ekö pet
ZAO «Alco-Naphtha»
Baltiyskoye Shosse. 123, Kaliningrad, 236013, Russia
phone:+7(4012)563-692, fax: +7(4012) 563-711
e-mail: office@ekopet.ru, site: www.ekopet.ru

Polyethyleneterephtalate (PET)

EKÖPET 80

Index name	Units	Specification	Test methods (according technical conditions TY 2226-001-13649021-2011)
Intrinsic viscosity	dl/g	0,80 ± 0,02	IQ-10682 Ph/DCB (50:50) Recalculation Ph/TCEt (60:40)
Melting point	°C	246 ± 2	IQ-10704 (DSC)
Acetaldehyde content	ppm	1,0 Max	IQ-10698
Color number (CIE-LAB) L^* b^*		 82,0 Min - 1 ± 2	IQ-10688
Moisture content	weight %	0,2 Max	IQ-10683
Dust content	ppm	100 Max	IQ-10702
Pellets weight	g/100 pcs	1,6 ± 0,2	IQ-10692

Remark: **EKÖPET 80 BB** – material is packed in **big-bag**, weight net 1050±5 kg.

Upon agreement with the Buyer **EKÖPET 80** to be supplied with other type of packaging to ensure the safety of the quality and quantity of PET resin during transportation and storage.

HEAD OFFICE. :GROUND FLOOR, G&T TOWER #10, BEAUMONT ROAD, CIVIL LINES-10, KARACHI, PAKISTAN 75530.
HEAD OFFICE: TEL NO. (+9221)35659585-7. FAX. (+9221)35659516.
FACTORY. 117-83, RAILWAY SIDING OFF. EXPORT PROCESSING ZONE ROAD,
NEAR WHEAT GODOWN, LANDHI, KARACHI – 75160, PAKISTAN.
FACTORY. TEL. #: (021) 5017484 TO 85 FAX: (021) 5017750
E-MAIL. NOVAFAC@NOVATEX.COM WEBSITE:WWW.GATRONOVA.COM

GATRONOVA PET

Standard Specifications of Gatronova PET resin
A-80 Polyester Bottle Grade Chips

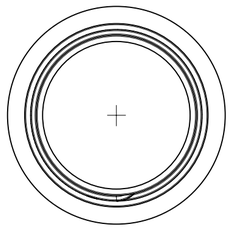
Description	Unit	Test Method	Test Equipment	Novatex Specifications
Intrinsic viscosity (IV)	[dl/g]	PV-07040.5ª	Capillary Viscometer	0.80 ± 0.02ª
DEG Content	%	PV-09040	Gas Chromatograph	≤ 1.5
Carboxylic End Groups	m.mol/kg	PV-07013.4	Titranoplus	35 max.
Acetaldehyde (AA)	ppm	Cobarr 201/A [1]	Gas Chromatograph	< 1.0
Moisture Content	%	PV-07109.5	MEECO	0.4 Max.
Melting Point (DSC)	[°C]	PV-07089.2	Mettler DSC	247 ± 2
Color No. Hunter Lab	LH	PV-07136.1	BYK Gardener	≥ 83
Color No. Hunter Lab	bH	PV-07136.1	BYK Gardener	0.0 ± 0.95
Number of Chips/gram	No.	Manual	-	61 ± 3
Crystallanity	%	ASTM D 1505	Techne Gradient Column	≥ 50

Specifications as per Zimmer test methods. Details of method can be provided upon request.
[1] As per Sinco method
ª IV is done according to PV-07040.5- Solvent is Phenol/Dicholobenzene using ubbelohde type 1(c) capillary viscometer at 25°C.
≤ read as less than or equal to
≥ read as greater than or equal to
The information and the data contained here is believed to be correct and there are FDA/EEC compliance certifications and other major food grade approvals available and can be provided upon request.

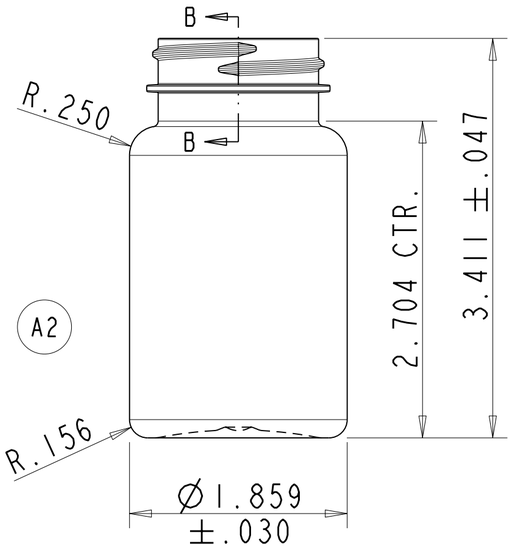
Please direct all you inquiries to:

