

Use of Liquid Anti-stripping Asphalt Additives on NSTAT Projects 2021 Action Plan

Model Safe Work Practices for Paving Sites

1. Read and follow the 2021 Action Plan that came with these Model Safe Work Practices.
2. Establish a Site-Specific Safety Plan.
3. Read and update these Model Safe Work Practices, customizing them for this particular paving site.
4. Arrange a Pre-Construction Meeting with Nova Scotia Transportation and Active Transit (NSTAT) officials to review the requirements for use of the liquid anti-stripping asphalt additive in the:
 - Standard Specification for Highway Construction and Maintenance;
 - Provisions for use of Liquid Anti-stripping Asphalt Additives on 2021 NSTAT Projects;
 - 2021 Check List for Liquid Anti-stripping (LAS) Asphalt Additive Projects;
 - and to identify the Contractor's On-site Representative who is authorized to make decisions regarding any health or safety issues which may arise during the paving project.
5. Ensure that all paving site workers, inspectors, quality control personnel, truckers and other persons who will be at the paving site have attended a Worker Information Session covering the 2021 Action Plan (may be a refresher session if previously trained), the customized Safe Work Practices prepared for this location and the Site-Specific Safety Plan and have been informed of the identity of the Contractor's On-site Representative who is authorized to make decisions regarding any health or safety which may arise during the paving project.
6. Ensure that the paving machines have been fitted with engineered exhaust ventilation systems to capture vapours from the hot or warm mix.
7. Ensure that all storage tanks (propane, gasoline, diesel, fuel oil, etc.) are clearly and properly labelled.
8. Follow all manufacturer's instructions for your pavers, shuttle buggies, rollers and any associated mobile equipment, etc., including regular servicing, preventive maintenance and repairs.
9. Follow all existing Safe Work Practices and Safe Job Procedures for the paving site, including traffic control, site access, etc.
10. Ensure that a Safety Data Sheet (SDS) for the liquid asphalt cement containing liquid anti-stripping asphalt additive is on site and available to all workers. This must be the SDS for the mixture of liquid asphalt and anti-stripping asphalt additive, not the SDS for the pure liquid anti-stripping asphalt additive.
11. Ensure that all workers at the paving site, including employees of the Contractor, inspectors, quality control personnel, truckers and other persons have been instructed to

do whatever is practical in the circumstances to limit their exposure to smoke, asphalt fume or vapour of the liquid anti-stripping asphalt additive, including:

- standing upwind of all operations;
 - standing as far back as possible from hot or warm mix transfer operations such as unloading hot or warm mix from the truck box to the shuttle buggy or asphalt paver; and
 - avoiding direct contact with hot or warm asphalt cement.
12. Ensure that the added risk of damp or wet conditions is understood by all parties and that adequate precautions are taken, including:
- delaying the start of paving until any standing water has drained or been removed from the road surface and the road surface is dry;
 - delaying the start of paving until morning fog has lifted and dew on the road surface has evaporated and the road surface is dry;
 - requiring the use of half-face respiratory protection during any short period of ground level fog or mist during the day; and
 - stopping paving operations at any time that it starts to rain. Tarpaulins should be placed over any trucks containing hot or warm mix. If the rain stops within 15 minutes, paving may resume once the road surface has dried. If the rain continues for more than 15 minutes, paving should cease until dry conditions return and the trucks containing hot or warm mix should be instructed to dump their loads at an approved disposal site.
13. Ensure that all hot or warm mix truckers are instructed to do whatever is practical in the circumstances to limit their exposure to asphalt fume or the vapour of the liquid anti-stripping asphalt additive including:
- when waiting to unload, staying in their truck cab. When they are located down-wind from the paving operation and can smell the asphalt fumes or vapours of the liquid anti-stripping asphalt additive, keeping their windows rolled up, only rolling their windows down when in an area of clean air, such as up wind from the paving operation, and if they must leave their truck cab, not standing down-wind from the paving operation;
 - when using tarpaulins, reducing exposure to asphalt fumes or liquid anti-stripping asphalt additive vapours by using tarpaulins which deploy by means of a motorized or hand crank system which can be operated from the side of the truck; and
 - when unloading the hot mix or warm mix into the paver or shuttle buggy, by staying in their truck with the windows rolled up, and if necessary to roll up their tarpaulin, staying at the side of the truck and using the crank system.
14. Have a supply of half-face respirators on site at all times for use by employees who experience symptoms of exposure to liquid anti-stripping asphalt additive, those who may find the odour objectionable, or those who at any time may wish to wear a respirator for additional protection:
- must be NIOSH approved;
 - ensure that each respirator is inspected each day before using (all valves working, cartridges and dust pre-filters in place, clean, etc.);
 - instruct employees to request replacement respirator cartridges when they no longer

- remove the smell from the filtered air;
- instruct employees to request replacement respirator dust pre-filters when it becomes hard to breathe air through the respirator or when the dust pre-filters become loaded with dirt; and
 - ensure that each respirator is cleaned each day after use (warm water or alcohol swab on the rubber or neoprene surfaces) and stored in a plastic bag or box to keep it clean.
15. Instruct employees to advise the Contractor's On-Site Representative of any time they feel irritation or burning in their throat or chest or experience a headache or nausea from exposure to asphalt fumes or the vapours of the liquid anti-stripping additive. Ensure that affected employees wear their respirators.
 16. Ensure that any employee who must wear a respirator because of symptoms of exposure to liquid anti-stripping asphalt additive or who frequently needs to wear their respirator is given a qualitative or quantitative fit test to ensure that it fits properly and is giving good protection. The safety supplier who provided the respirators can help with this.
 17. Ensure that any employee who must wear a respirator for extended periods because of symptoms of exposure to the liquid anti-stripping additive or who has become sensitized to the additive, is given a powered air purifying respirator (PAPR), and has been properly fit tested (qualitative or quantitative) for the use of that respirator.
 18. Ensure that all employees know that even if they are not physically affected by asphalt fumes or the vapours of the liquid anti-stripping asphalt additive, any time they find the odour to be objectionable or any time they wish additional protection, they may ask for a respirator (qualitative or quantitative fit testing not required).
 19. Report all of the following to the Nova Scotia Transportation and Active Transit's On-Site Representative:
 - any situation where there is an on-site condition or weather condition which requires decision by the Contractor's On-Site Representatives regarding continued paving, temporary cessation of paving, or modification of operating procedures;
 - any report of symptoms of exposure to the liquid anti-stripping asphalt additive, such as irritation or burning in the throat or chest, or a head ache or nausea from exposure to asphalt fumes or the vapours of the liquid anti-stripping additive;
 - any use of respirators is required to avoid symptoms of exposure to the anti-stripping asphalt additive, such as irritation or burning in the throat or chest, or a headache or nausea;
 - any situation where it is necessary to move an employee to an area of less exposure to the fumes of the liquid anti-stripping asphalt additive; and
 - any situation where it is necessary to move an employee to another work site where liquid anti-stripping asphalt additive is not being used.