DUST SUPPRESSANT FOR INDIAN MINES

CLARIANT

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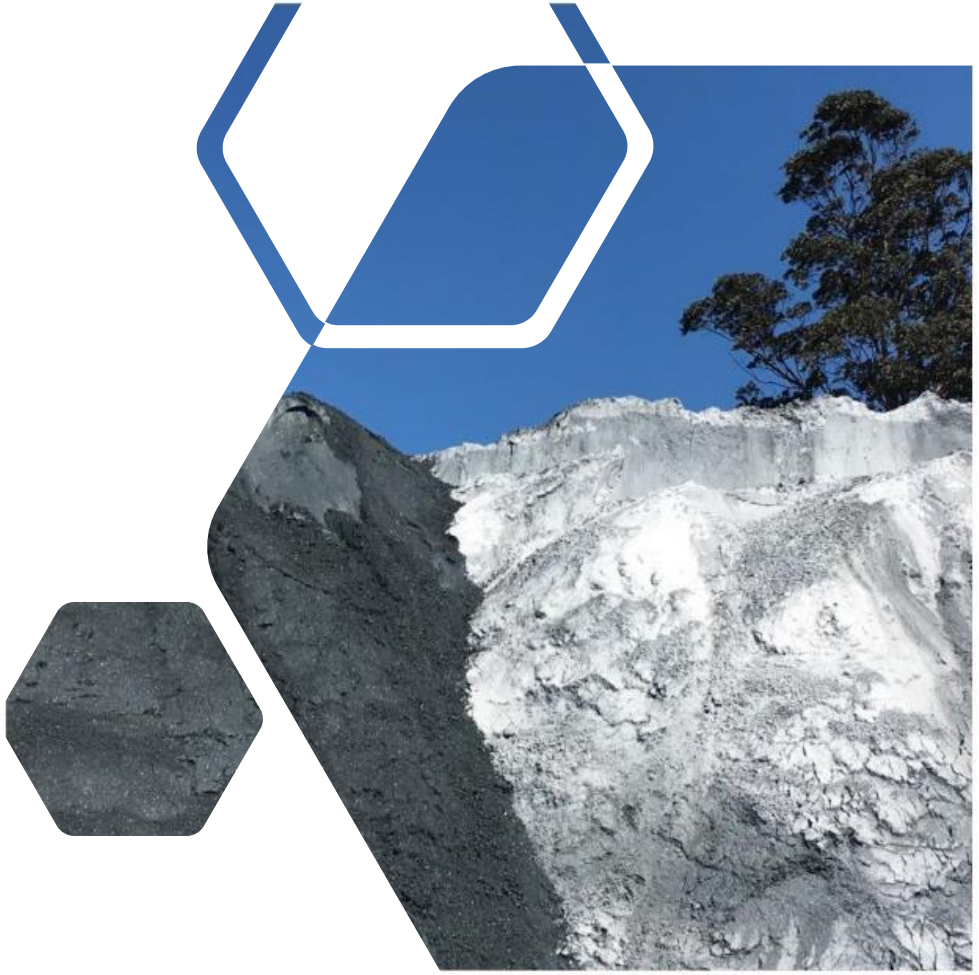
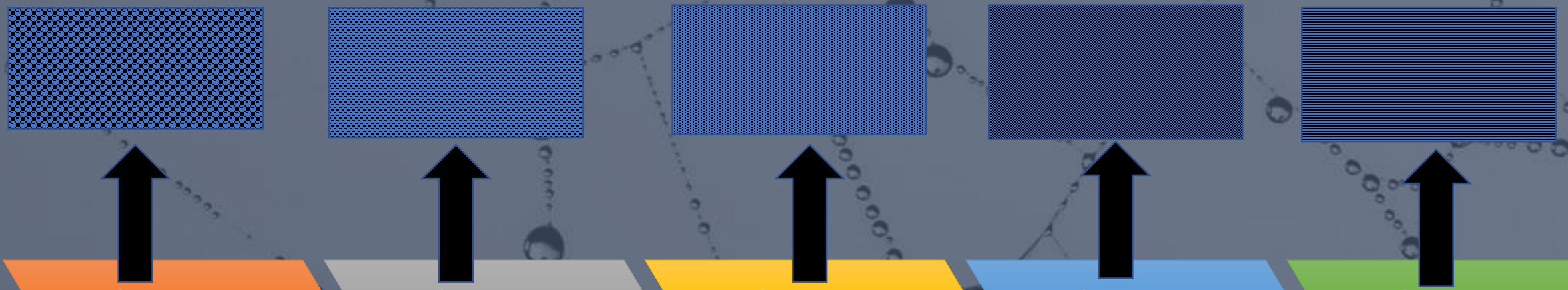
FOCUS AREA