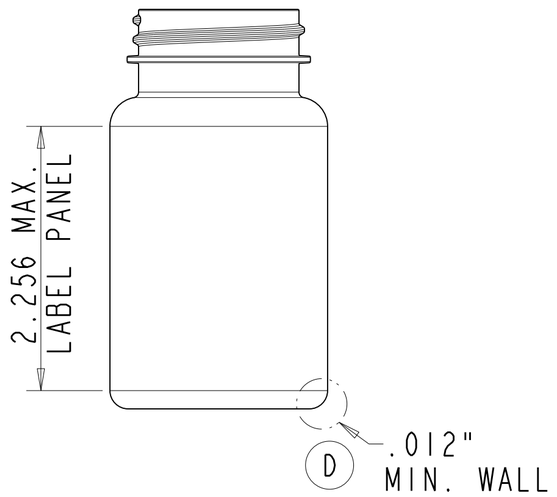
Gatronova Marketing and Exports Department
GROUND FLOOR, G&T TOWER #10, BEAUMONT ROAD, CIVIL LINES-10, KARACHI, PAKISTAN 75530.
Email: marketing@gatronova.com
Phone: (+9221)35659585-7.
Fax: (+9221)35659516.

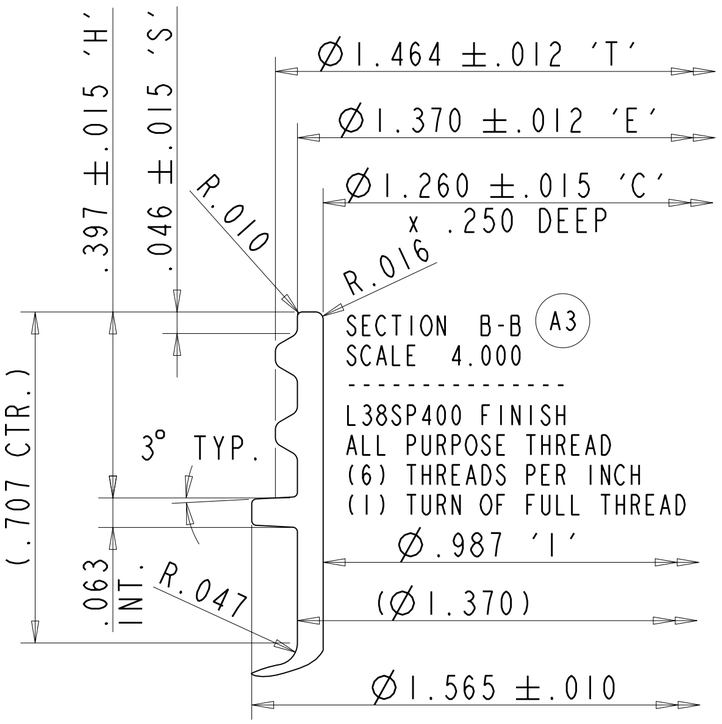
REV	DATE	BY	REVISION
	091710	RRJ	THIS DRAWING HAS BEEN REDRAWN FROM GMP-1026-C-PD.
A	101710	RRJ	A1 REMOVED NOTES 5 & 6, A2 REMOVED DIM'S 2.412 & 1.284, A3 REVISED THREAD DETAIL.
B	092415	ES	A1 REDRAWN FROM 3196-0203-A.
C	050917	ES	UPDATED PUSHUP ENGRAVING.
D	081518	ES	ADDED MIN. WALL LOCATION & NOTE 5.
E	112718	ES	WEIGHT WAS 14 ±1 GRAMS.

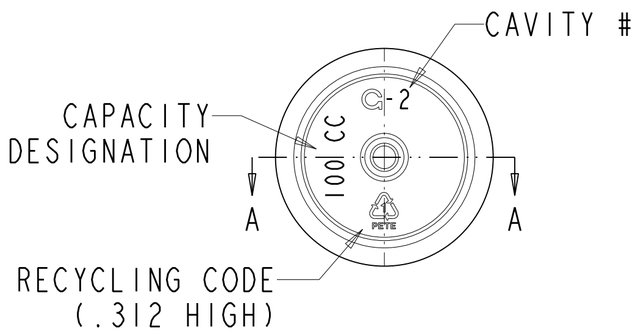


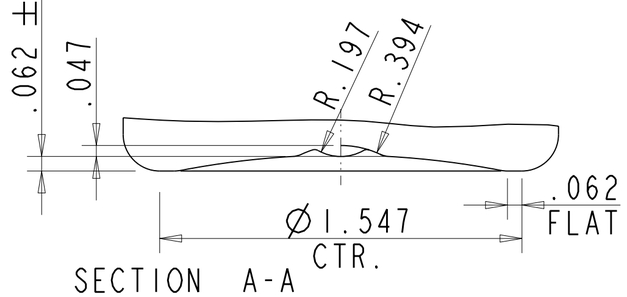
SCALE 0.750











SECTION A-A
SCALE 2.000

A1 NOTES:

