

Draft Assessment Report

Metam-sodium

Volume 2

August 2007

Revision August 2010

Listing of Data and
Information submitted

Rapporteur Member State: Belgium

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At the request of the RMS to revise the listing of protection claims that seemed to be incorrect, the notifier answered on 4/12/2006 the following:

“Although metam salts have been registered in several EU countries, please note that in most cases these registrations were obtained through the old national procedures without submission of many full study reports. As a consequence the majority of studies is still eligible for data protection in the EU review.

Please also note that many study reports are shared between Taminco and other companies. It is not in the power of Taminco to assess if and when some of these data were submitted in the past by other companies for their national registrations in EU Member states.

In our view the selection of study reports for which data protection should not be claimed, is complicated, and is not necessary to perform at this stage. We feel that for such detailed exercise a better timing would be after the scientific evaluation by the rapporteur member state and EFSA.

Of course, should the evaluators have particular question regarding the data protection status of individual study reports; we will do our best effort to address these questions.”

The RMS is not happy with this answer and considers that the listing of protection claims as the notifier has presented is incorrect (several old studies considered as protected; The CTB (The Netherlands) has thoroughly reviewed the a.s. around 10 years ago and has granted national authorizations; we therefore expect that several studies have lost data protection.)

Revised in August 2010:

The reference list has been updated by adding the studies submitted by the applicant after the finalisation of the original DAR (i.e. after August 2007). New studies included in the resubmission dossier (received in January 2010) are highlighted in yellow for the sake of transparency.

A.1 Identity

A.1.1 Identity of the active substance (Annex IIA 1; Annex IIIA 1, 3.1 to 3.4)

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Annex point / reference number	Author(s)	Year	Title Source (where different from company) Company report no. GLP / GEP status Published or not	Data protection claim Y/N	Owner
IIA 1.11 IIA 4.1.2	Schouten, A.	2002a	Analysis of five batches (32E0208, 32E0410, 32E1301, 32E1906 and 32E2806) of Metam-Sodium TNO Voeding, AJ Zeist (The Netherlands) Report No. V3937 GLP: yes Unpublished	Y	Taminco
IIA 1.11 IIA 4.1.2	Schouten, A.	2002b	Analysis of five batches (4691/1, 4691/2, 46391/3, 4691/4 and 4691/5) of Metam-Potassium TNO Voeding, AJ Zeist (The Netherlands) Report No. V4691 GLP: yes Unpublished	Y	Taminco

FMC Foret

Annex point / reference number	Author(s)	Year	Title Source (where different from company) Company report no. GLP / GEP status Published or not	Data protection claim Y/N	Owner
IIA 1.11 IIA 4.1.2 IIA 4.1.3	Comb, A.L.	1997	Metam sodium (technical): five-batch analysis Huntingdon Life Sciences Ltd., Eye, Suffolk, IP23 7PX, England Report No. FRT003/970499 GLP: yes Unpublished	Y	European Metam Sodium Task Force
IIA 4.1.2 IIA 4.1.3	Comb, A.L.	2004	Metam sodium analysis Huntingdon Life Sciences Ltd., Eye, Suffolk, IP23 7PX, England Report No. Report No. FRT003/970499	Y	European Metam Sodium Task Force

Lainco

Annex point / reference number	Author(s)	Year	Title Source (where different from company) Company report no. GLP / GEP status Published or not	Data protection claim Y/N	Owner
IIA 1.11	Puy, E.; Wasser, C.	2004	Element of purity study of METAM SODIUM soluble concentrate – Study agreement Anadiag, S.A., 16, rue Ampère, 67500, Haguenau, France Report No. (Agreement no.) A4204_C GLP: yes Unpublished	Y	European Metam Sodium Task Force
IIA 1.11 IIA 4.1.2 IIA 4.1.3	Wasser, C.	2002	Purity profile for 5 batches of metam sodium technical Anadiag, S.A., 16, rue Ampère, 67500, Haguenau, France Report No. A1208 GLP: yes Unpublished	Y	European Metam Sodium Task Force

A.1.2 Identity of the formulations (Annex IIIA 1, 3.1 to 3.7, 3.9 and 12.1)

none

A.2 Physical and chemical properties

A.2.1 Physical and chemical properties of the active substance (Annex IIA 2)

