

Green Certification Requirements

Innovation Through Chemistry, LLC

ITC Labs

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The following table lists the requirements (Factors and Limits) for Green Certification by Innovation Through Chemistry, LLC.

Green Certification Requirements	
Factor	Limit
Oral toxicity	LD ₅₀ >5000 mg/kg
Dermal toxicity	LD ₅₀ >2000 mg/kg
Inhalation toxicity	LC ₅₀ >20 mg/L (ppm)
Carcinogenicity	Not listed by IARC, NTP, or CA prop 65
Aquatic toxicity	LC ₅₀ or EC ₅₀ > 10 mg/L and 10 mg/L < LC ₅₀ or EC ₅₀ < 100 mg/L, offending component or product must be readily biodegradable (OECD 301B) or LC ₅₀ or EC ₅₀ > 100 mg/L
Alkyl phenol ethoxylates	Not Present
Inorganic phosphates	Not Present
pH	pH between 3 and 10
Volatile Organic Compounds (VOCs)	Product must contain less than 10% VOCs

Oral, Dermal, and Inhalation Toxicity

The product shall have an oral toxicity value (LD₅₀) greater than 5000 mg/kg.

The product shall have a dermal toxicity value (LD₅₀) greater than 2000 mg/kg.

The product shall have an inhalation toxicity value (LC₅₀) greater than 20 mg/L.

When reliable and accurate data is not available for a product, the following formula will be used to calculate the toxicity of the product:

$$\frac{C_A}{T_A} + \frac{C_B}{T_B} + \dots + \frac{C_Z}{T_Z} = \frac{100}{T_{Mixture}}$$

C = The wt% concentration of constituent A, B, ... Z in the product

T = The LD₅₀ or LC₅₀ value of constituent A, B, ...Z in the product

T_{mixture} = The calculated LD₅₀ or LC₅₀ value of the product

Carcinogenicity

Products shall not be recognized as a carcinogen or be listed as a carcinogen by IARC, NTP, or CA Prop 65.

Aquatic Toxicity

The product passes for aquatic toxicity based on the following criteria:

The product passes for aquatic toxicity if the LC₅₀ or EC₅₀ of the product is greater than 10 mg/L and less than 100 mg/L and the offending component or product is readily biodegradable as measured by OECD 301B testing or equivalent.

or

The product passes for aquatic toxicity if the LC₅₀ or EC₅₀ of the product is greater than 100 mg/L.

When reliable and accurate data is not available for a product, the following formula will be used to calculate the aquatic toxicity of the product:

$$\frac{C_A}{T_A} + \frac{C_B}{T_B} + \dots + \frac{C_Z}{T_Z} = \frac{100}{T_{Mixture}}$$

C = The wt% concentration of constituent A, B, ... Z in the product

T = The LC₅₀, EC₅₀, or IC₅₀ value of constituent A, B, ...Z in the product

T_{mixture} = The calculated LC₅₀ or EC₅₀ value of the product

Alkyl phenol ethoxylates

The product shall not contain alkylphenol ethoxylates.

Inorganic phosphate

The product shall not contain inorganic phosphates.

pH

The pH of the ready-to-use solution of the product shall be between 3 and 10.

Volatile Organic Compounds (VOC)

The solution shall contain less than 100 g/L volatile organic compounds.