1 - MOLD NO. NB-400118
2 - MAX. VARIATION IN AVERAGE DIAMETER BETWEEN TOP AND BOTTOM NOT TO EXCEED .010
3 - ALL DIMENSIONS APPLY AS MOLDED
4 - MAXIMUM OUT OF ROUNDNESS ON BODY OF CONTAINER NOT TO EXCEED .015.
5 - .012" MIN. WALL THICKNESS.

19.29 SQUARE INCHES	5.19 SQUARE INCHES	16.0 ±1.0	PET	123.9 ±4.5 cc (4.19 ±.15 fl oz)
SURFACE AREA BELOW BASE OF NECK	AREA AT PART LINE BELOW BASE OF NECK	GRAMS	MAT'L.	OVERFLOW CAPACITY

Performance Plastic Technologies
484-885-0569

100 cc CT ROUND WIDE MOUTH PACKER
L38SP400 FINISH

FILE NAME:	SIZE	DRAWN BY:	DWG NO.
XXXX_100cc-STR-SIDE (15-075-01-E)	C	RRJ	3196-0203-E
	SCALE: 1,4:1	DATE: 09-17-2010	SHEET 1 OF 1

Riverdale Color®

Technical Data Sheet

Colors and Additives for Plastics

Liquid White

Product # 11989F | **Std. Lot #**10095501 | **Customer:** COLORCO, INC.

Resin: PET | **Customer ID:** WHITE | **Address:** 1261 W. ELIZABETH AVE. LINDEN, NJ 07036

Usage %: 1.30 | **Wt./Gal.:** 19.0 | **Regulatory:** FDA

Additives: N/A | **Carrier:** Ester Type Plasticizer

Specification	Test Method	Parameters
Appearance	Visual	Free-flowing liquid with no or minor separation of phases and free from mechanical impurities.
Color Variance	Instrumental TM-02-014	Total color difference should not exceed 1.0 CIE Lab Units. (1.5 CIE Lab Units for Fluorescents).
	Visual TM-02-014	No or minor visual color difference**
Density (Wt./Gal.)	TM-02-017*	Variance should not exceed +/- 5% of the standard
Fineness of Pigment Dispersion (Grind)	TM-02-019*	Below 20 µm (6 or higher on Hegman Grind Gauge)
Dynamic Viscosity	TM-02-016*	☐ 900-3500 cP (for transparent) ☒ 8000- 13000 cP (for opaque) ☐ 1900-6000 cP (for Injecta Products) ☐ Other

* Riverdale Color's internal standards.

** All comparisons are vs the approved sample of liquid colorant

QR-02-114 Revision: B 04/17/15

1 Walnut Street, Perth Amboy, NJ 08861 Tel: 732-376-9300 Fax: 732-376-9394
Web site: www.riverdalecolor.com

TECHNICAL DATA SHEET *KÖKSAN PET K-080*

KÖKSAN

Koksan PET Resin is a general purpose food grade PET copolymer resin that is suitable for a wide variety of application like containers and films. Koksan Pet Resin offers an excellent strength characteristics like dimensional stability and mechanical properties.

Koksan PET Resin is suitable for injection, injection stretch blow molding and extrusion application mainly for carbonated soft drinks, water bottles, alcoholic beverages, households, oil, agrochemicals, wide mouth containers, PET sheets and film extrusion.

