

APPENDIX I
DUST CONTROL PLAN

for
Class 2 Landfill CAMU Final Operation and Closure Activities
at
Class 2 Landfill CAMU
Exide Technologies, Inc.
Frisco, Texas

Prepared by:
Remediation Services, Inc.
&
ENVIRON International Corp.

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Reviewed by:
Golder Associates Inc.

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1.0 INTRODUCTION

The purpose of this Dust Control Plan is to identify the measures that will be taken to minimize emissions associated with operation and closure activities at Exide Technologies' Class 2 Landfill (CL2LF) Corrective Action Management Unit (CL2LF CAMU). The CL2LF CAMU (also referred to as the Landfill) is located at the Former Frisco Recycling Center (FRC) near Frisco, Collin County, Texas (Site). Specifically, this Dust Control Plan specifies the requirements and methods for minimizing dust generation during Landfill operation and closure activities. This plan works in conjunction with the Air Monitoring Plan, which describes the air monitoring activities that will be performed during the work.

The purpose of this Dust Control Plan is to identify the steps that will be taken to reduce particulate emissions during Landfill operation and closure activities, and includes site specific dust suppression procedures. Best management practices (BMPs) will be implemented throughout the project. BMPs will include wetting active work areas, minimizing or ceasing activity during periods of high wind (greater than 20 miles per hour), sweeping or wetting paved areas, wetting unpaved areas, and application of dust suppressant materials. The *Dust Control Plan* provides specific information about the generation and control of dust emissions during Landfill operation and closure activities. This Dust Control Plan is to be used in conjunction with the *Air Monitoring Plan*. The following sections detail potential dust sources and dust control means and methods.

1.1 Project Overview

The overall project consists of the placement of Class 2 wastes in the Landfill and subsequent final Landfill closure activities. Waste placed in the Landfill will be waste generated during the ongoing demolition and remediation activities at the Site, including metals-impacted soils from the Undeveloped Buffer Property (J-Parcel) surrounding the Site (PBW, 2013). Dust control is a high priority during the project.

1.2 Wind Monitoring and Dust Prevention Team

These Contractor points of contact have the authority to implement additional dust control provisions and stop work provisions based on the Air Monitoring Plan. These team members are also responsible for maintenance and revisions of the Dust Control Plan.

Employee Name	Employee Title	Designated Dust Control Responsibility
TBD	Project Manager, RSI	On-site project manager responsible to insure Dust Control Plan is followed by all project team members.
John Gillman	Principal in Charge, RSI	Senior management authority; provide corporate support to ensure availability of necessary resources to maintain compliance with the Dust Control Plan.
Dan Roth	Director of Corporate Health and Safety, RSI	Qualified Individual; review and modify the Dust Control Plan to keep it current; ensure proper record keeping

2.0 DUST CONTROL

Dust control is a high priority during remediation activities. During all materials handling activities, one or more large area misters (e.g., Dust Boss DB 60 with oscillation or equivalent equipment) will be utilized as an airborne dust wet suppression system to ensure full, overlapping coverage of active work areas and mitigating fugitive emissions. The airborne dust wet suppression system resembles a snow making

machine and can cover a large area (approximately ½-acre per machine) with a fine mist of water, effectively controlling dust. Descriptive literature on the Dust Boss DB 60 is included in Attachment 1. In addition, water trucks with a spray bar and spray hose(s) will be used to wet work areas prior to beginning work and as a supplemental dust control mechanism during the activities. Only potable water will be used for dust control purposes.

Proactive controls will be instituted to reduce the amount of dust generation during site activities, including enforcement of low speed limits for vehicular traffic and the application of water to access/haul roads.

If enhanced dust suppression is required by ambient conditions, emulsifiers or surfactants may be added to improve the “wettability” of water sprays, and paper mulch mixed with a tackifier may be used if needed. Section 3.0 describes the additional dust control measures to be used. Information on the surfactants and paper mulch materials is provided in Attachment 2.

If the sustained wind speed (the wind speed obtained by averaging the measured values over a ten minute period) exceeds 20 miles per hour, it is a “high wind condition.” When there is a high wind condition, all Landfill operation and closure activities must cease until the sustained wind speed declines to 20 miles per hour or lower for at least 20 consecutive minutes. Non-dust producing activities (equipment maintenance, etc.) may still be conducted during these periods.

2.1 Training of Personnel

RSI will implement a dust control training program for all Site personnel. This training program will review the potential sources of dust, individual responsibilities, and actions for controlling dust as described in this Dust Control Plan. The training will emphasize the importance of dust control to the overall success of the remediation activities and familiarize Site personnel with the air monitoring requirements and appropriate dust control procedures that must be adhered to in accordance with this Dust Control Plan.

2.2 Inspection and Maintenance

Dust suppression equipment will be inspected at least once a week and properly maintained. RSI will maintain records of the weekly inspections.

3.0 POTENTIAL DUST GENERATION ACTIVITIES AND PROPOSED CONTROLS

Landfill operation and closure activities will have the potential to generate emissions in the form of fugitive dust. Dust control methods will vary based on the activities occurring at the site. Dust control methods are summarized by source below. Table 3-1 describes the activities to be conducted during Landfill operation and closure which have the potential to generate dust and the respective dust control measures.

Table 3-1 Potential Dust Generation Activities and Proposed Control	
Activity	Proposed Controls
General Dust Suppression – All Activities	Use of airborne dust wet suppression system during operating hours for all material handling activities and otherwise as needed. Water spray/mist to wet work areas prior to beginning work and as a supplemental system. Adjust the waste placement rate. Suspend work under high wind conditions until sustained wind speed is below 20 mph for at least 20 consecutive minutes.

