



Tire Chip Substitution for Rock Aggregate in Onsite Wastewater Treatment Fields

Permitting

Tire chip aggregate may be substituted for clean/washed graded stone required for soil absorption systems receiving domestic strength wastewater or sewage as described in “Site and Design Criteria”. Tire chips must comply with the specifications detailed below. Installation procedures are provided on page 2.

A Sewage Disposal Permit must be obtained from the health region prior to beginning any work on a private sewage system containing tire chips. The provision of information in this fact sheet on the use of tire chips in soil absorption fields does not imply that approval will be granted for any installation containing tire chips. The local health region should be contacted for more information.

Site and Design Criteria

The standard requirements for the onsite wastewater system site as specified in the 2009 Saskatchewan Onsite Wastewater Disposal Guide (Guide) shall apply, except as follows:

1. Tire chip aggregate may be substituted for clean/washed graded stone in soil absorption systems (Section 8 of the Guide), chamber systems (Section 7 of the Guide), Type I Mounds (Section 9.1 of the Guide) or Type II Mounds (Section 9.2 of the Guide). This includes both pressure and gravity systems.
2. Tire chip aggregate may be substituted for clean/washed graded stone in repairs or extensions of soil absorption systems (Section 8 of the Guide), chamber systems (Section 7 of the Guide), Type I Mounds (Section 9.1 of the Guide) or Type II Mounds (Section 9.2 of the Guide). This includes both pressure and gravity systems.
3. Tire chip aggregate may be only substituted for clean rock on a one-to-one basis volumetrically.
4. The minimum vertical separation of 1.5 m (5 ft) to the groundwater table shall not be reduced.

Specifications

Tire chip aggregate used as a clean/washed graded stone substitute in soil absorption fields shall meet the following specifications:

1. Shall be free (95% or better by weight) of balls of wire and fine rubber particles less than 2 mm.
2. Shall be clean and free (95% or better by weight) of any soil particles (fines) either adhering to the chips or floating loose within the chips.
3. Shall be nominally 5 cm (2 in.) in size and may range from 1.25 cm (½ in.) to a maximum of 10 cm (4 in.) in any one direction (95% or better by weight).
4. Shall not contain wire protruding more than 2.5 cm (1 in.) from the sides of the chips (85% or better by weight).
5. Contractors seeking approval to use tire chip coarse aggregate in a soil absorption system shall, upon request by a health region, provide documentation of the tire chip aggregate size and quality.

Installation Procedures

The following installation requirements shall be met when tire chip aggregate is used in whole or part for the dispersal system:

1. The installation recommendations contained in the Guide for clean/washed graded stone apply for tire chips.
2. Tire chips shall be firmly compacted prior to covering with a filter fabric.
3. The tire chip aggregate shall be covered with a layer of non-woven filter fabric¹ extending across the top of the tire chip aggregate before backfilling.
4. All tire chips not used in the soil absorption system shall be removed from the site by the installer or contractor of the system. The site shall be cleaned-up to ensure that no chipped tires or related material remain after completion of the system.
5. Any tire chips placed on top of the filter fabric after system inspection shall be covered adequately to prevent persons or pets from being punctured by the wires.
6. Contractors are responsible to ensure that an appropriate level of cover (which may include a straw layer above the filter fabric) to prevent an undue risk of freezing.

Note: Persons handling the chips should use care, wear thick gloves and appropriate clothing (including thick-soled boots) and have current tetanus protection.

Additional information

The Government of Saskatchewan provides information on private sewage systems at <http://www.saskatchewan.ca/residents/environment-public-health-and-safety/environmental-health/plumbing-sewage> .

For more information on this fact sheet and/or other onsite sewage system topics, contact your local health region Public Health Inspector.

<http://www.saskatchewan.ca/residents/health/understanding-the-health-care-system/saskatchewan-health-regions/regional-public-health-inspectors>.

1. It is recommended that the fabric have a unit weight of at least 3.0 oz./yd² (per ASTM D-5261), a permittivity of at least 1.0 sec⁻¹ (per ASTM D-4491), a trapezoid tear strength of at least 35 lbs. (per ASTM D-4533), and have a mesh size equal to U.S. Sieve No. 70 (A.O.S.)(ASTM D-4751).

References

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NOTE: This information was updated in October 2010. To confirm you are reading the most recent version of this document, check to see the most recent version on the Ministry of Health website.

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