Property	Unit	Value	Test Method
Intrinsic Viscosity	*dL/g*	0,80±0,02	ISO 1628-5
Acetaldehyde	*ppm*	max. 1	ASTM F-2013-01
Color L*		min. 90	ASTM D-6290
b*		max.(+1)	
Melting Point	*°C*	246±2	DIN 53765
Moisture Content	*%*	max. 0,2	DIN 51777 Part 2 (09/74)
Chip Size	*g/100 chips*	1,6±0,2 spherical	
Fines	*ppm*	max. 100	

Specification *KÖKSAN PET type K-080*

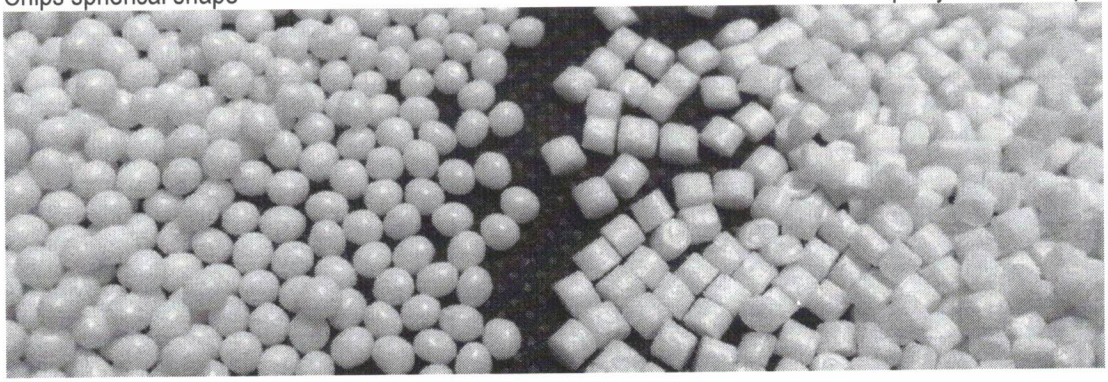
Form No: FR-KY-38 / 04
Issue Date: 27.11.2013
Revision No / Date: 04/23.12.2015

Technology of Our Resin / Advantages

Pellet Shape / Spherical

Chips spherical shape

Chips cylindrical shape



No dust generation during conveying

KÖKSAN PET Resin is produced using the latest state-of-art MTR technology with spherical pellet shape which ensures smooth conveying in long pipelines with near zero fines generation.

Save Energy during drying / injection process

The uniform spherical surface allow for easy flow of air around the PET pellets and not having any sharp corners helps in consistent drying at lower temperatures, saving valuable energy.

KÖKSAN PET VE PLASTİK AMB. SAN. VE TİC. A.S. KÖKSAN PET PACKAGING INDUSTRY CO.
Address : Organize Sanayi Bolgesi, 83422 Nolu Cad. No:10 PK:39 Baspinar, 27600 Sehitkamil / Gaziantep / TURKEY
Tel : +90.342.3570330 Fax :+90.342.3570343-44 E-mail : info@koksan.com

Uniform IV within Resin Pellet
The final viscosity is reached in the melt phase by MTR (Melt-to-Resin) Technology. Since the reaction continues in the melt phase, the IV is uniform within pellet. This property gives the polymer easy melting behavior. In the conventional technology, the final viscosity is attained in SSP (Solid State Polycondensation) process. As it is known, the heat transfer coefficient of PET is very low. So, the viscosity is not uniform within pellet.

Low AA generation during drying and injection process
The low crystallinity and heat of the resin provides unique advantages of low residual acetaldehyde generation in injection process and also lower energy requirement for bottle production.

Low Dust Content in Resin Pellet
KÖKSAN latest state-of-art MTR with hot cutting technology ensures very low dust content in the resin pellets which helps superior product quality afterwards process.

Processing Conditions
The Processing condition depends on machines, product size and mold design.

Drying Temperatures	160 -180°C
Drying Time	4 – 6 hours
Injection Temperatures	260 - 280°C

Recommendation
We advise to our customers to use 8 – 12°C lower temperature and 30 – 60 min lower drying condition compare with the other PET resin which is produced with conventional SSP technology. In addition to drying process, decreasing temperatures around 8 – 12°C during injection process give better results in our standard injection application.

Remark
The above results confirm to our specification for type K-080.

All above mentioned results are based on KÖKSAN PET Resin Laboratory conditions and its analytical methods shown. Any other/different analysis methods or conditions may give other/different values. KÖKSAN PET Resin material will be accompanied by its Certificate of Analysis, with the relative representative average values of specified method/results.

KÖKSAN PET Resin shall not be responsible of the use of any products compliance, methods related to quality specifications and required regulations. No other warranty, either expressed or implied, regarding the suitability of the product for any particular purpose is made. Buyers must take their own determination about safety, health, environment protection and suitability of use for their intended purpose. No warranty is made of the merchantability or fitness of any products.

Form No:	FR-KY-35 / 02
Issue Date:	29.01.2014
Revision No / Date:	02/23.12.2015

KÖKSAN PET VE PLASTİK AMB. SAN. VE TİC. A.S. KÖKSAN PET PACKAGING INDUSTRY CO.
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