

Monosodium Citrate

- Defined endothermic decomposition
- Formation of uniform and fine cell structures
- Suited for colourless applications
- Food contact compliant



Jungbunzlauer

Monosodium Citrate

Food Quality Ingredient in Blowing Agents for Foamed Plastics

Monosodium citrate is a high purity chemical which is widely used in food applications for pH regulation and effervescent systems. In foamed plastic production, monosodium citrate is combined with carbonates (mainly sodium bicarbonate), to create endothermic blowing agents. This mixture facilitates the acid-assisted chemical and thermal decomposition reaction to produce carbon dioxide gas and water vapour. The additive blends can also be incorporated in masterbatches with various carriers.



Advantages in blowing agents

- Monosodium citrate is the preferred non-toxic alternative to exothermic blowing agents such as azo compounds, hydrazine derivatives or semicarbazides
- Decomposition occurs in a defined temperature range of about 207-217°C depending on its granulometry and type
- Fine granular type (Type D) decomposes at 207°C and leads to energy savings due to its porous structure and improved dispersability
- No hazardous decomposition products – simply carbon dioxide and water are formed
- Enables formation of uniform and fine cell structures with improved surface quality at low dosages
- Provided as colourless crystals or white powder making it especially applicable for opaque and translucent end products
- Complies with highest food industry purity criteria according to E 331
- Registered under REACH regulations



Make your choice of Jungbunzlauer's grades for blowing agents

Monosodium citrate grade	Particle size		Decomposition temperature	Gas yield
Fine Granular D	> 0.355mm	max. 10%	~207°C	185-240ml/g
Powder F3500	> 0.355mm	max. 5%	~217°C	185-240ml/g
Powder F0100	> 0.355mm	max. 1%	~217°C	185-240ml/g
	> 0.100mm	max. 20%		
	> 0.063mm	max. 40%		
Powder F0063	> 0.063mm	max. 5%	~217°C	185-240ml/g



The main areas of application for monosodium citrate-based foaming agents include polyethylene (PE), polypropylene (PP), polyvinyl chloride (PVC-U), polystyrene (PS), polyamide (PA) and acrylonitrile butadiene styrene (ABS). These foamed products display excellent weight reduction, improved surface texture as well as a stable foam structure.

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