

The recommendation for identification

Substance name : magnesium nitrate

EC / CAS no . : 233-826-7 / 10377-60-3

(proposal's date : 04th August 2010)

		For members who produce solid magnesium nitrate hexahydrate	For members who produce magnesium nitrate solution with till 5 % Ca(NO₃)₂ and till 5 % HNO₃	For members who produce magnesium nitrate in the mixture and are going to register separately pure materials
Material which manufacturers have to send to laboratory for identification		Their product – magnesium nitrate hexahydrate	Under J. Ebenhoen recommendation from solution separated solid form*	Separated from the mixture magnesium nitrate hexahydrate (magnesium nitrate is not stable in air). If it is impossible – pure solid magnesium nitrate hexahydrate
Chemical material which manufacturers have to identify in laboratory	IR analysis	Identification of magnesium nitrate hexahydrate	Identification of magnesium nitrate hexahydrate, impurities	Identification of magnesium nitrate hexahydrate
	XRD analysis	Identification of magnesium nitrate hexahydrate	Identification of magnesium nitrate hexahydrate, impurities	Identification of magnesium nitrate hexahydrate
	IC analysis	Determination of Mg(NO ₃) ₂ ·6H ₂ O content (second composition) in solid product and recalculation of Mg(NO ₃) ₂ content excluding water (first composition) in solid product	Determination of Mg(NO ₃) ₂ ·6H ₂ O content (second composition) in separated solid form and recalculation of Mg(NO ₃) ₂ content excluding water (first composition) in separated solid form	Determination of Mg(NO ₃) ₂ ·6H ₂ O content (second composition) and recalculation of Mg(NO ₃) ₂ content excluding water (first composition)
	Additional method: Quantification of Mg and NO ₃ under Regulation 2003/2003			

Filling IUCLID section 1.1		Composition of magnesium nitrate (content of magnesium nitrate has to be ≥ 80 %) Reference substance – magnesium nitrate	Composition of magnesium nitrate (content of magnesium nitrate has to be ≥ 80 %) Reference substance – magnesium nitrate	Composition of magnesium nitrate (content of magnesium nitrate has to be ≥ 80 %) Reference substance – magnesium nitrate
Filling of IUCLID section 1.2	First composition	Composition of magnesium nitrate (content of magnesium nitrate has to be ≥ 80 %) Reference substance – magnesium nitrate Brief description “This composition is neither manufactured nor import but corresponds to the substance used as test material in the registration”.	Composition of magnesium nitrate (content of magnesium nitrate has to be ≥ 80 %) Reference substance – magnesium nitrate Brief description “This composition is neither manufactured nor import but corresponds to the substance used as test material in the registration”.	Composition of magnesium nitrate (content of magnesium nitrate has to be ≥ 80 %) Reference substance – magnesium nitrate Brief description “This composition is neither manufactured nor import but corresponds to the substance used as test material in the registration”.
	Second composition	Composition of magnesium nitrate hexahydrate (content of magnesium nitrate hexahydrate has to be ≥ 80 %) Reference substance – magnesium nitrate hexahydrate Brief description “Composition covered by the registration of the anhydrous form of the substance”	Composition of magnesium nitrate hexahydrate (content of magnesium nitrate hexahydrate has to be ≥ 80 %) Reference substance – magnesium nitrate hexahydrate Brief description “Composition covered by the registration of the anhydrous form of the substance”	Composition of magnesium nitrate hexahydrate (content of magnesium nitrate hexahydrate has to be ≥ 80 %) Reference substance – magnesium nitrate hexahydrate Brief description “Composition covered by the registration of the anhydrous form of the substance”
Filling of IUCLID section 3.4		Available as substance	Substance in mixture (insert content of magnesium nitrate anhydrous in the solution).	Substance in mixture (insert all contents of magnesium nitrate in the mixtures).

- * It should be possible to crystallize liquid magnesium nitrate with excess of nitric as follow:
- evaporate the aqueous nitric acid under reduced pressure (e.g. 20 mbar) and 60 degr C.

Under these conditions the magnesium nitrate should remain stable and most of the excess acid be removed. In the first round it is possible that an oily residue is obtained. In such case you need to 'clean' the residue, i.e. add a small amount of water and repeat the evaporation under reduced pressure. It is possible that you need to repeat this process a few times, but in the end you should obtain a whitish residue, which most likely is 'pure' magnesium nitrate (including all relevant inorganic impurities).