



MMH (Anhydrous MonoMethylHydrazine)

SPACE PROPULSION

- › LAUNCHER
- › SATELLITE
- › FINE CHEMICAL

Ergol for satellites and launchers.

Intermediate for the synthesis of pharmaceuticals, agrochemicals and fine chemicals.



MMH (Anhydrous MonoMethylHydrazine)

SPACE PROPULSION

- › **Chemical Name:** METHYLHYDRAZINE
- › **CAS Number:** 60-34-4
- › **EINECS Number:** 200-471-4
- › **Molecular Formula:**
C H₆ N₂ M.W : 46.1
- › **Structure:** $\text{H}_3\text{C} - \text{NH} - \text{NH}_2$



Typical Analysis

Chemical Properties

Tests	Units	Requirements	Test Methods
Aspect		Colorless transparent liquid	Visual control
Assay	%	≥ 98.5	Gas chromatography
Ammonia	%	≤ 0.2	Gas chromatography
Monomethylamine	%	≤ 0.5	Gas chromatography
Water	%	0.2 ≤ x ≤ 0.7	Gas chromatography

Physical Properties

Density	0.88 (at 20°C)
Molecular weight	Soluble in water, in alcohol and hydrocarbons

REGULATORY INFORMATION

Chemical uses:

- › Strong reducing agent giving immediate ignition with oxidizing agents such as hydrogen peroxide fuming acid or chlorine. Reacts with aldehydes and ketones leading to hydrazones production. Reacts with anhydrides leading to hydrazides production.

Packaging and Storage:

- › In bulk (in customer's container packaging) or stainless steel drum containing 160 kg with inert gas. Stored in its original packaging, in a covered dry, cool, and well ventilated warehouse, the product is stable. However, in case of prolonged storage, it is recommended to check again the product before use, by measuring typical parameters of its quality.

Regulatory information:

See SDS

- › **EC Regulation n°1272/2008 (CLP):**



Danger Hazards classes H225, H300, H310, H330, H314, H350, H410, H400

- › **Directive n° 67/548/EEC (DSD):**

R-phrases R11, R26, R24/25, R34, R45, R50/53

NOTE: MMH is classified MTCR (Missile Technology Control Regime)

CONTACT

STEPHANE MANDOU

Email: stephane.mandou@ariane.group

Phone: + 33 5 57 20 38 67 / + 33 6 77 20 07 53

ArianeGroup Holding

51-61 Route de Verneuil
78130 Les Mureaux, France
www.ariane.group
www.ariane.group