Truck Traffic	Wetting unpaved and paved haul roads prior to the start of activities each morning and as needed during working hours.
Waste Hauling and Placement	Use of airborne dust wet suppression system. Water spray/mist the work area prior to placement and as a supplemental system.

3.1 Dust Suppression Measures

3.1.1 Particulate Take Action Levels

If the thirty-minute (30-minute) average PM₁₀ concentration from the downwind monitors exceeds the applicable Take Action Level set forth in Table 1 of the *Air Monitoring Plan*, RSI will immediately implement increased dust suppression activities. These increased dust suppression adjustment activities may include, but are not limited to the following:

- Increased wetting/misting of work area
- Adding surfactant to the water used for dust control
- Applying temporary cover (paper mulch with tackifier) to areas not being actively worked
- Adjusting the rate/speed and/or quantity of equipment in the work area
- Stopping specific dust-generating activities until wind directions and/or wind speeds are more conducive to reduced dust levels
- Mobilize additional dust suppression equipment and initiate its use

3.1.2 Particulate Stop Work Levels

If the one-hour (60-minute) average or thirty-minute (30-minute) average PM₁₀ concentration from the downwind monitors exceeds the applicable Stop Work Level set forth in Table 1 of the *Air Monitoring Plan*, RSI will immediately stop all Landfill operation and closure work. During the work stoppage period (minimum 15 minutes), RSI must make dust suppression adjustments to reduce airborne particulate matter concentrations below the Take Action Level concentration for particulate. The dust suppression adjustment activities may include, but are not limited to the following:

- Increased wetting/misting of work area
- Adding surfactant to the water used for dust control
- Applying temporary cover (paper mulch with tackifier) to areas not being actively worked
- Adjusting the rate/speed and/or quantity of equipment in the work area
- Stopping specific dust-generating activities until wind directions and/or wind speeds are more conducive to reduced dust levels
- Mobilize additional dust suppression equipment and initiate its use

3.1.3 Visible Dust

If visible dust is present in the active work zone, increased wetting of the area using water trucks or spray misters will be implemented. If visible dust is observed leaving the active work zone, work will stop until additional dust control measures are implemented. These additional dust control measures may include:

- Increased wetting/misting of work area
- Adding surfactant to the water used for dust control
- Adjusting the rate/speed and/or quantity of equipment in the work area.
- Applying temporary cover (paper mulch with tackifier) to areas not being actively worked
- Stopping specific dust-generating activities until wind directions and/or wind speeds are more conducive to reduced dust levels
- Mobilize additional dust suppression equipment and initiate its use

3.2 On-Site Transportation

All employee vehicles will enter the Landfill area from the east or northwest construction entrances and employees will park in the designated parking area on the east side of the facility. No private vehicles will be allowed into the site.

Vehicle travel on unpaved access roads will be limited to 10 miles per hour. Project personnel are required to obey posted speed limits to prevent wind turbulence and associated dust generated at higher vehicle and equipment velocities. Off road travel on unimproved roads will be limited to construction equipment, support vehicles and material delivery trucks.

Unpaved and paved roads will be wetted using a water truck prior to the start of activities each morning and during working hours, as appropriate to minimize dust formation without creating runoff or tracking issues.

3.3 Waste Hauling and Placement

Controls for dust mitigation during waste hauling and placement will include operation of the airborne dust wet suppression system. In addition, a water mist/spray hose from a water truck will be used to wet material that is not already moist prior to work beginning and as a supplemental system during loading, hauling and placement to control dust.

4.0 POINTS OF CONTACT

Concerns regarding activities conducted at the Exide Technologies Frisco Recycling Center should be addressed to the following points of contact:

Exide:
 Eduardo Salazar
 P.O. Box 250
 Frisco, Texas 75034
 Ph: [972-335-2121](tel:972-335-2121)
 Cell: 972-786-5404
 Fax: 972-377-2707
Eduardo.Salazar@exide.com

Texas Commission on Environmental Quality:

Margaret Ligarde

Office of Legal Services

MC-173

P.O. Box 13087

Austin, Texas 78711

Ph: 512-239-3426

Fax: 512-239-0330

Margaret.ligarde@tceq.texas.gov

City of Frisco:

Mack Borchardt

City of Frisco

6101 Frisco Square Blvd.

Frisco, Texas 75034

Ph: 972-292-5127

Fax: 972-292-6319

mborchardt@friscotexas.gov

ATTACHMENTS

ATTACHMENT 1

Descriptive Literature on Misting Equipment

Monsoon

DUST CONTROLLER- DIESEL COMPLETE



HIGH SPEED
OSCILLATION
UP TO **270°**



Made in America



BUFFALO TURBINE

180 Zoar Valley Road, Springville, NY 14141 | ph 716.592.2700 | www.buffaloturbine.com | Dealer Inquiries Welcome



QUESTIONS? SPEAK WITH AN EXPERT :: (716) 592-2700 :: M-F 8:00AM-4:30PM EST :: Jody Smith | Brian Singer

➤ MONSOON DUST CONTROLLER W/OSCILLATION - DIESEL

TOP BENEFITS

- > Extended engine life when compared to traditional gas models
- > Powerful and versatile
- > Easy to operate and maintain
- > Self contained

TOP FEATURES

- > High speed oscillation up to 270°
- > Dual 6 gallon fuel tanks for additional run time
- > Low oil shut-off feature
- > Low intake airflow shut-off
- > 3 wheel off-road trailer package for ease of transport

ENGINE SPECS

- > Kohler 3-cylinder diesel engine
- > Liquid cooled, tier-4 compliant
- > 3 year engine warranty
- > 12 gallon fuel capacity

PHYSICAL SPECS

- > Length w/wheels & handle removed: 88"
- > Overall length w/nozzle & tow handle: 136"
- > Width: 55"
- > Max height w/nozzle in upright position: 54"
- > Weight: 975 lbs.

