

MINING RECLAMATION AND CLOSURE

VEGETATIVE AND SOIL
STABILIZATION SOLUTIONS



Solutions for your Environment®



TRANSFORMING THE WORLD'S MOST CHALLENGING MINE SITES

Mining environments present some of the world's toughest reclamation and closure challenges. Steep slopes, depleted soils, harsh conditions and remote locations make successful restoration difficult. Even when topsoil is salvaged and stockpiled, it can lose much of its biological and microbial activity over time, limiting the foundation needed for sustainable vegetation.

Profile® combines advanced erosion control technologies, soil science and global expertise to help reclaim mine sites and establish sustainable vegetation — wherever the challenge exists. The result is faster vegetation establishment that can accelerate bond release for closure and support future mine expansion.

A Complete Approach to Mine Reclamation

Every mine site is different. Profile takes a consultative, soil-first approach to develop solutions based on site conditions, regulatory requirements and long-term reclamation goals.

WHY PROFILE?

- World's largest manufacturer of vegetative erosion control solutions
- Proven on nearly 200 mine sites worldwide
- Agronomic expertise
- Complimentary soil testing
- Profile Soil Solutions Software (PS³) facilitates site-specific designs and offers prescriptive solutions for your unique challenges
- Spec Builder™: a fast, free and easy-to-use online specification drafting tool
- Global team support

Managing the Impacts of Acid Mine Drainage (AMD)

Acid mine drainage occurs when exposed sulfur-bearing minerals react with air and water, creating acidic runoff capable of impacting surrounding ecosystems.

IMPACTS

- Contaminated water sources – the acid leaches heavy metals such as arsenic, copper and lead, poisoning groundwater and surface water supplies
- Damaged aquatic ecosystems – acidic water is toxic to fish, insects and plants
- Altered soil chemistry that limits vegetation establishment

Engineered Soil Cover System

Traditional Mine Cover



Store and Release Cover Systems

While Profile® solutions are not designed to treat the source of acid mine drainage, engineered vegetated store-and-release cover systems can help support long-term reclamation strategies by reducing water infiltration, increasing evapotranspiration and promoting sustainable vegetation as demonstrated in testing at the University of Saskatchewan MOST testing facility.

THE PROGANICS® ADVANTAGE

- Thick, sustainable vegetative cover
- Reduced haul and placement costs
- Increased evapotranspiration
- Reduced emissions and carbon footprint
- Compatible with any cover system design

Profile's 5 Fundamentals

THE FOUNDATION TO SUSTAINABLE VEGETATION

Successful mine reclamation starts below the surface. Profile's 5 Fundamentals provide a proven framework for restoring disturbed soils, establishing sustainable vegetation and supporting long-term reclamation success. Combined with complementary soil testing, technical expertise and project support, they help build a customized solution for every site.



1. *Assess and Create Optimal Soil Conditions*



2. *Pick the Right Plant Species*



3. *Select the Correct Erosion Control Material*



4. *Ensure Proper Installation*



5. *Follow-up Inspections and Maintenance Practices*



Proven Technologies for Success

Flexterra® HP-FGM®

Maximum Growth and Erosion Control Performance

Ultimate erosion control, vegetation establishment and longevity for up to 18 months.

ProMatrix® EFM™

Vegetative Establishment and Erosion Control

Up to 12 months of erosion protection and revegetation on moderately challenging areas.

ProFlex™ System

Improve and Protect Soil

The combination of ProGanics BSM and Flexterra HP-FGM creates sustainable soil health and superior erosion control protection on the toughest sites.

ProGanics® BSM

Development of Depleted Soils/Substrates

Revolutionary growing media remedies soils with low organic matter, low nutrient levels and limited biological activity. It's an ideal alternative to hauling topsoil and compost or where site access is limited.

GreenArmor® System

Reinforce Vegetation in Areas of Concentrated Flow or Severe Slope Grade

The GreenArmor System replaces hard armor and provides a more cost-effective and environmentally superior solution in areas of concentrated flow. The GreenArmor System consists of Futerra® Turf Reinforcement Mat (TRM) infilled with Flexterra HP-FGM.



From complimentary soil testing and product recommendations to installation guidance, specifications and CAD details, Profile supports every step of the process.

Engineered for Every Phase of Your Mine Project

Whether supporting active operations or final reclamation, Profile® helps mining companies around the world overcome their most challenging site conditions.

DURING OPERATIONS

Waste Containment and Site Management

- Infrastructure development
- Overburden and stockpile management
- Tailings and waste containment areas
- Dust suppression
- Stormwater management

DURING CLOSURE AND RECLAMATION

Long-Term Ecosystem Restoration

- Soil rebuilding
- Revegetation
- Erosion control
- Sustainable cover systems

Your Site. Your Challenges. Your Complete Solution.

Profile's global team of engineers, agronomists and industry experts can help develop a customized reclamation strategy built around your site's unique conditions.

During



After



Speak with us today about your mining reclamation project.

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