

Description

Methylaluminoxane (MAO) is used primarily as a catalyst component in Ziegler-Natta type systems for olefin polymerizations.

Physical Properties

Form 5 - 30 wt. % MAO* in toluene
Appearance clear to cloudy solution
Al, wt. %..... 2.5 - 14.0 *

**MAO is a complex mixture of linear and cyclic oligomeric aluminoxanes containing 20 - 30 wt. % trimethylaluminum. MAO solubility depends on its molecular weight, composition and trimethylaluminum content. MAO has good solubility in aromatic hydrocarbons such as toluene, xylene, cumene and mesitylene. Solubility in aliphatic hydrocarbons such as isopentane, hexane and heptane is much lower. MAO reacts with solvents containing active hydrogen.*

Shipping Information

Container Designation	Nominal Volume		Approximate Loadings	
	Gallons	Liters	Pounds	Kilograms
Portable tanks	250	945	1,400	635
(DOT-51)	430	1,635	2,400	1,089
	1,980	7,500	11,100	5,035
Cylinders: dual valve				
(DOT-4BA240)				
3 gallon size	2.9	11	15	6.8
5 gallon size	5.7	22	30	13.6
26 gallon size	28.0	106	162	73.0
Laboratory cylinders				
(DOT-3AA1800)				
0.2 gallon size	0.18	0.68	0.6	0.3
1.0 gallon size	0.94	3.60	4.0	1.8

*Loadings are for MAO in toluene solutions.

Actual weight depends on highway load limits.

Shipments are made in accordance with DOT regulations — Section 173.134.

All containers are shipped blanketed with dry nitrogen under slight positive pressure.

Hydrocarbon solutions are also available blended to customer specifications.

Tank rail cars and tank trucks are available in North America only.

Shipping Classifications

Proper shipping name:	Organometallic compound solution, water-reactive, flammable, n.o.s. (methylaluminoxane, toluene)
Hazard class:	4.3 (dangerous when wet)
ID number:	UN3207
Placard(s):	dangerous when wet w/number 4
Label(s):	dangerous when wet
MARPOL classification:	not applicable
Harmonized tariff number:	2931.00.9050
Schedule B number:	2931.00.9055

Safety and Handling Information The pyrophoric nature of MAO, a white powder in neat form, presents potential hazards not common to most industrial chemicals. MAO, being pyrophoric, breaks into flame spontaneously and gives off dense smoke when exposed to air. It reacts violently with water. MAO, however, as opposed to other aluminum alkyl type compounds, is sold only as a solution in a hydrocarbon solvent, preferably toluene. Hydrocarbon solutions of MAO at normally used concentrations are not pyrophoric. However, these solutions will react with air and moisture at the surface of the solution, giving off smoke, heat and flammable gas. For specific information on the safe handling and toxicity of this product, please refer to the material safety data sheet, which is available upon request.

Chemical Registration Numbers CAS: No CAS number assigned.

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