

UNICELL-H Series

Description

UNICELL-H series, the trade name of p-toluenesulfonylhydrazide, produces non-discoloring and low odor cellular foams. UNICELL-H series is designed for regular opened/closed rubber and fine cellular structures. It has excellent performance without activators at conventional curing temperature.

UNICELL-H series is especially recommended for the less shrinkable materials when exposed to light or heat.

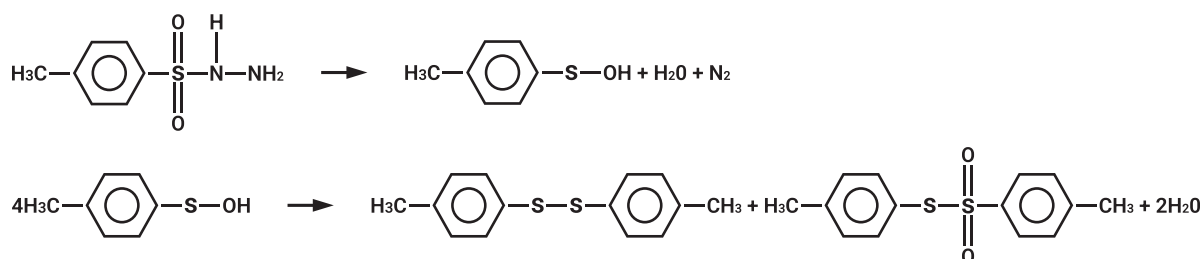
UNICELL-H series also has commercial applications for thermosetting polyesters and PVC sealants.

Properties of UNICELL-H series

Item	Specification
Grade Name	H
Chemical Name	p-Toluenesulfonylhydrazide
Appearance	Fine White Powder
Decomposition Temperature (°C)	143~147
Gas Volume (ml/g, at 25°C)	105~115
Average Particle Size (μm)	5.6~6.0
Moisture Content (%)	0.5 max.
Specific Gravity	1.42
Molecular Weight	186.23
Solubility (g sample/ 100g solvent, at 20°C)	Soluble in Water: 0.49 Toluene: 0.35 Alcohol: 5.1 DMSO: fairly soluble
CAS No.	1576 - 35 - 8

Decomposition of UNICELL-H series

A possible decomposition mechanism of UNICELL-H series has been suggested as follows;



UNICELL-H releases N₂, H₂O, and p-toluenesulfonic acid as an unstable intermediate when heated. The unstable p-toluene sulfonic acid turns into ditolyl disulfide and tolyl paratoluene thiosulfonate immediately. The sulfur-containing decomposition residues can function as curing agents in rubber compositions.

Applications

The decomposition rate of UNICELL-H series is appropriate for low processing temperatures and does not require decomposition activators. Processing conditions should be carefully adjusted to prevent loss of foaming efficiency. UNICELL-H series significantly activates curing during the foaming process; therefore, the addition of secondary accelerators is generally unnecessary.

*p-Toluenesulfonylhydrazide

*Specially designed foaming agents for rubbers and plastics