GENERAL INFO

- > Hand held wireless transmitter (water resistant) with push button control (manual control option available)
- > Gyrotary atomizing nozzle system
- > Hose input: 3/4" utility / garden hose
- > Min/Max water pressure: 40psi - 120psi
- > Min/Max water volume: 1/3 gallon - 20 gallons per minute
- > Throw distance (neutral wind conditions): Vertical: up to 50 ft, Horizontal: up to 125 ft
- > Input RPM: Up to 3600 rpm
- > Outlet size: 12"
- > Droplet size: 50 - 200 microns

Applications

Demolition Sites | Landfills | Wood Recycling
Scrap Metal Recycling | Aggregate Processing
Waste Transfer



**Optional* Lifting Bracket



**Optional* Fork Lift Pockets





DB-60 SPECS >

GENERAL SPECIFICATIONS

- > 30,000 CFM (849.50 CMM) generated by 25 HP fan.
- > 21,000 square feet (1,950 square meters) coverage. Up to 84,000 square feet (7,804 square meters) coverage available with optional 180° oscillation.
- > Oscillator gives 0–40° of movement on standard unit. Unit can also be equipped with optional 180° oscillation.
- > Adjustable angle of throw 0–50° of height adjustment.

ELECTRICAL SPECIFICATIONS

- > U.S.: 3 Phase / 25 HP fan / 480 Volt / 60 Hertz.
Full load current is 46 amps. 60 Kw gen set is recommended.
Motor is designed with a 1.15 service factor capable of operating at +/- 10% of design voltage.
- > Other motor options available, including all international electrical motors:
 - 3 Phase / 25 HP fan / 380 Volt / 50 Hz (Europe, Middle East, N. Japan, Latin America)
 - 3 Phase / 25 HP fan / 400 Volt / 50 Hz (Europe, Japan, New Zealand, Australia)
 - 3 Phase / 25 HP fan / 415 Volt / 50 Hz (Europe, New Zealand, Australia)
 - 3 Phase / 25 HP fan / 575 Volt / 60 Hz (Canada)
 - 3 Phase / 25 HP fan / 380 Volt / 60 Hz Korea)
 - 3 Phase / 25 HP fan / 440 Volt / 60 Hz (Mexico)
- > 380, 400, 415 volt / 50 Hz motors are designed with a 1.00 service factor capable of operating at +/- 10% of design voltage.
- > 10 HP (7.5 Kw) high-pressure booster pump with no lift.
- > 1/8 HP (0.10 Kw) oscillator.
- > 150 foot (45.72 meters) 6/4 electrical cord. Other options available.
- > No male plug, "bare wired" is standard. Any plug is extra cost.
- > Cabinet with control panel.

WATER SPECIFICATIONS

- > 10PSI (0.69 BAR) constant pressure needs to be delivered to booster pump. Maximum inlet water pressure should not exceed 100 PSI (6.89 BAR) when operating the booster pump.
- > Maximum PSI delivered by booster pump is 200 PSI (13.79 BAR).
- > Filter is included and should be used at all times. Contact us for recommendations when using nonpotable water.
(Filter system in-line 30 mesh 595 micron).
- > 1-1/2" (38.10 mm) cam-and-groove quick disconnect female coupling for fire hose provided on machine.
- > 30 brass nozzles (also available in stainless and nylon).
- > Droplet size of 50–200 microns.
- > Throw 200 feet (60 meters).

ENGLISH UNITS	WITHOUT BOOSTER PUMP				WITH BOOSTER PUMP		
Water Pressure, psi	40	60	80	100	160	180	200
Water Flow, gpm	12	14.6	16.9	18.9	23.9	25.4	26.7
METRIC UNITS							
Water Pressure, bar	2.8	4.14	5.5	6.89	11	12.4	13.8
Water Flow, lpm	45.3	55.4	64.0	71.6	90.5	96.0	101.2

1-1/2" FIRE HOSE WATER SUPPLY



NOISE LEVELS

WITH BOOSTER PUMP	CONTROL PANEL SIDE	BACK SIDE OF FAN	OPPOSITE SIDE	DISCHARGE
0 feet	92	103	92	100
12 feet	86	89	84	88
WITHOUT BOOSTER PUMP	CONTROL PANEL SIDE	BACK SIDE OF FAN	OPPOSITE SIDE	DISCHARGE
0 feet	86	101	88	96
12 feet	80	87	80	84

DIMENSIONS

ON STANDARD WHEELED CARRIAGE

- > 6.75 feet (81 inches; or 2.06 meters) wide.
- > 9.75 feet (117 inches; or 2.97 meters) long.
- > 7.17 feet (86 inches; or 2.19 meters) tall.
- > 1800 lbs. (816.50 kilograms).

MAINTENANCE

- > If using potable water, nozzles need to be inspected once a year.
- > Fan motor and high pressure pump should be greased every 10,000 hours.
- > Oscillator bearing should be greased on a regular maintenance schedule, or as needed.

CHEMICAL ADDITIVES

- > Can be used with surfactant to improve binding of dust particles or with tackifying agents to seal the ground to prevent dust from becoming airborne.
- > Odor control chemicals can be used to help eliminate odor.

OPTIONS

- > Unit is available with optional 180° oscillation. Standard oscillation provides 0–40° of movement.
- > Available on frame with skid mount. Unit comes standard on wheeled carriage.
- > Dosing pump can be added to unit for chemical applications.

WARRANTY

- > Unit is covered by a 3-year/3,000-hour warranty.

> **CALL: 1 (800) 707-2204 (U.S.)**
+1 (309) 693-8600 (Int'l)

> **24 HR Technical Support: (309) 645-3691**
www.dustboss.com

ATTACHMENT 2

Additional Dust Suppression Materials

DESCRIPTION AND USE

XP 355 is a liquid dust suppressant that can be added to dry material at any point in the operation.

