



# POKETONE

## Water & Food Application

**Non Toxic**  
**High Efficiency**



Acrylate Free  
Melamine Free  
Bisphenol A Free  
Formaldehyde Free  
Lead/ Chrome/ Free  
Phthalate Free

### Global Warming Potential

* PA6	6.70	
* PA66	6.40	
* PC	3.40	
* POM	3.20	
* ABS	3.10	
** PK	3.08	(kg CO <sub>2</sub> eq)

\* Other ETP data is based upon the Eco-profiles data from [www.plasticseurope.org](http://www.plasticseurope.org)

\*\* PK Data is based upon Korea LCI database and Ecoinvent database.



## Product Overview

A new thermoplastic polymer HYOSUNG Chemical POKETONE is a family of Semi-crystalline aliphatic polyketone, made of carbon monoxide(CO) and olefins. POKETONE are used as engineering plastics in a broad range of application with eco-friendly and non-toxic characteristics, such as no VOCs(Volatile Organic compounds), free of formaldehyde and acrylonitrile, making it perfect for **drinking water purifier parts, table ware.**



## Benefits for Water & Food contact parts

- No Formaldehyde
- Various overseas certifications (FDA, NSF, KTW, WRAS, ACS, W270)
- Low water absorption & Dimensional stability
- High flowability & Odor improvement for injection process

## Certifications





## Properties

Properties	Unit	POKETONE M330F	POKETONE M630F
Density	-	1.24	1.24
Melt Index	g/10min	60	6
Tensile Strength	MPa	60	58
Elongation at Break	%	> 300	> 300
Flexural Strength	MPa	57	53
Flexural Modulus	MPa	1,500	1,350
Impact Strength	KJ/m <sup>2</sup>	8	17



## Superior toughness



[**POKETONE** molded part of food tray  
Never Deformed after vehicle load]



[Melamine food tray  
Completely Cracked after vehicle load]



**POKETONE**



**Current Material [Melamine]**



# Test for Hazardous material elution (PK vs POM)

**Test Condition** : After 24hr of 17EA parts in 90°C hot water, 1 Liter

Sample Description : **Poketone(PK)** parts for water purifier (After 3 year usage)

Items	Standard		Results	Items	Standard		Results
	Conc.	Unit			Conc.	Unit	
Cd	below 0.005	mg/L	ND	1,1,1-Trichloroethane	below 0.01	mg/L	ND
Se	below 0.001	mg/L	ND	Dichloromethane	below 0.002	mg/L	ND
Pb	below 0.001	mg/L	ND	Cis-1,2-Dichloroethylene	below 0.004	mg/L	ND
As	below 0.001	mg/L	ND	Tetrachloroethylene	below 0.001	mg/L	ND
Cu	below 0.1	mg/L	ND	Epichlorohydrin	below 0.01	mg/L	ND
Cr <sup>6</sup>	below 0.005	mg/L	ND	Vinyl acetate	below 0.01	mg/L	ND
KMnO <sub>4</sub>	below 1.0	mg/L	ND	Styrene	below 0.002	mg/L	ND
Phenols	below 0.0005	mg/L	ND	1,2-Butadiene	below 0.001	mg/L	ND
Carbon tetrachloride	below 0.0002	mg/L	ND	1,3-Butadiene	below 0.001	mg/L	ND
1,2-Dichloroethane	below 0.0004	mg/L	ND	N,N-Dimethylaniline	below 0.01	mg/L	ND
1,1-Dichloroethylene	below 0.003	mg/L	ND	Formaldehyde	below 0.1	mg/L	ND
1,1,2-Trichloroethane	below 0.0006	mg/L	ND	Toluene	below 0.07	mg/L	ND
Trichlorethylene	below 0.003	mg/L	ND	Xylenes	below 0.05	mg/L	ND
Benzene	below 0.001	mg/L	ND				

Sample Description : **POM** parts for water purifier

KMnO <sub>4</sub>	below 1.0	mg/L	0.6	Styrene	below 0.002	mg/L	ND
Phenols	below 0.0005	mg/L	ND	1,2-Butadiene	below 0.001	mg/L	ND
Carbon tetrachloride	below 0.0002	mg/L	ND	1,3-Butadiene	below 0.001	mg/L	ND
1,2-Dichloroethane	below 0.0004	mg/L	ND	N,N-Dimethylaniline	below 0.01	mg/L	ND
1,1-Dichloroethylene	below 0.003	mg/L	ND	Formaldehyde	below 0.1	mg/L	0.066
1,1,2-Trichloroethane	below 0.0006	mg/L	ND	Toluene	below 0.07	mg/L	ND
Trichlorethylene	below 0.003	mg/L	ND	Xylenes	below 0.05	mg/L	ND
Benzene	below 0.001	mg/L	ND				

\* ND : No detection



## Poketone applications in our kitchen



### ① Water purifier parts



### ② Kitchen wares parts



### ③ Water supply parts



## Joint Marketing & Social contribution activities



“Donating to a social welfare institution (POKETONE Food Tray)”

• POKETONE commercial Plant in South Korea, Ul-san City, Production capacity : 50,000 MT/Year



• No formaldehyde · FDA & EU food contact · Low abrasion loss (no particle) · Excellent chemical resistance

## **CONTACT US**

### **Republic of Korea**

+82 2 2146 5583, [jdm@hyosung.com](mailto:jdm@hyosung.com) / +82 2 2146 5589, [issooho@hyosung.com](mailto:issooho@hyosung.com), [sej@hyosung.com](mailto:sej@hyosung.com)

### **China**

+86 021 62250312 (ext.8030), [yjkim77@hyosung.com](mailto:yjkim77@hyosung.com) / +82 2 2146 5573, [ropopchem@hyosung.com](mailto:ropopchem@hyosung.com), [kibeom.kang@hyosung.com](mailto:kibeom.kang@hyosung.com)

### **Europe**

+49 6172 8553222, [jakelee@hyosung.com](mailto:jakelee@hyosung.com) / +82 2 2146 5591, [lovetoken@hyosung.com](mailto:lovetoken@hyosung.com), [hjkim13@hyosung.com](mailto:hjkim13@hyosung.com)

### **America**

+82 2 2146 5572, [mkjung@hyosung.com](mailto:mkjung@hyosung.com) for NA and SA

### **R.O.W (Rest of world)**

+82 2 2146 5551, [jaejung@hyosung.com](mailto:jaejung@hyosung.com)

**Further Information**  
**[www.poketone.com](http://www.poketone.com)**

**POKETONE**<sup>TM</sup>  
**HYOSUNG POLYKETONE**

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