

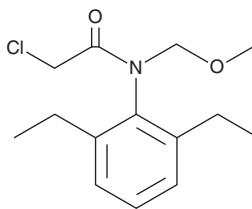
PRODUCT INFORMATION



Alachlor

Item No. 30854

CAS Registry No.: 15972-60-8
Formal Name: 2-chloro-N-(2,6-diethylphenyl)-N-(methoxymethyl)-acetamide
MF: $C_{14}H_{20}ClNO_2$
FW: 269.8
Purity: $\geq 95\%$
Supplied as: A crystalline solid
Storage: $-20^{\circ}C$
Stability: ≥ 2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Alachlor is supplied as a crystalline solid. A stock solution may be made by dissolving the alachlor in the solvent of choice, which should be purged with an inert gas. Alachlor is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of alachlor in these solvents is approximately 30 mg/ml.

Description

Alachlor is an acetanilide herbicide.¹⁻³ It inhibits the growth of *Avena* seedlings when applied to the root medium by subirrigation at concentrations ranging from 0.1 to 25 mM.¹ Alachlor (3.4 kg/hectare) reduces woolly cupgrass (*E. villosa*) emergence by 85% in corn crop fields.² It also reduces emergence of broadleaf signalgrass (*B. platyphylla*) in peanut crops when applied at planting.³ Alachlor ($>1 \mu\text{g/ml}$) induces sister chromatid exchanges and chromosome aberrations in isolated human peripheral blood lymphocytes.⁴ *In vivo*, alachlor (126 mg/kg per day) induces olfactory mucosal tumor formation in rats.⁵ Formulations containing alachlor have been used for weed control in agriculture.

References

1. Chang, T.C., Marsh, H.V., Jr., and Jennings, P.H. Effect of alachlor on *Avena* seedlings: Inhibition of growth and interaction with gibberellic acid and indoleacetic acid. *Pestic. Biochem. Physiol.* **5**(4), 323-329 (1975).
2. Owen, M.D.K., Hartzler, R.G., and Lux, J. Woolly cupgrass (*Eriochloa villosa*) control in corn (*Zea mays*) with chloroacetamide herbicides. *Weed Technol.* **7**(4), 925-929 (1993).
3. Chamblee, R.W., Thompson, L., Jr., and Bunn, T.M. Management of broadleaf signalgrass (*Brachiaria platyphylla*) in peanuts (*Arachis hypogaea*) with herbicides. *Weed Sci.* **30**(1), 40-44 (1982).
4. Ribas, G., Surrallés, J., Carbonell, E., et al. Genotoxicity of the herbicides alachlor and maleic hydrazide in cultured human lymphocytes. *Mutagenesis* **11**(3), 221-227 (1996).
5. Genter, M.B., Burman, D.M., and Bolon, B. Progression of alachlor-induced olfactory mucosal tumours. *Int. J. Exp. Pathol.* **83**(6), 303-308 (2002).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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