

Product Profile

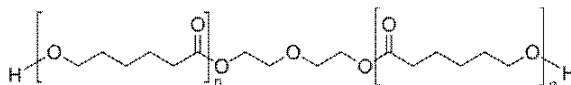
Identification

Product Name: Poly(ε-Caprolactone)

Product Lot Number: P41215-CL

CAS #: 24980-41-4

Chemical Architecture:



Composition:

Mn (g/mole)	54,000
Mw (g/mole)	103,500
Mw/Mn	1.90
dn/dc (mL/g) in THF at 30 °C	0.030

Method of Synthesis

The polymer is synthesized by ring opening polymerization process.

Solubility in different solvents:

THF	√	DMF	√
Alcohol	X	CHCl ₃	√
Toluene	√	Water	X

Validation of Architecture

A. Gel Permeation Chromatography (GPC), SEC Profile:

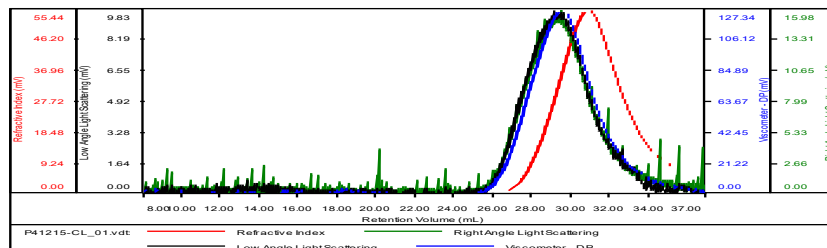
Molecular weights were determined by Agilent Technologie 1260 Infinity II GPC/SEC System equipped with Triple detector (RI, Viscometer, RALS 90° and LS 15°) and three columns (PLgel, 7.5x300 mm, 5μm-10μm, 10⁵-10⁶Å). THF (stabilized BHT) with 1%(v/v%) TEA was the eluent. The flow rate was 1.0 ml/min.



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P41215-CL

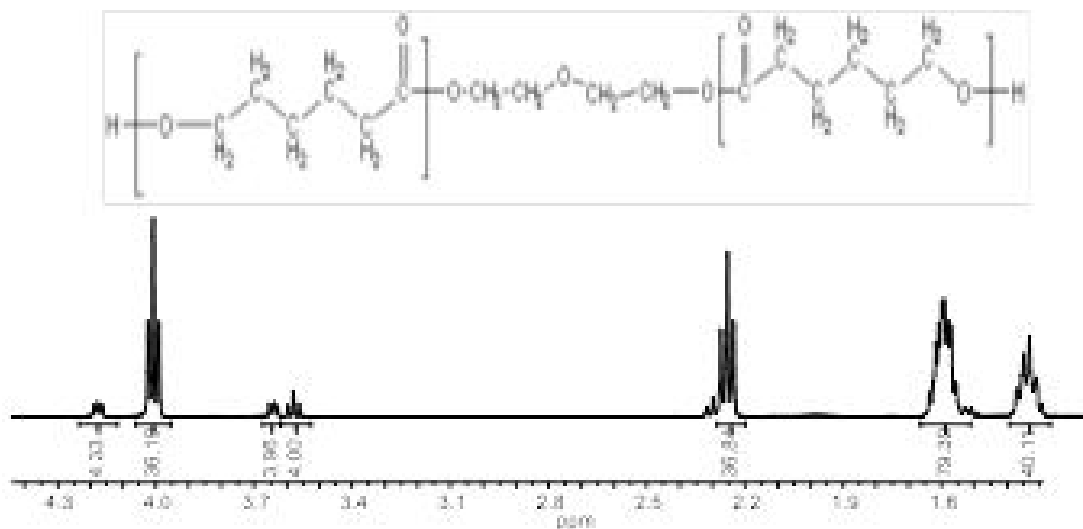
Concentration (mg/mL)	16.0977
Sample dn/dc (mL/g)	0.0350
Method File	PS99K-May-2018-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P41215-CL_01.vdt	54,262	103,509	1.908	0.5033	60,102

B. NMR (¹H NMR) of CL

CL sample was dissolved in CDCl₃. ¹H NMR spectra was determined using a 500 MHz. Bruker Avance III spectrometer.



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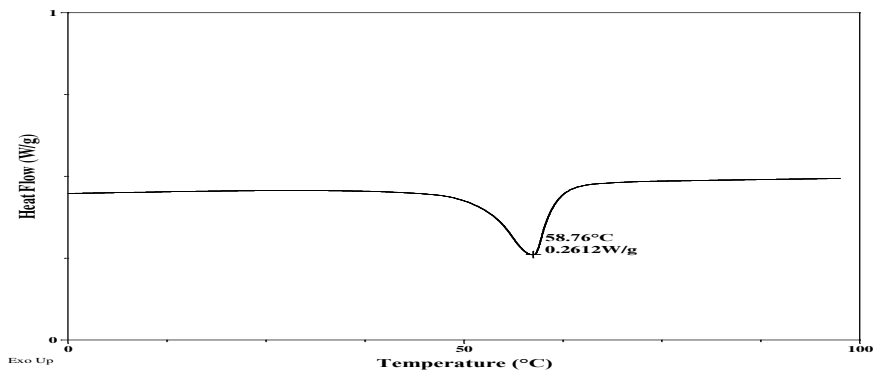


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Thermal analysis result at a glance:

T _m (°C)	T _c (°C)	T _g (°C)
59	12	Not distinct

Melting curve for the CL sample:



Crystallization curve for the CL sample:

