



Technical Bulletin

Shingle Runoff (Tobacco Juicing and Biological Runoff)

The formation of a “tobacco-juice” residue, so named for its color, as well as biological run-off has been widely attributed to the weathering of asphalt roofing (i.e., roof coatings, base and cap sheets and shingles – to name a few) or the exudation of asphalt fractions from the roofing material.

In fact, similar brown residues have been found on other non-asphaltic materials – indicating that the phenomenon can be environmental in nature and not wholly attributable to asphalt roofing. An investigation of this phenomenon concluded that environmental contamination, environmental biological runoff and/or pollutant deposition was the major contributor to “tobacco-juicing”.

Factors commonly present with “tobacco-juicing” are excessive air pollution accompanied by nighttime dew conditions and prolonged lack of rain. Air pollutants can collect on roof surfaces with the formation of dew and subsequently run down onto lower roof surfaces, fascia, and other finish surfaces. For steep slope applications, such as asphalt shingled roofs, “tobacco juicing” may drip off of the shingles and stain the fascia and/or siding. This accumulation of residue can continue until the surfaces are washed or significant rainfall occurs. The residue typically will not affect the performance of the roof and should not be considered a performance problem.

Though it may not be possible to control environmental elements that cause the formation of the residue, the following recommendations can be utilized by the specifier, contractor or owner to minimize the aesthetic conditions associated with “tobacco-juicing” and/or biological run-off.

- Add or retrofit drip edge at the eaves and rakes in areas that do not have this previously installed. It’s critical that the drip edge have a well-defined kick edge that will help ensure that the roof run-off will be diverted and fall away from the building/residence.
- Install gutters to capture and divert the runoff
- During shingle installation, extend the overhang of the shingle at the eave and rake towards the maximum length as identified in the manufactures written installation instructions. This will allow the run-off to fall away from the building/residence. Most shingle manufactures allow up to 3/4” overhang of shingles at the eave and rake.
- Hose down the roof at regular intervals during long, dry periods of the first summer after installation. Note: this is not recommended where proper fall protection is not in place, or where steps have not been taken to protect exterior surfaces that may come into contact with the wash-off, i.e., siding on a house without gutters.

- Require edge metal with a drip lip on parapet walls where the metal slopes outward, is rounded, and has no existing lip on the outside edge to assure the residue-laden run-off will fall away from the building.
- For stained fascia: Paint the fascia with an exterior silicon based paint that includes mold and/or algae inhibitors.
- For low slope applications, contact and consult your low slope product manufacturer for solutions.
- Consult the specific material manufacturer for additional recommendations.

The effects associated with “tobacco-juicing” can be minimized if the necessary steps are taken by the specifier, contractor and owner. The residue typically will not affect the performance of the roof and should not be considered a performance problem.

For additional information please review the Atlas Roofing Limited Shingle Warranty page at atlasroofing.com/warranty.