BLOMMER CHOCOLATE COMPANY

EMULSIFIER TYPES, USAGE & ADDITIONAL ADDITIVES

Emulsifiers have been widely used in the chocolate and compound industry for decades as a way to decrease the viscosity, or thin the chocolate. In the US, the standard of identity for chocolate products states that total emulsifiers must be kept below 1% of the formula. Emulsifiers enable confectioners to lower the viscosity (plastic viscosity and yield value of chocolate) to improve functionality and keep costs lower. A chocolate can certainly be made without emulsifiers but the cost would be higher since it takes 7-10% more cocoa butter in the formula to reach the desired viscosity.

EMULSIFIER TYPES AND AMOUNTS

Lecithin – Lecithin is the most commonly used emulsifier in chocolate and compound manufacturing. Most is made from soy beans but versions using sunflower and safflower exist as well. Lecithin can significantly reduce the product viscosity, particularly plastic viscosity, by adding little cost. However, viscosity tends to increase if lecithin is added at percentages over 0.5% of the total formula.

PGPR – PGPR stands for polyglycerol polyricinoleate and is made from castor beans. PGPR can reduce the viscosity of chocolate, particularly yield value, while also adding little cost. PGPR is often used in conjunction with lecithin for optimum viscosity reduction as it does not function well as a sole emulsifier.

AMP – AMP, or Ammonium Phosphatide, is made from rapeseed oil and can also be used in conjunction with lecithin or by itself. AMP is common in many European confections and it is starting to gain popularity in the US as well. The FDA declares that AMP may be used at a rate up to 0.7% in chocolates. This may also be labeled as “Emulsifier YN” on labels.

ADDITIONAL EMULSIFIER ADDITIVES IN CHOCOLATE

Sorbitan Tristearate – This can be used in chocolate, and categories as an emulsifier, as long as it is kept under the 1% total emulsifier amount. Sorbitan tristearate can be used to help delay the effects of bloom. This can be used as a bloom inhibitor in compounds at a higher rate to help delay bloom and hasten the hardening period of compounds.

Distilled Monoglycerides – This can be used in a similar fashion to sorbitan tristearate. As long as it is kept under 1% total emulsifier, the chocolate is able to be labeled as “Chocolate” according to its standard of identity. This can also be used to help inhibit bloom in chocolate and compounds.

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