XP 355 is effective at low dosage levels providing superior performance and economical treatment.

TYPICAL PROPERTIES

These properties are typical. Refer to the MSDS for the most current data.

Appearance:	Red Liquid
pH:	NA
Solubility in water:	Low

FEED METHOD & DOSAGE

XP 355 dosage varies depending on plant conditions. Your Plymouth Technology representative will conduct a series of on site testing to determine optimal feed rates for your application.

Typical dosage rates are 20-40 ounces per ton.

The most effective method of application is to spray the liquid through multiple nozzles on the dry material as it is being conveyed.

MATERIALS OF COMPATIBILITY

Compatible: Tanks – HPDE, PP, XLPE
Fittings – PVC, CPVC, EDPM, Viton

Non-Compatible: Fittings –Copper, Aluminum

PACKAGING

Packaging is standard in bulk, one way intermediate bulk containers (totes) and 55-gallon drums.

STORAGE

Recommended storage periods:
Material as supplied: 12 months

Protect from freezing.

HANDLING

For complete safety information, please refer to the Material Safety Data Sheet.

CHEMICAL EMERGENCY NUMBER:

1-800-535-5050

Q U A L I T Y T H R O U G H S E R V I C E

MATERIAL SAFETY DATA SHEET



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MSDS No: XP 355
XP 355

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: XP 355

MANUFACTURER:
PLYMOUTH TECHNOLOGY, INC.
2925 Waterview Drive
Rochester Hills, MI 48309
Customer Service: 248-537-0081

**24 HR. EMERGENCY TELEPHONE
NUMBERS:**
Emergency Phone 800-535-5053

	Health	Flammability	Reactivity
HMIS	0	1	0
NFPA	0	1	0

2. COMPOSITION/INFORMATION ON INGREDIENTS

Trade Secret

wt. % CAS Registry
99% NA

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

EXPOSURE LIMITS
OSHA PEL ACGIH TLV Supplier

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Not expected to present a hazard under anticipated conditions of use. If ingestion occurs, do not induce vomiting since aspiration into the lungs may create a hazard.

POTENTIAL HEALTH EFFECTS

EYES:

No significant health hazards identified.

SKIN:

No significant health hazards identified.

INGESTION:

Negligible effect; may act as a laxative.

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INHALATION:
No significant health hazards identified.

4. FIRST AID MEASURES

Inhalation: Seek fresh air. If irritations persist, seek medical attention.

Ingestion: May act as a laxative seek medical attention. Do not induce vomiting.

Eye Contact: Flush eyes immediately and thoroughly with water. If irritation persists, seek medical attention.

Skin Contact: Wash exposed skin with water and mild soap. Seek medical attention in all cases of skin irritation and rash.

5. FIRE FIGHTING MEASURES

Flash Point: 280°F Minimum (138°C) Cleveland Open Cup Method

Flammable Limits: LEL (% vol. in air): 0.9%
UEL (% vol. in air): 7.0%

Flammability Classification: Slight hazard. Material must be preheated before ignition will occur (OSHA Class III B)

Extinguishing Media: Agents approved for Class B Hazards (e.g. dry chemical, carbon dioxide, foam, steam or water fog). Do not use streams of water as this will scatter the liquid and may spread the fire. A water spray may be used to keep fire-exposed containers and surroundings cool.

Unusual Fire And Explosives Hazards: May create dense smoke during combustion. Mild fire hazard when heated above its flash point.

Firefighting equipment: Firefighters should wear full bunker gear, including a positive pressure selfcontained breathing apparatus.

Hazardous Combustion Products: Incomplete burning can produce carbon monoxide and/or carbon dioxide and other toxic gases.

6. ACCIDENTAL RELEASE MEASURES

GENERAL PROCEDURES:

Accidental release: Remove all sources of ignition. Dike around spilled liquid to contain. Use absorbent material such as dry sand or earth.

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7. HANDLING AND STORAGE

Handling: No special requirements.

Storage: Store in a cool well-ventilated area in sealed containers. Do not store in open or unlabeled containers. Store away from strong oxidizing agents or combustible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: None required; however, use of safety glasses, goggles or face shield is just good industrial practice.

Skin Protection: None required; however, use of protective gloves/clothing is good industrial practice.

Respiratory Protection: Avoid breathing mist. If local ventilation is not adequate, use a NIOSH/MSHA approved respirator that will protect against dust/mist. A respiratory protection program in accordance with OSHA Standard 29 CFR 1910.134 must be implemented whenever workplace conditions warrant use of a respirator.

Exposure guidelines: OSHA PEL: 5 mg/m³ (oil mist)

ACGIH TLV: 5 mg/m³ (oil mist)

ACGIH TLV STEL: 5 mg/m³ (oil mist)

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Red, oily liquid. Slight odor.

PH: Not Determined

Vapor Density (Air = 1): >1

Boiling Point: Not Determined

Vapor Pressure: <1.0 mmHg @ 68°F (20°C)

Specific Gravity (Water = 1): About 0.875

Solubility in Water: Negligible in water (below 0.1%); soluble in hydrocarbons

Melting Point: Not Applicable

10. STABILITY AND REACTIVITY

Stability: Stable

Hazardous Decomposition: None identified

Hazardous Polymerization: Will not occur.

Conditions to avoid: Avoid excessive heat and open flames.

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Incompatibility: Avoid chlorine, fluorine, and other strong oxidizers.

11. TOXICOLOGICAL INFORMATION

Eye Irritation: Testing not conducted. See other toxicity Data.

Skin Irritation: Testing not conducted. See other toxicity Data.

Dermal LD50: Testing not conducted. See other toxicity Data.

