

**TGL-5-R3-11**  
Flushing Toilets

Scope

This product category is applicable for vitreous china sanitary appliances as defined in the following sub-categories:

- a) water-closet bowls and its components
- b) flushing type squatting water-closet pan and its components

Green Label Requirements

To be authorized to carry the Green Label, a product shall meet both the general requirements and the specific requirements listed below:

**A. General Requirements (Product Quality)**

1. The product shall meet, at least, one of the following requirements;
  - 1.1 The product shall be certified to or passed the tests for desirable product characteristics specified in the Thai Industrial Standard (TIS) for that product, according to the following list:
    - TISI 792, *Standard for Vitreous China Sanitary Appliances : Water-Closet Bowls;*
    - TISI 794, *Standard for Vitreous China Sanitary Appliances : Squatting Water-Closet Pans*
  - 1.2 The product shall be certified to or passed the tests according to the recognized international standard or national standards

***Compliance verification***

Compliance with requirement number 1 shall be verified as one of the followings.

1. The applicant shall submit the certificate of Thai Industrial Standard of the product, or declare the test results according to the Thai Industrial Standard of the product, or
2. submit the certificate or test results according to the international standards or acceptable national standards.

2. Toilet seats

- 2.1 The toilet seats shall be certified to TIS 2118 or passed the tests of TIS 2118 for desirable characteristics mentioned in item no. 4.4.1 and 4.4.2.

*In the event of any conflict arising, the original criteria in Thai is to be final authority.*

In case of toilet seat with mechanical operation, the test item no. 4.4.2 of TIS 2118 is not required, but shall be tested for its 50000 cycles durability as mentioned in TIS 2118

2.2 The toilet seats shall be certified or pass the test according to the international or national standard, which are equivalent to the requirement number 2.1.

***Compliance verification***

Compliance with requirement number 2 shall be verified as one of the followings.

3. The applicant shall submit the certificate of Thai Industrial Standard of the product, or declare the test results according to the Thai Industrial Standard of the product, or
4. submit the certificate or test results according to the international standards or acceptable national standards.

3. The components of the product

3.1 Fittings shall meet, at least, one of the following requirements;

- 3.1.1 certified to TIS 1014 (*Standard for Fittings for Water-Closet Flushing Cisterns*) or
- 3.1.2 passed the test of TIS 1014 for desirable product characteristics in item no. 5.13.1 or
- 3.1.3 certified or passed the test of recognized international or national standards, which is equivalent to requirement 2.1.1.

3.2 Flush valves shall meet, at least, one of the following requirements;

- 3.2.1 certified to TIS 1093 (*Standard for Flush Valves for Water-Closets*) or
- 3.2.2 passed the test of TIS 1093 for desirable product characteristics in item no. 5.7.1 or
- 3.2.3 certified or passed the test of recognized international or national standards, which is equivalent to requirement 3.2.1

***Compliance verification***

Compliance with requirement number 2 shall be verified as one of the followings.

5. The applicant shall submit the certificate of Thai Industrial Standard of the product, or declare the test results according to the Thai Industrial Standard of the product, or
6. submit the certificate or test results according to the international standards or acceptable national standards.

4. The manufacturing, transportation and waste disposal of the product shall comply with the relevant national laws and regulations.

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***Compliance verification***

7. The applicant shall submit evidence documents regarding its manufacturing, transportation and waste management.

***B. Product Specific Requirements (Environmental criteria)***

1. Single Flush Toilets must use 4.8 liters or less of water per flushing cycle

***Compliance verification***

8. A test of the single flush toilet for water per flushing cycle shall be performed according to TIS 792 and shall be witnessed by Green Label Auditors for the

2. Dual Flush Toilets

2.1 Full flush toilets shall use 4.5 liters or less of water per flushing cycle.

2.2 Reduced flush toilets shall use 3.0 liters or less of water per flushing cycle.

***Compliance verification***

9. A test of the dual flush toilet for water per flushing cycle shall be performed according to TIS 792 and shall be witnessed by auditor team of the Thai Green Label.

3. Color and coatings

3.1 Aromatic hydrocarbon solvents include thinner, toluene and xylene shall not be used

***Compliance verification***

10. The applicant shall submit a declaration letter, signed by the managing director or authorized person, to certify that hydrocarbon solvents include thinner, toluene and xylene are not used in colors and coatings.

3.2 contents of each heavy metal shall be less than 0.1 % by dry weight for mercury, lead, chromium (VI), and less than 0.01% by dry weight for cadmium

***Compliance verification***

11. The applicant shall submit a test report according, or equivalent, to the following standards.

ISO 3856-1 or ASTM D 3335 for lead

ISO 3856-4 or ASTM D 3335 for cadmium

ISO 3856-5 for chromium (VI)

ISO 3856-7 or ASTM D 3624 for mercury

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4. Plastic toilet seat shall be made of recycled material (post consumer waste and/or post industrial waste) at least 25% by weight.

***Compliance verification***

12. The applicant shall submit a declaration letter, signed by the managing director or authorized person, to certify that plastic toilet seat used with the applied product is made of 25% recycled material by weight or above, and declare a bill of material for the applied model.

5. The product must be accompanied by detailed instructions to the consumers outlining proper installation, maintenance and usage to ensure fully protected from leakage and maximum water savings.

***Compliance verification***

13. The applicant shall submit a user manual.

6. The plastic parts including water-out set, water-in set and ball valve shall be symbolized according to TIS 1310 or ISO 1043 or ISO 11469

***Compliance verification***

14. The applicant shall submit a declaration letter, signed by the managing director or authorized person, to certify that the plastic parts of the applied product include water-out set, water-in set and ball valve are symbolized according to TIS 1310 or ISO 1043 or ISO 11469. Samples or photographs of the mentioned plastic parts are also required.

7. Packaging

7.1 Paper packaging, depending on the type of paper used, shall be made from the Green Label certified paper (TGL-8) or passed the test according to specific requirements of the TGL-8.

***Compliance verification***

15. The applicant shall submit a certificate of Thai Green Label for paper (TGL-8), or declare the test results of the paper used in making the packaging, according to the specific requirements of the TGL-8.

7.2 Shockproof packaging shall not contain CFC.

***Compliance verification***

16. The applicant shall submit a declaration letter, signed by the managing director or authorized person, to certify that shockproof packaging used with the applied product does not contain CFC.

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7.3 Plastic packaging shall be symbolized according to TIS 1310 or ISO 1043 or ISO 11469

***Compliance verification***

17. The applicant shall submit a declaration letter, signed by the managing director or authorized person of the plastic packaging company, to certify that the plastic packaging for the applied product is symbolized according to TIS 1310 or ISO 1043 or ISO 11469. Samples or photographs of the mentioned packaging are also required.

7.4 Total concentration of heavy metals including mercury, lead, chromium (VI), and cadmium in color or pigment used with the container shall be less than 0.01% by weight.

***Compliance verification***

18. The applicant shall submit a test report of heavy metal concentrations in color or pigment used with the packaging according, or equivalent, to the following standards.

ISO 3856-1 or ASTM D 3335 for lead

ISO 3856-4 or ASTM D 3335 for cadmium

ISO 3856-5 for chromium (VI)

ISO 3856-7 or ASTM D 3624 for mercury

**Remarks:** All tests shall be conducted by the following laboratories.

- 1) Government laboratories, or
- 2) Private laboratory that is certified for its capability of testing following the requirement of Thai Industry Standard, or laboratory that is certified for competence of testing and calibration according to ISO/IEC 17025.
- 3) In case of ISO/IEC 17025 uncertified laboratory, a witness test by auditor team of Thai Green Label is required.

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