

UNICELL-G Series

- N,N'-Dinitrosopentamethylenetetramine
- The most economic foaming agents for rubber foams

Description

UNICELL-G series, the trade name of dinitrosopentamethylenetetramine, is well known as the oldest and most economic foaming agent for plastics and rubbers. And they are non-staining and non-discoloring.

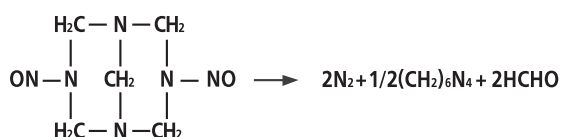
UNICELL-G series is usually mixed with oils and inorganic fillers in order to increase the stabilities.

Properties of UNICELL-G series

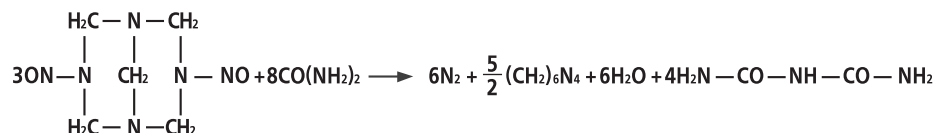
Item	Specification			
Grade Name	G (100%)	GP9	GP3	GP5
Chemical Name	N,N'-Dinitrosopentamethylene tetramine			
Appearance	Fine Lemon Yellow Powder			
Decomposition Temperature (°C)	197~203	197~203	197~203	202~208
Gas Volume (ml/g, at 25°C)	200~210	200~210	185~195	165~175
Moisture Content (%)	0.5 max.			
Chemical Formula	C ₅ H ₁₀ N ₆ O ₂			
Specific Gravity (at 25°C)	1.45			
Decomposition Heat (kcal / mol)	100			
Molecular Weight	186.17			
Solubility (g sample/100ml solvent, at 20°C)	Soluble in Water : 0.48 MEK : 1.6 Alcohol : 0.3 Insoluble in almost organic solvents. Can be exploded by strong acid, strong base and other oxidizing agent.			
CAS No.	101 - 25 - 7			

Decomposition of UNICELL-G series

<Mechanism-1>



<Mechanism-2>



When UNICELL-G is decomposed alone by heat (**Mechanism-1**), 2 moles of nitrogen gas and 2 moles of formaldehyde and 0.5 mole of hexamethylene tetramine are produced per 1 mole of UNICELL-G.

The formaldehyde and hexamethylene tetramine give rise to unpleasant odor in the foams.

The odor can be partially reduced by the addition of urea, melamine and certain amino compounds. Therefore, When UNICELL-G is decomposed with UNIPASTE series (**Mechanism-2**), unpleasant odor is reduced.

If UNICELL-G is contacted with strong acids, it immediately decomposes and may cause fire.