Oral LD50: Testing not conducted. See other toxicity Data.

Inhalation LC50: Testing not conducted. See other toxicity Data.

Other Toxicity Data:

Specific toxicity tests have not been conducted on this product. The hazard evaluation is based on information from similar products, the ingredients, technical literature, and/or professional experience. A similar product produced a Primary Eye Irritation Score (PEIS) of less than 10/110.0 (rabbits), a Primary Skin Irritation Score (PDIS) of less than 4.0/8.0 (rabbits), a Dermal LD50 greater than 2000 mg/kg (rabbits) and an Oral LD50 score greater than 5000 mg/kg (rats). Also, a similar product was not a skin sensitizer when tested.

Oil Mist: Repeated exposure to levels of oil mists in excess of the exposure limits may result in accumulation of oil droplets in pulmonary tissue and may lead to irritation of the nose and throat. No adverse health effect is expected to occur at or below the exposure limits.

No component of this product present at levels greater than 0.1% is identified as a carcinogen by the U.S. National Toxicology Program, the U.S. Occupational Safety and Health Act, or the International Agency on Research on Cancer (IARC).

12. ECOLOGICAL INFORMATION

Ecological testing has not been conducted on this product.

13. DISPOSAL CONSIDERATIONS

Disposal of the Material should be in accordance with the applicable federal, state and local laws and regulations.

The above applies to materials as sold by Plymouth Technology. The material may be contaminated during use, and it is the responsibility of the user to assess the appropriate disposal of the used material.

14. TRANSPORT INFORMATION

General Transport Statement: This product does not require classification by DOT.

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15. REGULATORY INFORMATION

TSCA: (Toxic Substance Control Act): Listed on inventory. All components comply with TSCA.

CERCLA: Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.4 Not Reportable.

Emergency Planning and Community Right to Know Act (EPCRA:

Sara Title III Section 302. Not regulated as an extremely hazardous substance. (40 CFR Part 355).

Sara Title III Section 311/312 Hazardous Categorization. Not a toxic chemical. (40 CFR Part 370)

Sara Title III Section 313. Not regulated. (40 CFR Part 372)

OSHA Hazard Communication Standard: Listed by ACGIH. Listed by OSHA.

Food contact Status:

FDA: This product is approved for use by the FDA under the following sections of 21 CFR. Part 178.3620 as a component of nonfood articles in contact with food when used in accordance with the specifications of this subpart.

Part 573.680 in animal feed, subject to the provisions of this subpart.

USDA: H1 Status: This product is acceptable to the SDA as a lubricant with incidental food contact in official meat and poultry establishments.

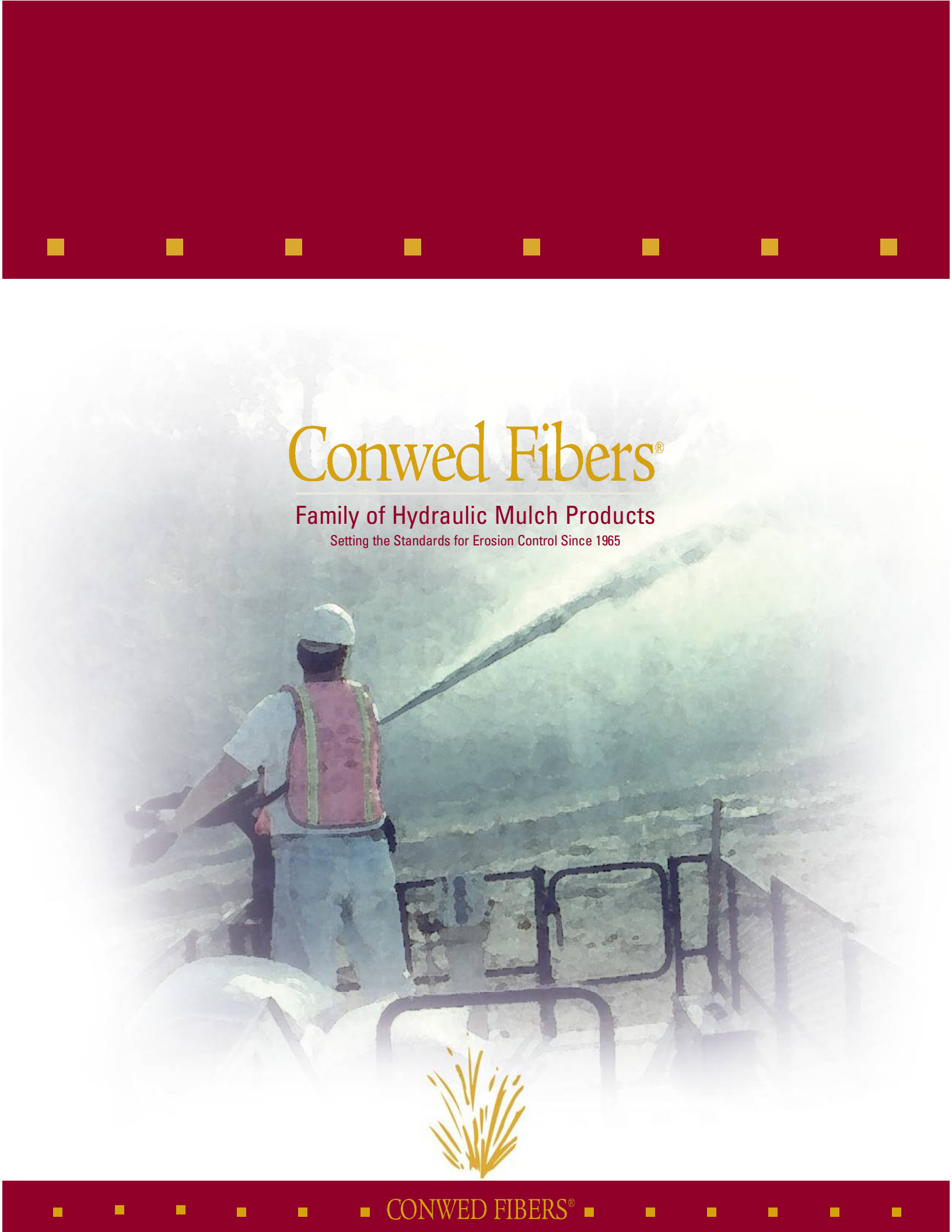
16. OTHER INFORMATION

Approval date: 03/31/11

MANUFACTURER DISCLAIMER:

This information is furnished without warranty, expressed or implied, except that it is accurate

to the best knowledge of manufacturer. The data on this sheet relates only to the specific material designated herein. Manufacturer assumes no legal responsibility for use or reliance upon this data.



Conwed Fibers®

Family of Hydraulic Mulch Products

Setting the Standards for Erosion Control Since 1965



CONWED FIBERS®

■ Conwed Fibers® Is Your Insurance Policy Against the Storm of Phase II



Nothing is changing the face of erosion control more dramatically than the Clean Water Act. Noncompliance with the National Pollution Discharge Elimination System (NPDES) Phase II storm water regulations is subject to administrative orders, civil actions and/or criminal prosecutions on federal, state, county and/or local level. Conwed Fibers® can help ensure you'll be in compliance by helping you calculate the Revised Universal Soil Loss Equation (RUSLE) and select the most effective mulches for your site. Don't leave anything to chance. Ask the Conwed Fibers experts.

■ Select the Right Mulch for Your Specific Job

A broad range of Conwed Fibers hydraulic mulches is available for today's hydro-seeder. Each has properties and performance characteristics that make them best suited to different types of sites. You can customize each to meet your specific site requirements.

PRODUCT	APPLICATION	SLOPE	CONTINUOUS MAX. SLOPE LENGTH* (without slope interruption devices)	CONDITIONS	RATE/LBS PER ACRE
Hydro-Blanket® BFM	Erosion Control	≤ 1:1 ≤ 2:1 ≤ 3:1	75 ft	Critical Sites	4,000 3,500 3,000
Conwed Fibers® 2000	Erosion Control	≤ 2:1 ≤ 3:1 ≤ 4:1	30 ft	Moderate	3,000 2,500 1,500-2,000
Conwed Fibers® 1000	General Seeding	≤ 2:1 ≤ 3:1 ≤ 4:1	28 ft	Moderate	3,000 2,500 1,500-2,000
EnviroBlend® with Tack	General Seeding	≤ 3:1 ≤ 4:1	25 ft	Mild	2,500 1,500-2,000
EnviroBlend®	General Seeding	≤ 3:1 ≤ 4:1	23 ft	Mild	2,500 1,500-2,000
Cellulose with Tack	General Seeding	≤ 4:1	20 ft	Mild	1,500-2,000
Cellulose	General Seeding/ Reclamation/ Straw Tacking	≤ 4:1	18 ft	Mild	1,500-2,000

*Maximum slope length is based on a 4H:1V slope (BFM is 3H:1V). For applications on steeper slopes, the maximum slope length may need to be reduced based on actual site conditions.

■ The #1 Choice of Hydro-Seeders

More hydro-seeders choose Conwed Fibers® wood and wood/cellulose hydraulic mulches than any other brands.

Conwed Fibers set the standard for erosion control excellence when it began operations in 1965. Our wood-fiber hydraulic mulch stood head and shoulders above all other mulches at that time, and it still does. Continual research, thorough testing at leading universities, and the commitment to remain the premium mulch producer has kept Conwed Fibers on top of the competition for all of these years. And now we've introduced the first wood and blended products with a new flocculating agent that takes hydraulic mulch performance to an even higher level.



Manufacturing advancements have gone hand-in-hand with advancements in Conwed Fibers' ingredients and mulch performance.

■ New **SLIKSHOT™** Makes Mulch Shoot Better, Work Better

Conwed Fibers offers the only wood and blend products in the industry with the added value of ProPlus® SlikShot®. It's a proven flocculant that acts as a lubricant to slicken the hose and prevent hose clogs common with competitors' mulches. This innovative, proprietary formulation helps mulch:

- Shoot easier and farther for improved productivity
- Adhere on impact to provide more uniform ground coverage
- Increase water holding capacity to maximize germination and revegetation
- Increase yield to provide an outstanding value

The addition of SlikShot to our mix is just the latest in a long line of new ingredients designed to deliver optimum performance. No matter what type of mulch — wood, blend or cellulose, our unsurpassed expertise in the industry and commitment to total quality continue to make Conwed Fibers hydraulic mulch second to none.



■ Superior Fibers Deliver Superior Results for Fewer Callbacks

Nothing illustrates Conwed Fibers superior quality than a comparison of our wood fibers to those of our competitors.

Fibers magnified 45 times by independent lab specializing in fiber analysis.

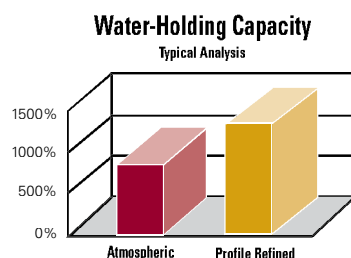


Conwed Fibers' Thermally Refined wood fiber holds 13.5 times its weight in water to promote faster, more complete germination. Say goodbye to callbacks due to washouts or poor turf establishment.



Competitors use atmospherically refined wood fiber which results in up to 50% less water holding capacity and less yield. It's one reason you need extra bales of competitive mulch to equal the performance of Conwed Fibers.

