

POKETONE FOR PLASTIC TOYS



POKETONE?

HYOSUNG POKETONE is a new class of engineering thermoplastics which are composed of carbon monoxide, ethylene and propylene, it is called as aliphatic polyketone. As a kind of semi-crystalline plastic, POKETONE can be used for a broad range of applications in toy industry with eco-friendly and it contains no harmful and toxic substances.

POKETONE PROPERTIES FOR TOYS

Properties	Unit	POKETONE M330F(F-S)	POKETONE M630F
Density	-	1.24	1.24
Melt Index	g/10min	60	6
Tensile Strength	MPa	60	58
Elongation at Break	%	> 240	> 240
Flexural Strength	MPa	57	53
Flexural Modulus	MPa	1,500	1,350
Impact Strength	KJ/m ²	8	17

CERTIFICATION



All F grades of POKETONE comply with FDA, EN71-3, PAHS and a variety of certifications. They guarantee chemical safety of POKETONE.

CONTACT US

Republic of Korea

+82 2 2146 5583, jdm@hyosung.com
+82 2 2146 5589, issooho@hyosung.com

China

+86 21 6225 0312 (ext.8030), yjkim77@hyosung.com
+82 2 2146 5573, leewhite0412@hyosung.com

Europe

+49 6172 8553222, jakelee@hyosung.com
+82 2 2146 5590 (or 5591), lovetoken@hyosung.com

America

+82 2 2146 5572, mkjung@hyosung.com for NA
+82 2 2146 5595, dooyong.eom@hyosung.com for SA

R.O.W (Rest of world)

+82 2 2146 5571, shin611@hyosung.com

+Note : The data contained in this publication are based on our current internal knowledge and experience, these do not imply any guarantee of certain properties. Most images are from googling image researching, which is considered as public open information.

POKETONE SAFETY REPORT

POKETONE
HYOSUNG POLYKETONE

Auftraggeber: Client:	FERRERO TRADING LUX S.A. FINDEL BUSINESS CENTER COMPLEXE B, RUE DE TRÈVES, L-2632 FINDEL, Luxembourg
Prüfgegenstand: Test item:	Toy for children
Bezeichnung / Typ-Nr.: Identification / Type No.:	FERRERO "Green List" - Resin "POK M330F-S" Supplier: Hyosung Corporation
Wareneingangdatum: Date of receipt:	30.07.2019
Prüfmuster-Nr.: Test sample No.:	A000238316
Prüfzeitraum: Testing period:	30.07.2019 – 14.08.2019
Ort der Prüfung: Place of testing:	Toy testing Nuremberg
Prüflaboratorium: Testing laboratory:	TÜV Rheinland LGA Products GmbH
Prüfergebnis: Test result:	Pass



Global Warming Potential

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

* Other ETP data is based upon the Eco-profiles data from www.plasticseurope.org

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



intertek
Total Quality. Assured.

SAMPLE DESCRIPTION: One (1) group of submitted sample said to be Hyosung Corporation Polyketone M630A
 Sample received date: December 1, 2017
 Date of testing started: December 1, 2017
 Date of testing ended: December 7, 2017

TEST CONDUCTED:
AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

Tested Samples	Standard	Result
Submitted sample	McDonald's Restricted Substances Standard Revision 9 - Heavy Metal Test	For your information
	McDonald's Restricted Substances Standard Revision 9 for Monomers Requirement - Total Bisphenol - A Content	Pass

PAGE 1/T0 BE CONTINUED

TOTAL 3 PAGES

LCA (Lifetime Cycle Assessment) is a methodology for assessing environmental impacts associated with all the stages of the life-cycle of a commercial product, process, or service. The LCA value of POKETONE is lower than polyamide and polyoxymethylene, it means that POKETONE has better eco-friendly properties in the manufacturing process in terms of consumption of energy.

POKETONE is satisfied with a variety of chemical safety requirements which are based on EN71, EU Directive 2009/48/EC and ASTM F963-17 (US CPSC) in toy application.

ANY SUCCESSFUL STORIES ? REFERENCE?

McDonalds RSS Pass : M330F, M630F (Distributor : Polymer Solution)

Ferrero Rocher Green List Pass : M330F-S (Distributor : Chi Bond HK Limited)

HASBRO SRS Pass : POKETONE Base Grade