Troubleshooting Guide

This guide provides information to assist the maintenance personnel in troubleshooting problems with slurry seals along with common problems that may be encountered during the course of a project. The troubleshooting guide presented below associates common problems with their potential causes. For example, an unstable emulsion, too little water in the mix, incompatibility between the emulsion and the aggregate, and so on may cause a slurry surface to delaminate.

Note that some specifications described in the following content may not be the same as the specifications followed by your agency. Always check with your State agency's standards and specifications when using these guidelines.

Guide

Cause	Problem									
	Brown	Whitish	Failure to Set	Poor Coating	Delayed Opening to Traffic	Breaks in Box	Ravels	Flushes	Delamination	Segregation
Emulsion										
Emulsion Unstable				•		•			•	
Emulsion Too Stable	•		•		•		•			
Emulsion Too Hot						•				
Too Little Emulsion	•			•			•			
Too Much Emulsion								•		

Cause	Problem									
	Brown	Whitish	Failure to Set	Poor Coating	Delayed Opening to Traffic	Breaks in Box	Ravels	Flushes	Delamination	Segregation
Mix										
Mix: Too Many Fines				•		•	•			
Mix: Too Much Cement		•				•				
Mix: Too Little Cement			•		•		•			•
Mix: Too Little Additive				•		•	•			
Mix: Too Much Additive		•	•		•		•			
Mix: Too Much Water	•		•		•		•	•		•
Mix: Aggregate/Emulsion Not Compatible			•	•	•		•		•	•
Conditions										
Condition: Too Hot	•			•		•	•	•		
Condition: Too Cold			•		•		•		•	
Condition: Rain	•		•	•	•		•	•	•	
Condition: High Humidity		•	•							
Surface										
Surface: Fatty			•					•		

Common Problems and Related Solutions

Problem	Solution
Uneven Surface – Wash Boarding	• Ensure the spreader box is correctly set up. • Ensure the viscosity of the mix is not too high. • Make adjustments so that the mix does not break too fast. • Wait until the ambient temperature is lower. • Use water sprays on the front of the spreader.
Poor Joints	• Reduce the amount of water at start up. • Use water spray if runners of the spreader box are running on fresh material.
Excessive Ravel	• Add cement and reduce additive so that the mix breaks and cures faster. • Check aggregate to ensure the clay fines are not too high. • Control traffic longer and at low speeds. • Wait until fully cured before allowing traffic. • Wait until mix is properly set before brooming or opening to traffic.