- Unsealed roads
- Non paved parking areas
- Tailings and Heaps
- Tunnels



WORKING STANDARD



Phase 0	Phase 1	Phase 2	Phase 3	Phase 4
• Dispersion in Water	• Concentration & equalization • T>MFFT, Water Evaporates	• Compacting • Close Packing	• Coalescence • Rapture Of Particle	• Maduration,Di fusion Of polymer • Mechanically Stable Film

Mini Trial Modalities

Application : Stabilization of Dust							
Area Width	Water Tank Capacity	Target Maintenance Time(days)	Solution conc.	Kg of FLOTINOR	Dosage Required (g/m2)	Area Required (m2)	Length of the Area (m)
12	12000	1	5	100	6	16666.67	1388.89
12	12000	1	5	200	6	33333.33	2777.78
12	12000	1	5	200	6	33333.33	2777.78
Total		3 Days Trial		500 Kg		83333.33	6944.44
* Things to be considered							
	Solution concentration to be maintained 3-5 % for adequate mixing.						
	Area is considered as rectangle for Easy Approximate Calculation Purpose						
	Maintenance period taken 1 as per Indian scenario but can be increased up to 10						
	Unless until necessary , full truck water capacity should not be changed						

From our Experience , Dilution 1: 500 and spraying of dilution product 0.5L/m2 then maintained in 2 days is well and good for high dusty Indian mine roads.

CASE STUDY 1: MINING ROAD SOUTH INDIA

Problem :
Airborne dust from unsealed roads and tailings
Past mitigation strategy : watering, 1,5 L/m2 per day

Application :
On unsealed access road to plant (4.800 m2) and tailings,
without traffic interruption

Soil texture : silty clay

Application : spray-on; dilution 53 g/L; dose 166 g/m2

Proposed maintenance : spray-on; dilution 100 g/L; dose 100 g/m2

Results :
Elimination of airborne dust after first application
Saving of USD110,000 (38%) per year over watering costs

maintenance frequency (every 15 days)

CASE STUDY 2: FARM ROAD NEAR MINING AREA EAST INDIA

Problem :
Airborne dust from unsealed road Claims from neighboring farmers
Past mitigation strategy : watering : 5 L/m^2 per day

Application :
On 2 km unsealed road ; without traffic interruption

Soil texture : silty clay

Traffic : 120 x 30 ton trucks per day

Initial application : mix-in + spray-on; 200 g/m^2

Maintenance : spray-on every 15 days; 80 g/m^2

Results :

Dust free road; no more claims from neighbors
Saving of USD2,000/ month for customer

CASE STUDY 3: PIGMENTED DUST SUPPRESANT : IRON ORE PILES :VALE - BRAZIL

- Quick preparation of the final solution. The inputs have excellent dispersion and homogenization (preparation of the solution practically instantaneous)
- - Slow sedimentation of the final solution (with rapid redispersion after a slight agitation).
- - Good pigmentation of cells using a solution with lower concentration compared to other alternatives on the market (resulting in reduced consumption, costs and complexity logistics).
- - Formation of resistant crust on the heaps (resulting in good particulate suppression performance).
- - Pigmented crust on the heaps also exhibits excellent resistance to rainfall while maintaining its properties.

BENEFITS

Instant dust suppressing results

Instantly reduces watering requirements

Cost effective due to increased water cart and grader efficiency

Increases ground compaction

Does not increase road slipperiness

Reduces road maintenance requirements

Easier and safer to use than other polymers

Low transport and freight requirements

Improves site safety