■ Thermally Refined® wood fiber holds up to 50% more water than atmospherically refined wood fiber – a critical factor in seed germination.



Thermally Refined wood utilizes heat and pressure that breaks wood down into more fibrous material with greater surface area that results in mulch with:

- Greater yield – reduces the number of bales you buy and load
- Greater coverage – reduces callbacks due to washouts
- Greater water retention – reduces callbacks due to poor turf establishment
- Greater productivity – eliminates clogs from the coarse fiber found in competitive mulches
- Lower total project cost

Ask your Conwed Fibers representative to conduct a side-by-side demonstration that leaves no doubt: Thermally Refined fiber performs better!



■ The Best Mulch for Any Job

Conwed Fibers® mulch products are ideal for a wide range of applications including turf establishment, golf courses, landfills, highway work, reclamation projects, airports and recreational areas.

■ Convenient 50-lb Bales

BFM



Hydro-Blanket® BFM

- The industry's leading Bonded Fiber Matrix (BFM) from Profile Products delivers a much higher level of performance than any standard hydraulic mulch or competitive BFM on the market today.
- Independent testing and years in the field prove Hydro-Blanket is effective on the steepest, roughest sites — a critical consideration for Phase II compliance.
- Hydro-Blanket is ideal for projects where blankets are impractical and/or too expensive, and conventional hydraulic mulches are ineffective.
- Produced from Thermally Refined® wood fiber and combined with 10% cross-linked hydro-colloid tackifier, Hydro-Blanket applies more easily, promotes faster germination and minimizes sediment and water runoff. Its performance is comparable to blankets, yet its cost is significantly less.

WOOD



Conwed Fibers wood and wood with tack products are ideal choices for critical sites with up to 2:1 slopes. Contractors report that our Thermally Refined fiber delivers up to 30% more yield than competitive products, which means money in their pockets.

Conwed Fibers® 1000 with SlikShot™

- Contains 100% of the highest quality wood fiber.
- Now with SlikShot for better yield, better shooting and better ground coverage.
- Thermally Refined wood fiber delivers up to 50% more water holding capacity than atmospherically refined wood mulches.

Conwed Fibers® 2000

- 100% wood fiber just like Conwed 1000 but with a premium tackifier included.
- Tackifier is a pre-blended high-viscosity, organic guar-gum tackifier.
- Eliminates the extra step and mess of field mixing.

BLEND



Conwed Fibers' EnviroBlend® and EnviroBlend® with Tack combine 100% Thermally Refined wood fiber with the highest quality cellulose mulch in the industry.

- Delivers up to 15% greater yield to contractors versus competitive blend products.
- Covers up to 20% more ground than cellulose and provides superior erosion control and more complete germination without a big jump in price.

EnviroBlend with SlikShot

- The #1 selling blend in the industry.
- Now with SlikShot for better yield, less hose clogging and better ground coverage.

EnviroBlend with Tack

- Same quality wood and cellulose blend as EnviroBlend but with a pre-blended 3% polymer tackifier for a stronger bond and added holding power.
- Eliminates the extra step and mess of field-mixing tackifier.

CELLULOSE

Conwed Fibers® Cellulose Conwed Fibers® Cellulose with Tack

- Exclusive defibration process and new manufacturing process improves water holding capacity by 22%.
- Less percentage of fines greatly reduces maché effect.
- High-quality, clean 100% cellulose fiber mixes in water at an accelerated rate and stays in suspension for more uniform consistency.
- Provides erosion control that is superior to straw for nearly the same cost □ making them ideal for general seeding.
- Darker, richer green color than competing brands gives your work a more professional look from the very beginning.
- Shoots great, allowing hydraulic machinery to run efficiently while providing excellent ground coverage.

Conwed Fibers Cellulose with Tack

- Comes pre-blended with 3% polymer tackifier to increase protection from seed washout and erosion.
- Eliminates the extra step and mess of field-mixing tackifier.

■ We've Got You Covered

No matter what the site or what the type of hydro-mulch equipment you use, wherever bare soil needs to be covered, Conwed Fibers® has the material best suited to the job. Our complete line provides you with every option you need.



■ Jet Spray® with FiberMax™ – Pourable Mulch Flakes Save You Time and Money

- Holds more water for enhanced seed germination and more effective erosion control for more water holding capacity and a stronger bond
- Delivers 50% of FiberMax™ for greater yield and better coverage, which means you buy and load less material
- Flocculating tackifier helps increase yield and gives the mulch matrix greater loft
- Designed specifically for the smaller tank openings of jet-agitated hydraulic machines, loads up to 90% faster than traditional hydraulic mulch
- Increases productivity while delivering professional results



■ Seed Aide® – Perfect for Small Jobs

- Expanding cellulose/wood fiber mulch granules are ideal for small areas
- Can be applied with a high volume drop spreader, large-opening broadcast spreader or by hand
- Great leave behind for touch ups after hydro-seeding to help eliminate callbacks
- Tests prove that granular properties and texture result in greater water absorption and soil coverage than competing brands for superior seed protection
- Organic tackifier reduces soil erosion, water runoff and seed washout



■ Futerra® Revegetative Blankets

- Futerra® F4 Netless® and EnviroNet® blankets are proven to keep soil in place with 99.9% effectiveness, providing better slope protection with faster, thicker vegetative establishment than traditional blankets and nets
- Designed to minimize danger to wildlife or maintenance equipment
- Costs less than half the price of installed sod, including seed and fertilizer
- Takes just one man-hour to lay 3,000 square feet of Futerra versus one man-hour to lay 500 square feet of sod
- Improves site logistics—one truckload of Futerra EnviroNet covers eight acres, compared to a truckload of sod that only covers one-quarter of an acre

