



**EROSION CONTROL  
SOIL STABILIZATION**

# UNSTABLE ROADS?

## **EARTHZYME<sup>®</sup>** SUPERIOR ROAD STABILIZATION

**Significantly reduce operational costs through better haul road management.**

**EARTHZYME<sup>®</sup>** is a highly concentrated, environmentally friendly, liquid enzyme-based soil stabilizer specifically engineered for high clay content materials. The solution saves costs through the allowance for use of clay-based materials, which are typically marginal in terms of their engineering properties, and turns them into a high performance engineering input.

**EARTHZYME<sup>®</sup>** treated materials exhibit reduced long-term maintenance requirements and produce tangible reductions in rolling resistance, which reduces fuel consumption and improves productivity of your haul fleet. Once applied, **EARTHZYME<sup>®</sup>** will dramatically reduce operating expenses.



### **SIGNIFICANTLY REDUCES LONG-TERM MAINTENANCE COSTS**

- Reduces dust, saves water
- Required grading frequency reduces dramatically.

**ONE APPLICATION LASTS SEVERAL YEARS**



### **REDUCTION IN MATERIAL COSTS TO BUILD ROADS**

- Allows for the use of inexpensive in situ, high clay content materials
- Saves on use of expensive aggregates

**SUPER CONCENTRATED LIQUID-REDUCING SHIPPING COSTS**



### **INCREASES CBR (CALIFORNIA BEARING RATIO) VALUE RESULTING IN REDUCED ROLLING RESISTANCE**

- Better fuel economy
- Improved productivity

**APPLICABLE USING STANDARD ROAD BUILDING EQUIPMENT & TECHNIQUES**



**REDUCES SWELL ALLOWING FOR MORE DURABLE ROADS IN WET WEATHER**



**NON-CORROSIVE & ENVIRONMENTALLY FRIENDLY**



- HAUL ROADS
- ACCESS ROADS
- RUNWAYS & TARMACS
- BASE, SUB-BASE OR SUB-GRADE BELOW ANY PAVED SURFACES
- STABILIZATION OF ANY HIGH-CLAY CONTENT MATERIALS

## TESTIMONIALS

“HEAVY HAULER OPERATORS IN THE NORTH MINE SAY THAT IT (EARTHZYME) PERFORMS BETTER AND IS HARDER THAN CONVENTIONAL ROADS. IT’S A LOT SMOOTHER AND EASIER TO TRAVEL ON - SIMILAR TO DRIVING ON PAVEMENT.”

-ANGUS MUNRO, OPERATIONS MANAGER, SYNCRUDE, CANADA

“SHENGLI OPEN-PIT COAL MINE BUILT 19.8KM OF EARTHZYME HAUL ROAD IN 2014. SO FAR, THE ROAD HAS BEEN SUBJECTED TO HEAVY TRAFFIC INCLUDING KOMATSU 830E WHICH AVERAGE 320 T IN WEIGHT. IT HAS BEEN OBSERVED THAT THE ROAD PERFORMS WELL IN FLATNESS, STRENGTH AND OTHER PERFORMANCE INDEXES. IT HAS PROVIDED BENEFIT FOR THE RECOVERY OF PRODUCTION AFTER THE RAIN AND THE REDUCTION OF COST, IT HAS GREAT SIGNIFICANCE IN COST CONTROL, ENERGY CONSERVATION AND ENVIRONMENTAL PROTECTION.”

-HUANG YUJUN, ENGINEERING SUPERVISOR, SHENJIA BEIDAN SHENGLI ENERGY CO. LTD

**LONG TERM  
STRONGER  
SAFER  
LOWER COST**



**REDUCTION IN HAUL TRUCK FUEL BURN RESULTING IN MILLIONS OF \$ SAVED**  
AS REPORTED BY: SHENJIA BEIDAN SHENGLI ENERGY CO. LTD



**REDUCTION IN ROLLING RESISTANCE**  
AS REPORTED BY: SYNCRUDE CANADA



**CALIFORNIA BEARING RATIO (CBR) MEASURE OF ROAD MATERIAL STRENGTH**  
AS REPORTED BY: 3rd PARTY LAB REPORTS



**REDUCTION IN SWELL POTENTIAL**  
AS REPORTED BY: EPMMOP - Quito, Ecuador



**CO2 EMISSIONS REDUCED BY OVER**  
AS CALCULATED: Based on the Shenhua fuel savings case study.



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MANUFACTURED IN CANADA  
Cypher Environmental

