

ADK STAB NA-21

— Nucleating / Clarifying agent —

Identification

Mixture.

Main component: Phosphate ester compound

Features

- Drastically Improves clarity of PP, in particular, random-PP.
- Shows high performance at low loading level as compared to sorbitol type.
- Improves not only clarity but also physical and mechanical properties (such as flexural modulus and heat deflection temperature) of PP. It enables to design thinner articles with well-balanced in stiffness and clarity.
- Enhances crystallization rate of PP, resulting in improved processing cycle time and productivity.
- No odor problem in end-use applications.
- Shows excellent resistance to extraction from the polymer.
- Approved as an indirect additive in food contact substances in US, EU, and Japan. Potential application is food packaging. (For additional information such as kind of adaptable polymers, please ask our Sales Department.)

Applications

- Homo PP and Random PP, in particular, random PP.
- Thermoforming articles, Injection-molded articles, blow-molded articles, films, etc.
- Food packaging, food containers, baby feeding bottles, stationery, etc.

Physical and chemical properties

- Appearance White powder
- Softening point ≥ 210 °C
- Thermal stability (TGA, 10°C/min, Air 200ml/min) 10% weight loss temperature: 300°C
- Solubility (g/100g solvent at 25 °C) Water : < 0.01 Others : No data available

* Above value of properties are just typical, not specific

Performance

ADK STAB NA-21 dramatically improves clarity of PP. It also improves not only clarity but also flexural modulus and heat deflection temperature of PP.

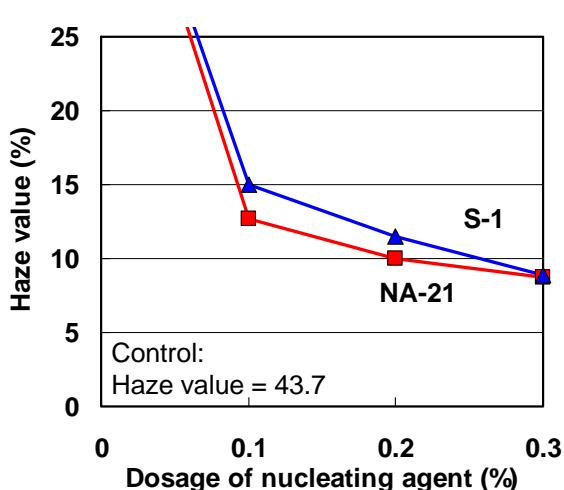


Fig.1 Haze value of PP-R (MFR=1)

Test plaque : 1mm-thick sheet

Formulation: PP-R (100), Ca-St (0.1), AO-60 (0.1), 2112 (0.1), nucleating agent (see graph)
Process: extrusion 250 °C, injection 250 °C

*S-1: Di(methylbenzilydene)sorbitol

*Control: without nucleating agent

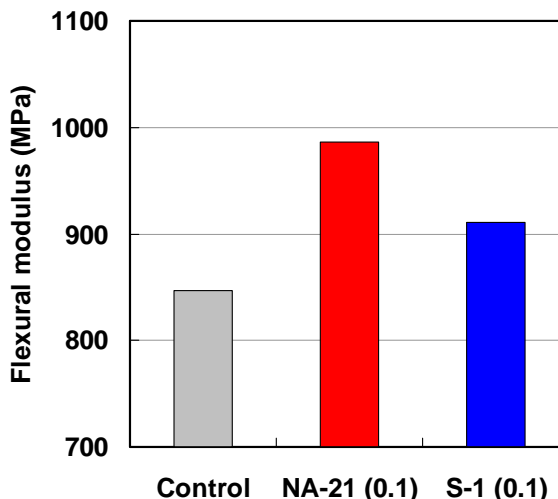


Fig.2 Stiffness of PP-R (MFR=10)

Handling and storage

- Store in the original container securely under cool and dry condition.
- Protective clothing should be worn when operators are handling, or being exposed to, this product. See the MSDS for further detailed advice.