So Effective, It's Almost Perfect

	C-Factor ¹	Effectiveness Rating	Soil Loss/Plot ²
Futerra® F4 Netless®	0.001	99.9%	0.4 lb
Futerra® EnviroNet®	0.003	99.7%	1.4 lb
Single-Net Straw Blanket	0.073	92.7%	28.9 lb
Single-Net Excelsior Blanket	0.075	92.5%	29.8 lb
Bare Soil Control	1.000	0.0%	397.0 lb

¹ Test Conditions — UWRL Rainfall Simulator, Slope Gradient — 2.5H:1V
Soil Type — sandy loam, Rainfall Event — 5"/hr, Test Duration — 1 hr

² Plot size 4' by 19.5'

Superior Germination

Futerra® Revegetative Blankets are ideally suited for areas where conventional practices are inadequate for establishing rapid and uniform vegetation. Through its patented design, Futerra is capable of absorbing and holding more water, thereby creating a moisture reservoir that ensures improved germination—nearly double that of straw!

Get all the Facts

Log on to www.profileproducts.com.

■ Put Added Value in Every Tank with ProPlus® Hydro Mulch® Solutions



Conwed Fibers® offers you the industry's most comprehensive line of hydraulic mulch additives to achieve maximum performance under virtually every condition. These accessory products are specifically designed to solve real-world seeding challenges that contractors face every day. Your Conwed Fibers distributor can help you analyze site conditions and recommend the best mix for the job. ProPlus® hydraulic mulch additives include:

Soil Amendments

- NEW Aqua-pHix™ Hydro** – Proprietary liquid formula of non-hazardous and non-corrosive, self buffering, chelated organic and inorganic acids that immediately lower pH of alkaline soils. Dramatically enhances seed germination.

Packaging: 2-2.5 gal jugs per case

- NEW JumpStart™** – Proprietary liquid reformulation with long-term penetrating agent added to humic acid and beneficial bacteria solution. Proven to promote faster germination and vegetation establishment.

Packaging: 2-2.5 gal jugs per case

- NEW BioPrime™** – Granular formulation containing biostimulant, 18-0-0 slow release nitrogen, humic acid and Endo Mycorrhizae. Designed to sustain long-term plant vitality.

Packaging: 40-lb bag

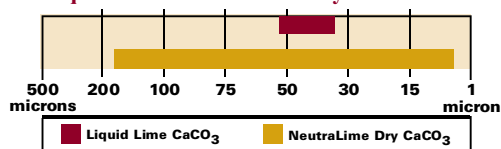
- Neutralime™ Dry** – Nothing balances soil pH faster – within 6-10 days of application – with the added plus of longer control – up to 18 weeks. Contains 50% more active ingredients than liquid lime.

Packaging: 4-10 lb bags per case, 40-lb bag

- Neutralime™ Liquid** – Balances soil pH and is effective in 7-10 days.

Packaging: 2-2.5 gal jugs per case

Liquid Lime vs Neutralime Dry Effectiveness



Graduated particle sizing extends minimum effectiveness from 12 to 18 weeks.



Conwed Fibers® • www.conwedfibers.com • 800-508-8681 • Fax 847-215-0577

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- JumpStart™ 5** – Jump start turf establishment with the industry's most complete package of growth stimulants and added polymers.

Packaging: 4-10 lb bags per case, 40-lb bag

- AquaGel™ A, B, C, D** – Four ways to hold 400 times the water in a variety of applications, making it an excellent water management tool.

Packaging: 6-5 lb pails per case (A and C only), 2-16 lb jugs per case, 25-lb bag and 50-lb drum

Fiber Mulch Amendments

- FiberBond Ultra™** – Enhances the performance of hydraulically applied fiber mulch materials.

Packaging: 4-7.5 lb bags per case

- FiberMax™** – Maximize yield and mulch performance with a stronger bond and the added plus of better shooting.

Packaging: 6-5 lb bags per case

- FiberLock™** – Patented, crimped fibers are your key to increased yield and sure success on the really long slopes.

Packaging: 10-lb case

- SlikColor™** – The only dye marker with the added plus of a slickifier to improve shooting – now in water soluble bags.

Packaging: 2-11 lb jugs per case, 11-1 lb bags per case (water soluble bags)

Soil Stabilization & Dust Control

- TackDown™** – The binder you need to make sure you've got the job nailed.

Packaging: 2-2.5 gal jugs per case, 250 gal tote

- FlocLoc™ (PAM) Dry** – A flocculating soil stabilizer that coagulates suspended soil particles, dropping them from runoff. It reduces soil erosion and improves water infiltration into the seedbed.

Packaging: 6-3 lb jugs per case, 40-lb pail

Tackifiers

- ConTack®** – 100% guar-based organic tackifier reduces the need for reseeded and minimizes soil erosion by stabilizing mulch and straw. It also helps increase the flow and pumping properties of mulch.

Packaging: 8-5 lb bags per case, 50-lb bag

- ConTack® AT** – A starch-based agricultural tackifier, ConTack AT is an economical choice for tacking straw or hay mulch to enhance germination by holding seed in place and preventing washouts.

Packaging: 50-lb bag

- Tacking Agent 3®** – Requires no cure time to be effective! University tests and field use prove it effectively reduces soil erosion and water runoff immediately after hydro-seeding. Also increases the water holding capacity of all types of hydraulic mulches.

Packaging: 4-8 lb bags per case, 25- and 50-lb bag, 7-3 lb bags per case (water soluble bags)

- MPT™ Tack** – A combination of poly-acrylamide and hydro-colloid polymers, MPT is highly viscous and dries to form a strong chemical bond. Ideal for fiber mulch binding, straw and hay mulch tacking.

Packaging: 4-12 lb bags per case, 50-lb bag

Please refer to the ProPlus brochure for specific application rates and conditions.