



Transportation Considerations for Asphalt Pavements

Publish date: April 27, 2010 | Author: Pavement Interactive

 Cite



We've heard from our readers that you find the RoadReady Newsletters highlighting best practices beneficial, so this week, we'd like to talk a little about best practices for transporting asphalt pavement mixes from plant to job site.

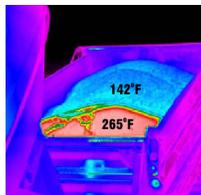
There are several considerations when transporting asphalt pavement mixes that are essential to maintaining the desired characteristics as it travels from the production facility to the paving site. They are best placed into three categories: loading, transporting, and unloading. Let's take a closer look.

1. **Loading at the production facility.** Before leaving the plant, there are several best practices that can ensure your mix arrives on site in proper condition:

- **Prepare truck bed for mix.** Prior to loading, truck beds should be cleaned and lubricated with "release agents" to keep foreign substances out of the mix and to prevent it from sticking to the truck bed. Non-petroleum based release agents should be used for lubrication such as lime water or soapy water. Petroleum based products, such as diesel fuel, should not be used not only because of environmental impacts of such substances, but because they also tend to break down the asphalt binder, resulting in a lower quality roadway.



- **Prevent aggregate segregation during load.** Asphalt mixes should be placed into the truck bed in a way that minimizes aggregate segregation. Dropping mix from the storage silo or batcher in one large batch creates a single pile of asphalt mix in the truck bed. Larger sized aggregate tends to roll off this pile and collect around the base. Therefore, it is recommended that the mix is loaded in several smaller masses (three is typical) at different points in the truck bed to prevent the collection of large aggregate in one area.
- **Minimize heat loss.** Both hot mix asphalt and warm mix asphalt cools during truck transport, which affects its characteristics when laid by the paver and during compaction. Mixes are usually loaded into a truck at a fairly uniform temperature, but during transport, some of that heat can be lost at the surface which causes a cool thin crust to form that surrounds a much hotter core. To prevent things such as air temperature, rain, wind and length of haul from creating heat loss, insulated truck beds and tarps covering the load are recommended.



1. **Transporting to the paving site.** Truck transport should be planned such that the mix transport rate (expressed in tons/hr) closely matches plant production rate and laydown rate. Traffic affects delivery rates because it affects truck speed, especially in congested urban areas, where heavy and/or unpredictable traffic may substantially increase, or at least vary, truck travel time. As truck travel time increases, more trucks are needed to provide a given delivery rate. As traffic gets worse, trucking costs increase. Additionally, the unpredictability of traffic may result in either long paver idle times while waiting for the next truckload of mix or large truck backups as several trucks all reach the paving site or production facility at the same time.

1. **Unloading at the paving site.** Asphalt mixes should be unloaded as soon as possible after arriving at the paving site in order to minimize mix cooling. Also, on jobs with more than one mix type the inspector and/or foreman should be certain the correct mix is loaded into the paver.



These are a few straightforward practices that can be done to prevent, or at least effectively manage the challenges transporting asphalt pavement mixes from plant to job site. When these are managed effectively, better quality roadways are paved, which improves project performance and decreases the life-cycle costs of our roadways.

If you would like to learn additional best practices and considerations when transporting asphalt mixes, check out our [End Dump Truck Exchange](#) course.

For those of you wondering what's next for the RoadReady newsletter, in our next issue, we will talk more in depth about work zone safety. As you look to the road ahead, please [let us know](#) if there are other critical issues you'd like us to discuss.

Leave a Reply

Copyright ©2012 Pavia Systems, Inc.