

UNICELL-OH Series

- p,p'-Oxybis(benzenesulfonylhydrazide)
- General purpose foaming agents

Description

UNICELL-OH series is an outstanding non-staining, non-discoloring, non-toxic, odorless, nitrogen releasing foaming agent for the production of both cellular rubbers and plastics. Among the latter, PE, PVC, EPOXY, TPR and PHENOLIC resins are currently expanded on a commercial scale with these foaming agents. It can be used also in the production of thermal insulation materials based on blend of synthetic rubbers and thermoplastics, e.g., NBR-PVC. **UNICELL-OH** series produces ammonia-free gas by thermal decomposition. Decomposition temperature of **UNICELL-OH** series is well matched with the conventional curing temperature range. **UNICELL-OH** series therefore provides good foaming efficiency at conventional curing temperature without activators. Furthermore, **UNICELL-OH** series has no effect on the cure of rubber or on the stability of PVC.

Properties of UNICELL-OH series

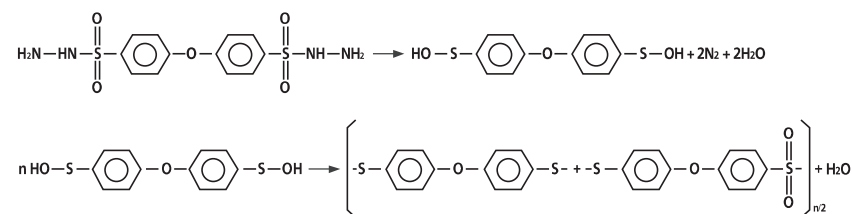
Item	Specification			
	OH	OH300N	OHW2	OH160NER
Chemical Name	p,p'-Oxybis(benzenesulfonylhydrazide)			
Appearance	White Fine Powder			
Decomposition Temperature (°C)	157~163	157~163	157~163	157~163
Gas Volume (ml/g, at 25°C)	119~129	120~130	115~125	110~120
Average Particle Size (μm)	3.2~4.2	2.9~3.3	4.0~4.5	3.2~4.2
Moisture Content (%)	0.5 max.	0.5 max.	0.5 max.	0.5 max.
Ash Content (%)	-	-	-	-
pH	6.0~8.0	6.0~8.0	6.0~6.8	6.0~8.0
Sieve Test (100mesh, max. %)	0.05	0.05	0.05	0.05
Chemical Formula	$\text{H}_2\text{N}-\text{NH}-\text{SO}_2-\phi-\text{O}-\phi-\text{SO}_2-\text{NH}-\text{NH}_2$			
Molecular Weight	358.40			
Specific Gravity	1.55			
Solubility (g sample/100g solvent, at 20°C)	Soluble in Water : 0.02 Toluence : 0.07 Benzene : 0.13 MEK : react DNF : react DMSO : very soluble			
CASNo.	80-51-3			

Applications

UNICELL-OH series can be used in the foaming of PVC, EPDM, EVA, LDPE, CR and other resin processing. **UNICELL-OH** series is suitable for plastisol and calendaring of PVC, extrusion, injection molding and other processing with thermoplastics.

Decomposition of UNICELL-OH Series

In the decomposition of **UNICELL-OH**, Nitrogen gas is produced as follows;



Solid residue is the non-polar aromatic sulfur containing polymer, which is approximately 84% of the origin weight of **UNICELL-OH**.

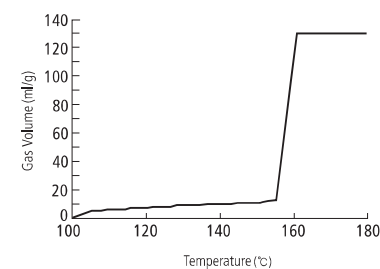


Fig1. The decomposition behavior of **UNICELL-OH** when heating speed is 5°C/min,

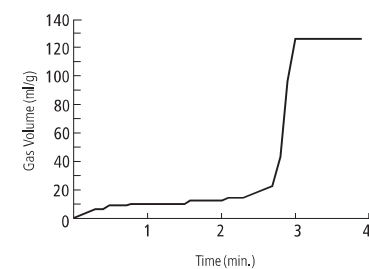


Fig2. The decomposition behavior of **UNICELL-OH** at the constant temperature of 160°C