

Product Name:	DL-Phosphinothricin
Product Number:	P034
CAS Number:	77182-82-2
Molecular Formula:	$C_5H_{15}N_2O_4P$
Molecular Weight:	198.16
Form:	Powder
Appearance:	Off-white powder
Solubility:	Water: Freely soluble
Source:	Synthetic
Melting Point:	215 °C
Storage Conditions:	2-8 °C
Description:	DL-phosphinothricin is a freely soluble broad spectrum herbicide also known as glufosinate ammonium.
Mechanism of Action:	DL-phosphinothricin interferes with the synthesis of the amino acid, glutamine. Toxicity of DL-phosphinothricin arises from glutamine shortages which can lead to an inability to detoxify ammonia and suppress photosynthesis activity.
Plant Biology Applications	DL-Phosphinothricin is a broad spectrum herbicide used to inhibit growth of unwanted plants. As an herbicide, DL-Phosphinothricin can be used as selection marker as well since resistance can be transferred by genetic transformation. McPhee and co-workers (2004) used glufosinate ammonium for selecting successfully transformed Pea plantlets.
References:	You W. and Barker A.V., 2002, Herbicidal actions of root-applied glufosinate ammonium on tomato plants. J. Amer. Soc. Hort. Sci 127(2):200-204. 2002 McPhee, K.E., Gollasch S., Schroeder H.E. and Higgins T.J.V. Gene technology in pea. Transgenic crops of the world, chapter 26.