



Magnesium phosphide

List of Annex II studies which were considered
as relied upon for the evaluation with a view to
Annex I inclusion
and for which the main submitter has claimed
data protection

Version 2.0

Rapporteur Member State: Germany

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MAGNESIUM PHOSPHIDE

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Version 2 - (20 June 2011)

B.1 Identity, B.2 Physical and chemical properties, B.3 Data on application and further information, B.4 Proposals for classification and labelling, B.5 Methods of analysis

Annex point/ reference number	Author(s)	Year	Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not	Reports ¹ on previous use in granting national authorizations
AIIA-1.8	Schmitt, S., Bürger, R.	2004	Manufacturing Method of the technical grade of active ingredient magnesium Phosphide. not GLP, unpublished CHE2005-239	
AIIA-1.10	Meza, J.R.	2002	Certificate of Analysis: Arsenic. 1697/2881LSSCL/2002 not GLP, unpublished CHE2005-242	
AIIA-1.10	Schmitt, S.; Bürger, R.	2004	Certificate of Composition- strictly confidential: magnesium phosphide techn. not GLP, unpublished CHE2005-241	
AIIA-1.11; AIIA-4.1.1	Kiefer, R.	2006	Determination of Magnesium Phosphide and Four Impurities in Five Batches of Magnesium Phosphide Technical. 20051462/01-U5B GLP, unpublished CHE2006-730	
AIIA-1.11	Schmitt, S., Dierks-Lange, H.	2006	Minimum and nominal content (g/kg) of technical active substance magnesium phosphide and relevant impurities. not GLP, unpublished CHE2006-731	
AIIA-1.11	Schmitt, S.; Dierks-Lange, H.	2004	Quality Control Certificate. not GLP, unpublished CHE2005-971	
AIIA-1.11	Zavala, C.F.J., Meza, J.R.	2001	Memorandum (Analysis metallic magnesium). 1269/2079LSSCL/2001 GLP, unpublished CHE2005-243	

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AIIA-2.1.1; AIIA-2.1.2; AIIA-2.3.1	Smeykal, H.	2002	Magnesium Phosphide technical: Melting Point / Melting Range, Boiling Point /Boiling Range, Vapour Pressure. 20020428.01 GLP, unpublished CHE2005-244	
AIIA-2.2	Smeykal, H.	2002	Magnesium Phosphide technical: Relative Density. 20020428.02 GLP, unpublished CHE2005-245	
AIIA-2.5.1	Schmitt, S., Voigt, M.	2002	Statement of the evaluation of UV / Vis, IR and NMR spectra. not GLP, unpublished CHE2004-1732	
AIIA-2.5.1	Voigt, M., Schmitt, S.	2004	Statement of the performance of the following test: Mass Spectra. not GLP, unpublished CHE2005-183	
AIIA-2.5.1	Voigt, M; Schmitt, S	2002	Statement of the evaluation of UV/Vis, IR and NMR spectra of aluminium and magnesium phosphide. not GLP, unpublished CHE2006-845	
AIIA-2.6; AIIA-2.8; AIIA-2.9.1; AIIA-2.14; AIIA-2.15	Voigt, M., Schmitt, S.	2003	Statement of the performance of the following tests according to EU Test Guideline 92/69/EWG: A6 Solubility in water, A8 Distribution coefficient, A17 Fire enhancing properties, C7 Hydrolysis abiotic decomposition. not GLP, unpublished CHE2005-184	
AIIA-2.7	Voigt M.; Schmitt, S.	2004	Statement of the performance of the following test according to CIPAC Method MT 181: Solubility in organic solvents. not GLP, unpublished CHE2005-1535	
AIIA-2.11.1	Smeykal, H.	2002	Magnesium Phosphide technical: Flammability (Solids), Flammability (Substances and Preparations which, in contact with water or damp air, evolve highly flammable gases in dangerous quantities). 20020428.03 GLP, unpublished CHE2005-237	

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AIIA-2.11.2; AIIA-2.13	Smeykal, H.	2002	Magnesium Phosphide technical: Explosive properties, auto-flammability (solids - determination of relative self-ignition temperature). 20020428.04 GLP, unpublished CHE2005-238	
AIIA-4.1.1; AIIIA-5.1.1	Anonymous	2001	Determination of Hydrogen Phosphide and Magnesium Phosphide respectively. 0011 not GLP, unpublished CHE2002-222	
AIIA-1.11; AIIA-4.1.1	Kiefer, R.	2006	Determination of Magnesium Phosphide and Four Impurities in Five Batches of Magnesium Phosphide Technical. 20051462/01-U5B GLP, unpublished CHE2006-730	
AIIA-4.2.1	Mende, P.	1999	Determination of residues of Detia Gas-EX-B, Degesch Magtoxin and Phostoxin; tablets after fumigation of different storage goods. 99322/01-SRPH GLP, unpublished MET2000-481	
AIIA-4.2.3; AIIIA-5.2	Werle, H.	1999	Method Validation for the Determination of Residues of Phosphine in Surface Water and Potable Water. 995040303 GLP, unpublished MET2000-49	

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B.6 Toxicology and metabolism

Annex point/ reference number	Author(s)	Year	Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not	Reports² on previous use in granting national authorizations
AIIA-5.2.1	Leuschner, F.	1992	Acute toxicity study of Aluminium phosphide by oral administration to NMRI mice. 7129/92 GLP, unpublished TOX2005-308	
AIIA-5.2.1	Sterner, W., Chibanguza, G.	1980	Acute oral toxicity of 1 % Magnesiumphosphid in vaseline in rats. 1-4-666-79 not GLP, unpublished TOX2000-89	
AIIA-5.2.2; AIIIA-7.1.2	Dickhaus, S., Heisler, E.	1987	Akute Toxizitätsprüfung von der Substanz Aluminiumphosphid nach dermalen Applikation an der Ratte (OECD-Guidelines no. 404) (Acute toxicological study on compound Aluminiumphosphid after dermal application to the rat). 1-4-142-87 GLP, unpublished TOX2000-93	
AIIA-5.2.3; AIIIA-7.1.3	Newton, P.E.	1989	An acute inhalation toxicity study of phosphine (PH ₃) in the rat. PROJECT NO.: 87-8029 not GLP, unpublished TOX97-51198	Task Force deviation Data Protection: UPL = N DET = Y
AIIA-5.2.3; AIIIA-7.1.3	Shimizu, Y., Ogawa, Y. and Tokiwa, K.	1982	Acute inhalation toxicity testing of hydrogen phosphide in rats. NRI 82-7489 not GLP, unpublished TOX2005-280	
AIIA-5.2.4	Brunt, P.	2001	Zinc phosphide: Acute dermal irritation in the rabbit. 1483/001 GLP, unpublished TOX2005-168	
AIIA-5.2.4; AIIIA-7.1.4	Dickhaus, S., Heisler, E.	1987	Prüfung von Aluminiumphosphid auf primäre Hautreizwirkung an der intakten Haut des Kaninchens (OECD-Guidelines no. 406). (Irritant effects of Aluminiumphosphid on intact skin of Rabbits). 1-3-183-87 GLP, unpublished TOX2000-94	

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AIIA-5.2.4; AIIIA-7.1.4	Heisler, E, Dickhaus, S.	1987	Irritant Effects of Aluminiumphosphid on Intact Skin of Rabbits. 1-3-183-87 GLP, unpublished TOX2005-1314	
AIIA-5.2.5	Brunt, P.	2001	Zinc phosphide: Acute eye irritation in the rabbit. 1483/002 GLP, unpublished TOX2002-178	
AIIA-5.2.5; AIIIA-7.1.5	Dickhaus, S., Heisler, E.	1987	Augenreiztest am Kaninchen mit Aluminiumphosphid nach OECD no. 405. (Irritant effects of Aluminiumphosphid on rabbit eye). 1-3-184-87 not GLP, unpublished TOX2000-95	
AIIA-5.2.6; AIIIA-7.1.6	Brunt, P.	2001	Zinc phosphide: Skin sensitisation in the guinea pig - Magnusson and Kligman maximisation method. 1483/003 GLP, unpublished TOX2002-179	
AIIA-5.2.6; AIIIA-7.1.6	Corea Costa, K.	2002	Evaluation of Skin Sensitisation of test substance Degesch-Magphos-Pastilhas de 0.6 g. R.E.428.194.02 not GLP, unpublished TOX2005-281	
AIIA-5.3.2	Schnellhardt, M., Gebhardt, M., Bräter, M., et al.	1985	Study on the subchronical toxicity of Aluminium phosphide - 90-day-test on growing wistar rats. not GLP, unpublished TOX2005-282	
AIIA-5.3.3	Newton, P.E.	1990	An thirteen week inhalation toxicity study of phosphine (PH ₃) in the rat. 87-8030 GLP, unpublished TOX2001-684	Task Force deviation Data Protection: UPL = N DET = Y
AIIA-5.4.1	Leuschner, F.	1992	Phosphine: Mutagenicity study in mammalian cells (V79) <i>in vitro</i> - HGPRT Test. 6990/91 GLP, unpublished TOX2005-284	

