

Santicizer-794

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ORGANIC CHEMICALS DIVISION
Everett, Long Beach and J.P.
Queeny Plants

Standard Manufacturing Process

for

SANTICIZER BLENDS

Supersedes all Tentative Processes for active Santicizer Blends
issued from January, 1954 thru April, 1960. (NOTE: Research
reference data is given for each of these active blends in Section V).

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INTRODUCTION

In 1954 Monsanto introduced to the plasticizer trade the custom blending of plasticizers to fit needs for specific end uses. Through this technique Monsanto has been able to not only satisfy customer requests for specific combinations of plasticizers, but to increase our participation in the plasticizer market by selling non-proprietary materials as a blend with materials which are made only by Monsanto.

Since its inception, this blending technique has resulted in over 60 different items of trade all listed as Santicizers. Previously, the request for a new blend has required documentation in the form of a Tentative Process for each mixture. This procedure has become overly time consuming since each process is essentially a duplicate of previous work, with only changes in the materials to be used and the quantity of each in the blend. This process, therefore, will serve as a standard blending procedure. Any variations from this standard operation will be noted on the instruction sheet for the particular blend, along with the ingredients which comprise the blend.

II. SYNOPSIS OF PROCESS

The process involves the mixing of two or more materials to produce a specific blend. The starting materials must comply with established specifications (see Section VI). These are pumped into a blending vessel. When the correct proportions of each material are charged, the mixture is stirred, filtered, and pumped to appropriate shipping equipment.

III. PROCESS IN DETAIL

A. Charging

The correct quantity of each of the required ingredients is pumped from the storage vessels, through suitable metering devices, to the blending vessel.

1. Monomeric Plasticizers may be handled at room temperature unless otherwise designated on the blend data page. Upon completion of the charging operation, the mass is stirred for 30 minutes.
2. Polymeric Plasticizers are normally handled at elevated temperatures (about 80°C) because of their high viscosity. The hot polymeric plasticizer should be added to the blend tank first, followed by the colder monomeric plasticizers or other ingredients. Stir for 30 minutes unless otherwise designated on the blend data page. (NOTE: If the polymeric is added to the cold monomeric, the polymeric may lose heat and become viscous before it becomes blended. If this happens the polymeric is present as a separate phase and will stick to the stirrer and blend tank. If the temperature of the monomeric is 25°C or higher, the order of addition becomes less critical but the easiest blending will result from adding it to the hot polymeric plasticizer.)

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B. Checking for completion

At the end of the stirring period the batch is sampled to insure homogeneity and tested for specific gravity and refractive index to obviate errors in charging. If the gravity or refractive index do not fall within the specification limits, adjustment must be made by charging an additional quantity of the correct starting material to bring the batch within specifications.

C. Filtering

After it has been established that the correct composition has been obtained, the product is filtered to remove any suspended matter and pumped to the appropriate shipping container. If the blend contains polymeric plasticizer, it should be filtered hot and the blend tank should be drained completely to reduce the chance of contaminating succeeding blends. Ample time should be allowed for this draining.

D. General

1. In the event that a particular blend requires special conditions for mixing (i.e. higher temperatures, longer stirring, etc.), this will be spelled out on the instruction sheet (see Section V) under the heading "Blending Conditions".
2. The toxicity and hazards of the majority of the materials used here are well known. Abnormal toxicity or hazard will be recorded on the appropriate data blend sheet.
3. Since no vapors can escape or process effluent enter sewer lines during the blending operation, no problems are encountered in these areas.

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By R. H. Mills

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