

PMAO-IP 7wt% Al in Toluene

Polymethylaluminumoxane-Improved Performance ^a

PMAO-IP 7wt% Al in Toluene is used as cocatalysts in polymerization of olefins and other monomers via single-site catalysts.

CAS number
206451-54-9

EINECS/ELINCS No.
regarded as 'polymeric
substance' ^b

TSCA status
listed on inventory

Molecular weight
approx. 58.0

Characteristics

Appearance	Clear colorless liquid
Density, 25 °C	0.889 g/cm ³
Melting point	≤ 88°C °C
Solubility	Soluble in aromatic hydrocarbons; poorly soluble in aliphatic hydrocarbons
Stability to air	May ignite upon exposure
Stability to water	Reacts violently
Viscosity, 30 °C	1.2 mPa.s

Composition

Active Al	^{b e} 5-25 wt%
Aluminum	^{b d} 6.0-8.0 wt%
Methane	^{b c} ≥ 98.0 molar%
Other alkanes	^{b c} -- molar%

Notes:

^a PMAO-IP composition is covered under US Patent 5,831,109. For more information on aluminoxanes, see technical bulletin entitled Properties of Aluminoxanes from Nouryon. ^b Data for toluene solution containing 7% aluminum; this corresponds to a PMAO-IP concentration of about 15%. ^c Calculated from gas chromatographic analysis of hydrocarbons and hydrogen obtained by hydrolysis. ^d Determined by titration of aqueous hydrolyzate. ^e Determined by the pyridine titration method.

Applications

PMAO-IP 7wt% Al in Toluene is used as cocatalysts in polymerization of olefins and other monomers via single-site catalysts.

Storage

Toluene solutions of PMAO-IP 7wt% Al in Toluene are stable for over 12 months. Extended storage at temperatures > 25°C may cause solution to become viscous.

Packaging and transport

Commercial quantities of PMAO-IP solutions are available B-type and C430S cylinders and portable tanks. Contact your Nouryon representative for more information on containers. A technical bulletin entitled Pyrosafe Cylinders is also available from Nouryon. Both packaging and transport meet the international regulations.

Safety and handling

Toluene solutions of PMAO-IP 7wt% Al in Toluene may ignite upon exposure to air and react violently with water. Toluene solutions of PMAO-IP 7wt% Al in Toluene must be handled under a dry, inert atmosphere, e.g. nitrogen or argon. Water must be scrupulously removed from process equipment prior to putting it into metal alkyls service. Failure to do so may result in an explosion. Products of complete combustion of toluene solutions of PMAO-IP 7wt% Al in Toluene are aluminum oxide, carbon dioxide and water. Toluene solutions of PMAO-IP cause severe burns to the skin and eyes. Inhalation of toluene may lead to weakness, confusion, impaired coordination and even death. It is imperative that proper personal protective equipment be worn when handling toluene solutions of PMAO-IP. Please refer to the Safety Data Sheet (SDS) for further information on the safe storage, use and handling of toluene solution of PMAO-IP. This information should be thoroughly reviewed prior to acceptance of this product. The SDS is available at nouryon.com/sds-search

Additional information

Availability: PMAO-IP 7wt% Al in Toluene is a commercial product available as nonpyrophoric solutions in toluene (typically containing ~7% aluminum). The product is not available neat. Consult your Nouryon representative for further information.

All information concerning this product and/or suggestions for handling and use contained herein are offered in good faith and are believed to be reliable. Nouryon, however, makes no warranty as to accuracy and/or sufficiency of such information and/or suggestions, as to the product's merchantability or fitness for any particular purpose, or that any suggested use will not infringe any patent. Nouryon does not accept any liability whatsoever arising out of the use of or reliance on this information, or out of the use or the performance of the product. Nothing contained herein shall be construed as granting or extending any license under any patent. Customer must determine for himself, by preliminary tests or otherwise, the suitability of this product for his purposes. The information contained herein supersedes all previously issued information on the subject matter covered. The customer may forward, distribute, and/or photocopy this document only if unaltered and complete, including all of its headers and footers, and should refrain from any unauthorized use. Don't copy this document to a website.

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The logo for Nouryon, featuring a stylized blue 'N' followed by the word 'ouryon' in a blue sans-serif font.