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AIIA-5.4.1	SanSebastian, J.R.	1990	Structural chromosome aberration in Chinese hamster ovary (CHO) cells induced by hydrogen phosphide (PH ₃). (in vitro). PH 320-DA-001-89 GLP, unpublished TOX2001-686	Task Force deviation Data Protection: UPL = N DET = Y
AIIA-5.4.1	Stankowski, L.F.	1990	Ames/salmonella plate incorporation assay on hydrogen phosphide (PH ₃). PH 301-DA-001-89 GLP, unpublished TOX2001-685	Task Force deviation Data Protection: UPL = N DET = Y
AIIA-5.4.1	Sutou, S., Yamamoto, K., Shirakawa, H.	1982	<i>In vitro</i> microbial mutagenicity testing of hydrogen phosphide. 82-7492 not GLP, unpublished TOX2005-283	
AIIA-5.4.2	McKeon, M.E.	1993	Genotoxicity test on Phosphine in the <i>in vivo/in vitro</i> assay for unscheduled DNA synthesis in rat primary hepatocyte cultures at two timepoints. A0040-0-494 GLP, unpublished TOX2005-285	Task Force deviation Data Protection: UPL = N DET = Y
AIIA-5.5	Newton, P.E.	1998	2-year combined inhalation chronic toxicity and oncogenicity study of phosphine in rats. 750-001 ! 182-007 GLP, unpublished TOX2000-98	Task Force deviation Data Protection: UPL = N DET = Y
AIIA-5.6.2	Schroeder, R.E.	1989	An inhalation developmental toxicity study of phosphine (PH ₃) in rats. 89-3413 GLP, unpublished TOX2001-687	Task Force deviation Data Protection: UPL = N DET = Y
AIIA-5.7; AIIA-5.8.2	Schaefer, G.J.	1998	90-day inhalation neurotoxicity study of phosphine in rats Vol. 1 to 5. 750-003 GLP, unpublished TOX2006-176	Task Force deviation Data Protection: UPL = N DET = Y
AIIA-5.7	Schaefer, G.J.	1996	Acute neurotoxicity study of phosphide in rats. (delayed neurotoxicity following acute exposure). 750-002 GLP, unpublished TOX2000-97	Task Force deviation Data Protection: UPL = N DET = Y

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AIIA-5.9.1	Asher, P.P.	2005	Report on health status of factory workers exposed during manufacturing of Aluminium phosphide. not GLP, unpublished TOX2006-225	
AIIA-5.9.1	Guth, E.	2003	Occupational Health Care for Employees under Hydrogen Phosphide (PH ₃) Exposition. not GLP, unpublished TOX2004-2205	

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B.7 Residues

Annex point/ reference number	Author(s)	Year	Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not	Reports³ on previous use in granting national authorizations
AIIA-6.3; AIIIA-8.2	Pollmann, B.	2001	Determination of residues of Detia Gas-Ex-B, Degesch-Magtoxin and Degesch Plate after fumigation of different storage goods. Trial code G01N050R. 20011247/G1-SRPH GLP, unpublished RIP2002-148	
AIIA-6.3; AIIIA-8.2	Pollmann, B.	1999	Determination of residues of Detia Gas-Ex-B, Degesch Magtoxin and Phostoxin tablets after fumigation of different storage goods. . 99322/01-SRPH GLP, unpublished RIP2000-419	
AIIA-6.9	Heller, G.	2003	Products generating hydrogen phosphide (Preparations containing magnesium phosphide and /or aluminium phosphide), Calculation of the Theoretical Daily Intake (=TMDI). not GLP, unpublished RIP2005-199	
AIIA-6.9	Köhl, W., Hofer, M.	2003	Aluminium and Magnesium Phosphide /Phosphine Gas, Deduction of Reference Figures (ARfD and ADI) for the Consumer Risk Assessment. 150-002 not GLP, unpublished RIP2005-198	

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B.8 Environmental fate and behaviour

Annex point/ reference number	Author(s)	Year	Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not	Reports⁴ on previous use in granting national authorizations
AIIA-7.1.1.2.1	Analytisches Labor, Fa. Dr Werner Freyberg	1983	Examination of the decomposition behaviour of hydrogen phosphide (phosphine) in standard soils (BBA-Merkblatt No. 36). not GLP, unpublished BOD2005-382	
AIIA-7.1.3	Friemel, W., Ehret, R.	1995	Distribution of PH ₃ in soil horizontal and vertical spreading (Translation of a German report from 1983). not GLP, unpublished BOD2005-101	
AIIA-7.2.1.1; AIIIA-9.2.3	Friemel, W., Ehret, R.	1995	Examination of the behaviour of phosphine in water (Translation of a German report from 1983). not GLP, unpublished WAS2004-300	

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B.9 Ecotoxicology

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AIIA-8.2.1	Leuschner, F.	1984	Examination of the acute toxicity of aluminium phosphide on rainbow trout. GLP, unpublished WAT2005-75	
AIIA-8.5	Schönborn, W.	1989	Studies on the effects of Phostoxin on the activity of the soil microflora. V-67.079 not GLP, unpublished BMF2005-16	

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