UNICELL-TS

Description

UNICELL-TS, the trade name of p-toluenesulfonylsemicarbazide, decomposes and evolves gas at a relatively higher temperature than other foaming agents.

The high decomposition temperature of **UNICELL-TS** reduces the risk of premature decomposition during the high-temperature compounding stage.

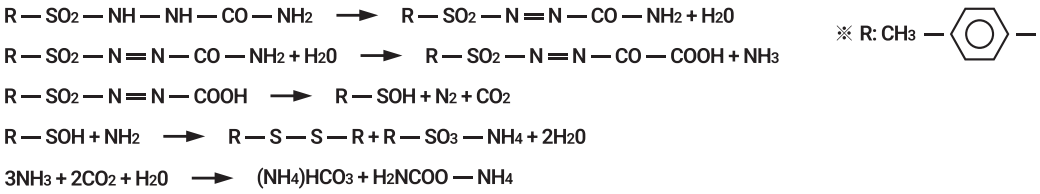
UNICELL-TS is recommended for use in ABS, rigid PVC, polyamide, HDPE, polysulfone, and other polymers that require high processing temperatures.

Properties of UNICELL-TS

Item	Specification
Chemical Name	p-Toluenesulfonylsemicarbazide
Appearance	Fine White Powder
Decomposition Temperature (°C)	228~232
Gas Volume (ml/g, at 25°C)	115~155
Average Particle Size (μm)	4.0~4.6
Moisture Content (%)	0.5 max.
Specific Gravity (at 25°C)	1.44
Molecular Weight	299.25
Solubility (g sample/100ml solvent, at 20°C)	Soluble in Water: 0.49 Toluene: 0.35 Alcohol: 5.10 DMSO: fairly soluble
CAS No.	10396 - 10 - 8

Decomposition of UNICELL-TS

When **UNICELL-TS** decomposes, nitrogen and carbon dioxide are evolved.



Several compounds have been identified as activators for the decomposition of **UNICELL-TS**. Through activation, **UNICELL-TS** becomes applicable to plastics processed at lower temperatures. General activators are; **UNIPASTE** series, zinc oxide, zinc stearate, calcium stearate, lead stearate, and zinc chloride.

Applications

UNICELL-TS exhibits a decomposition rate appropriate for high-temperature processing applications, including ABS, low-melt-index polyolefins, impact-modified polystyrene, and engineering plastics.
UNICELL-TS improves surface appearance in structural foam applications during injection molding and extrusion processes. It allows processing at higher temperatures for resins that can also be foamed using azodicarbonamide, thereby increasing productivity.
The decomposition temperature of **UNICELL-TS** can be lowered through the use of activators.
UNICELL-TS is applicable to white PVC products without requiring high titanium dioxide loadings, which may adversely affect physical properties.

*p-Toluenesulfonylsemicarbazide
*Foaming agent for high temperature process