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## Standard Specification for Liquid Toilet Soap<sup>1</sup>

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### 1. Scope

1.1 This specification covers liquid toilet soap. Two types are covered, as follows:

1.1.1 *Type A*—Liquid (15 % minimum anhydrous soap), and

1.1.2 *Type B*—Concentrate (30 % minimum anhydrous soap).

### 2. Referenced Document

2.1 *ASTM Standard:*

D 460 Test Methods for Sampling and Chemical Analysis of Soaps and Soap Products<sup>2</sup>

### 3. Ordering Information

3.1 The material shall be purchased by net volume of soap as received. One gallon (3.6 litres) of liquid soap is equal to 231 in.<sup>3</sup> (3780 cm<sup>3</sup>) at 60°F (15.5°C).

### 4. General Requirements

4.1 *Type A* shall be a clear, uniform solution of potash soap in water, with or without glycerol or alcohol. The soap shall be produced by the saponification of either whole vegetable oils or distilled fatty acids or both, or rosin acids, with caustic potash. It shall be ready for use and shall form a satisfactory lather.

4.2 *Type B* shall be a concentrate containing sufficient organic sequestering agent that when the concentrate is diluted for use with 1.5 parts of ordinary tap water a clear stable solution having satisfactory lathering properties will result.

4.3 Both types shall be mildly perfumed. The odor shall not be objectionable in the soap as received, or in a hot

solution of the soap in water. The material shall not leave any objectionable odor on the skin or other surfaces, after washing with a water solution of the soap and rinsing thoroughly with plain water.

4.4 Neither type shall have any undue corrosive action on the containers, liquid soap lines, dispensers, or valves.

### 5. Chemical Composition

5.1 Liquid toilet soap shall conform to the requirements as to chemical composition prescribed in Table 1. All constituents shall be calculated on the basis of the soap as received.

### 6. Methods of Sampling and Analysis

6.1 The material shall be sampled and analyzed in accordance with Test Methods D 460. The purchaser shall have the right to use any additional available information to ascertain whether the material conforms to this specification.

### 7. Keyword

7.1 toilet soap

TABLE 1 Chemical Requirements

	Type A	Type B
Total anhydrous soap, calculated as potash soap, min, %	15.0	30.0
Free alkali, calculated as KOH, max, %	0.05	0.12
Free acid, calculated as oleic acid, max, %	0.1	0.2
Matter insoluble in alcohol, max, %	0.5	1.2
Matter insoluble in water, max, %	0.1	0.2
Chlorides, calculated as KCl, max, %	0.3	0.7
Sulfates, max	trace	trace
Unsaponified plus unsaponifiable matter, max, %	0.6	1.4
Titer of mixed fatty acids, max		32
Acid number of mixed fatty acids		
max	270	270
min	215	215
Rosin acids, max	1.0	2.3
pH (5 % solution) max	10.2	10.2
Organic sequestering agent, min	...	A

<sup>A</sup> Type B shall contain sufficient organic sequestering agent to give a clear solution when one part of the concentrate is diluted with 1.5 parts of water having a hardness of 300 ppm as calcium carbonate.

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<sup>2</sup> *Annual Book of ASTM Standards*, Vol 15.04.

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