

DALIAN HANDOM CHEMICALS CO.,LTD.

POLY(D,L-LACTIDE-CO-GLYCOLIDE)

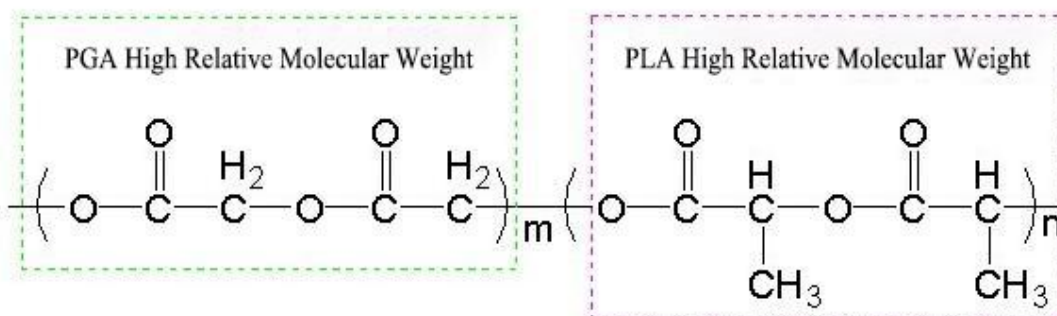
Abbreviation: PLGA

Appearance: White or yellow particles

Molecular Formula: $(C_6H_8O_4)_n(C_4H_4O_4)_m$

CAS No.: 26780-50-7

Chemical Structural Formula:



Product Features and Applications:

PLGA is a random copolymer, amorphous polymer, widely used in surgical sutures, anti-adhesion membranes, and tissue engineering scaffolds. Compared with PLA, the polymer degradation time can be controlled according to the GA content, and the material is soft and elastic. Different monomer ratios can produce different types of PLGA. For example: PLGA 75:25 means that the polymer is composed of 75% lactic acid and 25% glycolic acid. The degree of degradation of PLGA varies with the monomer ratio, the greater the glycolide ratio, the easier it is to degrade.

Test Items	Specifications	Test Methods
Intrinsic viscosity	0.2 dl/g ~ 2.5 dl/g	Ubbelohde viscometer
Viscosity-average Molecular Weight	1 ~ 400000	Ubbelohde viscometer



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Number-average molecular weight	1 ~ 400000	Gel permeation chromatography(GPC)
Glass transition temperature	40°C ~ 60°C	Differential thermal analysis and differential scanning calorimetry
Melting point	---	---
Residual monomer	Less than 1%	Gas chromatography, liquid chromatography
Residual solvents	Less than 0.05%	Gas chromatography, liquid chromatography
Heavy Metals	Less than 10 ppm	Colorimetry, atomic absorption spectroscopy
Density	1.20g/cm ³ ~ 1.30g/cm ³	---
Sulphated ash	Less than 0.05%	Burn at high temperature and weigh the remaining residue

Storage Method:

☞ This series of products are biodegradable materials. During storage, contact with reagents that can cause product degradation should be avoided, including water, acidic substances, alkaline substances, and alcohols.

☞ During the storage process, this series of products should be sealed, dried and stored at low temperature (refrigerator -20°C), and should be sealed with a sealing machine (remaining products after use must not be packaged and stored in ziplock bags).

☞ When using, take it out of the refrigerator and leave it at room temperature, wait until the temperature reaches room temperature and wipe off the condensed moisture on the surface of the packaging bag before opening it (take it out of the refrigerator and open it at a constant temperature, moisture in the air will condense on the surface of the product, causing the product to degrade). The ambient air humidity during use should be less than 35% to prevent the remaining products from getting damp and affecting product quality.

☞ Avoid contact with eyes, skin, etc. If contact occurs accidentally, rinse with plenty of water and seek medical advice.



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Type	Composition Ratio D, LA/GA	Intrinsic Viscosity Range(dl/g)	Weight-average Molecular Weight
PLG90-04	90/10	0.2 ~ 0.4	10000 ~ 30000
PLG90-07	90/10	0.4 ~ 0.7	30000 ~ 65000
PLG90-10	90/10	0.70 ~ 1.00	65000 ~ 110000
PLG90-14	90/10	1.00 ~ 1.40	110000 ~ 180000
PLG90-18	90/10	1.40 ~ 1.80	180000 ~ 260000
PLG90-22	90/10	1.80 ~ 2.20	260000 ~ 350000
PLG90-24	90/10	2.20 ~ 2.50	350000 ~ 410000
PLG75-04	75/25	0.2 ~ 0.4	10000 ~ 30000
PLG75-07	75/25	0.4 ~ 0.7	30000 ~ 65000
PLG75-10	75/25	0.70 ~ 1.00	65000 ~ 110000
PLG75-14	75/25	1.00 ~ 1.40	110000 ~ 180000
PLG75-18	75/25	1.40 ~ 1.80	180000 ~ 260000
PLG75-22	75/25	1.80 ~ 2.20	260000 ~ 350000
PLG75-24	75/25	2.20 ~ 2.50	350000 ~ 410000
PLG50-04	50/50	0.2 ~ 0.4	10000 ~ 30000
PLG50-07	50/50	0.4 ~ 0.7	30000 ~ 65000
PLG50-10	50/50	0.70 ~ 1.00	65000 ~ 110000
PLG50-14	50/50	1.00 ~ 1.40	110000 ~ 180000
PLG50-18	50/50	1.40 ~ 1.80	180000 ~ 260000
PLG50-22	50/50	1.80 ~ 2.20	260000 ~ 350000
PLG50-24	50/50	2.20 ~ 2.50	350000 ~ 410000