	Proprietary	Vinyl Copolymer			
2.	40-60	7732-18-5	Water			
	SECTION 3 - HEALTH HAZARDS					

#### **ROUTES OF ENTRY**

Eye Contact, Skin Contact, Ingestion and Inhalation

#### SIGNS AND SYMPTOMS OF ACUTE EXPOSURE

Eyes: Direct contact with this material may cause eye irritation including lachrymation (tearing).

Inhalation: Inhalation of vapor or aerosol may cause irritation to the respiratory tract (nose, throat, and lungs).

Skin: Contact may cause skin irritation.

Ingestion: No hazard in normal industrial use

## SIGNS AND SYMPTOMS OF CHRONIC EXPOSURE

Prolonged or repeated contact with skin may cause irritation and dermatitis (inflammation).

### **CARCINOGENICITY**

This material does not contain 0.1% or more of any chemical listed by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or regulated by the Occupational Safety and Health Administration (OSHA) as a carcinogen.

#### **SECTION 4 - FIRST AID**

#### **EYE CONTACT**

Flush eyes with clean water for at least 15 minutes. Get immediate medical attention.

#### SKIN CONTACT

Remove contaminated clothing and shoes. Wash affected area with soap and water. Get medical attention if irritation develops or persists.

#### **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.

#### **INGESTION**

Give the victim one or two glasses of water or milk to drink. Get immediate medical attention. Never give anything by mouth to an unconscious person.







## **SECTION 5 - FIRE AND EXPLOSION DATA**

FLASH POINT (closed cup)
UPPER EXPLOSION LIMIT (UEL)
Not applicable
LOWER EXPLOSION LIMIT (LEL)
AUTOIGNITION TEMPERATURE
FIRE HAZARD CLASSIFICATION (OSHA/NFPA)
EXTINGUISHING MEDIA

Not applicable
Not applicable
Non-Combustible

Product does not burn. The product will only burn after the water it contains is driven off. For dry polymer use carbon dioxide, foam, dry chemical or water fog to extinguish fire. Aqueous solution is not flammable.

#### FIRE FIGHTING EQUIPMENT

Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use

#### FIRE FIGHTING INSTRUCTIONS

Containers of this material may build up pressure if exposed to heat (fire). Use water spray to cool fire-exposed containers.

#### FIRE AND EXPLOSION HAZARDS

This material will not burn unless it is evaporated to dryness. Closed containers may rupture when exposed to extreme heat.

## **HAZARDOUS COMBUSTION PRODUCTS**

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**

Wear suitable protective equipment. If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an appropriate chemical waste container. Prevent spilled material from entering sanitary sewers, storm sewers, drainage systems and from entering bodies of water or ditches that lead to waterways. 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 from freezing. Store in a dry area. Keep containers closed when not in use to minimize contact with atmospheric air and prevent inoculation with microorganisms.

## **HANDLING**

Use only in well-ventilated areas. Avoid contact with eyes. Avoid breathing vapors. Avoid prolonged or repeated contact with skin. Wash hands thoroughly after handling and before eating or drinking.

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

#### **EXPOSURE GUIDELINES**

There are no Occupational Safety and Health (OSHA) Permissible Exposure Limits (PEL) or American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV) or Short Term Exposure Limits (STEL) established for the component(s) of this product.

#### **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 use.

## PROTECTIVE CLOTHING

No specific recommendation.

#### **ENGINEERING CONTROLS**

Good general ventilation should be sufficient to control airborne levels of irritating vapors.







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

PHYSICAL FORM liquid

COLOR
ODOR
Milky White (transparent once cured)
Mild / Slight (no odor once cured)

**pH** 4.5-6.0 **EVAPORATION RATE** < 1 (BuAc=1) **VAPOR DENSITY** > 1 (Air = 1)

**BOILING POINT** >100.00°C (>212.00°F)

FREEZING POINT <0°C (<32°F)

**SOLUBILITY IN WATER**Completely (100%) (until cured)

SPECIFIC GRAVITY (Water = 1) 1.05-1.10

#### **SECTION 10 - STABILITY AND REACTIVITY**

#### STABILITY

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

#### **INCOMPATIBILITY (Materials to Avoid)**

No incompatibilities have been identified.

#### HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition may form: Acetic acid and Acrolein. Thermal decomposition may produce various hydrocarbons and irritating, acrid vapors.

#### HAZARDOUS POLYMERIZATION

Will not occur

#### **CONDITIONS TO AVOID**

Freezing temperatures (until cured).

## **SECTION 11 - TOXICOLOGICAL PROPERTIES**

#### **ACUTE EYE TOXICITY**

No Information is available.

#### **ACUTE ORAL TOXICITY**

No Information is available.

#### **ACUTE SKIN TOXICITY**

No Information is available.

#### **ACUTE INHALATION TOXICITY**

No Information is available.

#### CHRONIC/CARCINOGENICY

This material <u>does not</u> contain 0.1% or more of any chemical listed by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or regulated by the Occupational Safety and Health Administration (OSHA) as a carcinogen.

#### **SECTION 12 - ECOLOGICAL INFORMATION**

ECOTOXICITY									
Common Name	Species	Test	Result	Concentration					
Green Algae	Raphidocelus Subcapitata	96-hr chronic LC50	>1,000	Undiluted					
Fathead Minnow	Pimephales Promelas	96-hr acute LC50	>1,208	Undiluted					
Rainbow Trout	Oncorhynchus Mykiss	96-hr acute LC50	>1,000	Undiluted					

# **ENVIRONMENTAL FATE**

No data is available.

#### **SECTION 13 - DISPOSAL CONSIDERATIONS**

#### WASTE DISPOSAL METHOD

This material is not a RCRA hazardous waste. Disposal of this material is not regulated under RCRA. Consult federal, state and local regulations to ensure that this material and its containers, if discarded, is disposed of in compliance with all regulatory requirements. 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.

#### RCRA HAZARD CLASS

This material is not a RCRA hazardous waste. When discarded in its purchased form, this material would not be regulated as a RCRA Hazardous waste under 40 CFR 261.







## **SECTION 14 - TRANSPORT INFORMATION**

DOT NON-BULK SHIPPING NAME Refer to Bill of Lading - Not DOT Regulated // Keep From Freezing // Not dangerous goods

DOT BULK SHIPPING NAME
IMO SHIPPING DATA
ICAO/IATA SHIPPING DATA
Refer to Bill of Lading.
Refer to Bill of Lading.
Refer to Bill of Lading.
Refer to Bill of Lading - Not IATA Regulated // Keep From Freezing // Not dangerous goods

CFR

Not Regulated // Keep From Freezing // Not dangerous goods

IMDG

Not Regulated // Keep From Freezing // Not dangerous goods

CTC

Not Regulated // Keep From Freezing // Not dangerous goods

### **SECTION 15 - REGULATORY INFORMATION**

## TSCA SECTION 8(b) INVENTORY STATUS

All components are included in the EPA Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

#### **TSCA SECTION 12(b) EXPORT NOTIFICATION**

This material **does not** contain any components that are subject to the U.S. Toxic Substances Control Act (TSCA) Section 12 (b) Export Notification requirements.

#### OSHA Hazard Communication Standard (29CFR1910.1200) hazard class(es)

This material **is not** classified as hazardous under the criteria of the U.S. Occupational Safety and Health Administration (OSHA) Hazard Communication Standard. 29 CFR 1910.1200

#### **EPA SARA Title III Section 304 CERCLA**

Reportable quantities have not been established for any of this material's components.

#### EPA SARA Title III Section 311/312 HAZARD COMMUNICATION STANDARD (HCS)

This material is not a hazardous chemical.

## **EPA SARA Title III Section 313 TOXIC CHEMICAL LIST (TCL)**

This product does not contain Section 313 Reportable Ingredients.

#### **CANADIAN INVENTORY STATUS**

All components of this material are listed on the Canadian Domestic Substances List (DSL)

#### CANADIAN WHMIS

This material is not classified as a controlled product under the Canadian Workplace Hazardous Material Information System.

## ADDITIONAL CANADIAN REGULATORY INFORMATION

This product **does not** contain a substance present on the WHMIS Ingredient Disclosure List (IDL) which is at or above the specified concentration limit.

## **EUROPEAN INVENTORY STATUS (EINECS)**

The polymer portion of this product is manufactured from reactants which are listed on EINECS and meets the EINECS definition of an exempt polymer.

#### AICS (Australia)

Included on inventory

#### **ENCS (Japan)**

Included on inventory

## ECL (South Korea)

Included on inventory

#### SEPA (China)

Included on inventory

## **SECTION 16 – OTHER INFORMATION**

## **HMIS and NFPA Classification**

Health : 1
Flammability : 0
Reactivity : 0
Special Hazard : 0