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 2.1.1 /01 IIA 2.1.3 /01 IIA 2.2 /01 IIA 2.3.1 /01	Betteley JMT	1997-12-08	Metam sodium – Physicochemical properties Huntingdon Life Sciences, FCC 152/963829 GLP Not published	Y	Taminco, FMC Foret
IIA 2.3.1 /02	Lindemann M	2003-11-07	Determination of the vapour pressure of methyl isothiocyanate RCC Ltd., 850435 GLP Not published	Y	Taminco
IIA 2.3.1/03 IIA 2.3.2/03	Habeck C.	2009-06-02	N,N-Dimethylthiourea: Determination of the vapor pressure Harlan Laboratories Ltd, Itingen, Switzerland Report No. C42765 GLP: yes Not published	Y	Taminco
IIA 2.3.2 /01	Taminco	2004a 2007	Calculation of Henry constant for Metam- sodium Not GLP Not published	Y	Taminco
IIA 2.3.2 /02	Taminco	2004b	Calculation of Henry constant for Methylisothiocyanate (MITC) Not GLP Not published	Y	Taminco
IIA 2.4.1 /01 IIA 2.4.2 /01	Betteley JMT	1997-12-08	Metam sodium – Physicochemical properties Huntingdon Life Sciences, FCC 152/963829 GLP Not published	Y	Taminco, FMC Foret
IIA 2.4.1 /02 IIA 2.4.2 /02	Van Hecke S, Van de Putte M, Demuyneck M	2001-03-19	Metam 510 g/l – Description of the physical state, color and odor UCB Research Laboratory, W/RL/200101/001 Not GLP Not published	Y	Taminco
IIA 2.4.1 /03 IIA 2.4.2 /03	Ambroz Hahn J	2002-01-25	Determination of color, physical state, odor, density, and pH for metam-potassium 54% ABC Laboratories, 47104 GLP Not published	Y	Taminco
IIA 2.4.1 /04 IIA 2.5.1 /03 IIA 2.6 /03 IIA 2.8 /02	Flack I	1997-05-08	Methyl isothiocyanate – Physical and chemical properties Huntingdon Life Sciences, FCC 153/962827 GLP Not published	Y	Taminco, FMC Foret

Metam
Belgium

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Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 2.5.1 /01	Betteley JMT	1997-12-08	Metam sodium – Physicochemical properties Huntingdon Life Sciences, FCC 152/963829 GLP Not published	Y	Taminco, FMC Foret
IIA 2.5.1 /02	De Boever F	2001-12-12	Spectroscopic characterisation of metam potassium UCB Research and technology Not GLP Not published	Y	Taminco
IIA 2.1.1/02 IIA 2.1.3 IIA 2.2/02 IIA 2.4.1/05 IIA 2.4.2/04 IIA 2.5.1/03	White G.A.	2009-11-04	Determination of physical properties for purified (solid) Metam-K G.C. Laboratories Ltd., England Report No. J17224/A GLP: yes Not published	Y	Taminco
IIA 2.5.2/01	O'Connor B.J., Woolley S.M.	2010-06-14	DMTU (N,N') : Determination of spectra Harlan Laboratories Ltd., England Report No. 15420009R GLP: yes Not published	Y	Taminco
IIA 2.6 /01	Betteley JMT	1997-12-08	Metam sodium – Physicochemical properties Huntingdon Life Sciences, FCC 152/963829 GLP Not published	Y	Taminco, FMC Foret
IIA 2.6 /02	Betteley J	2002-02-12	Metam-sodium – Solubility in water (pH 5 and pH 9) Huntingdon Life Sciences, UCB809/013754 GLP Not published	Y	Taminco
IIA 2.6/03	Habeck C.	2009-05-19	N,N'Dimethylthiourea: Determination of the water solubility Harlan Laboratories Ltd., Itingen, Switzerland Report No. C42743 GLP: yes Not published	Y	Taminco
IIA 2.7 /01 IIA 2.8 /01 IIA 2.9.1 /01	Betteley JMT	1997-12-08	Metam sodium – Physicochemical properties Huntingdon Life Sciences, FCC 152/963829 GLP Not published	Y	Taminco, FMC Foret

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 2.8/02	Kelly K.	2009-09-29	Determination of dissociation constant and partition coefficient for purified (solid) Metam-K G.C. Laboratories Ltd., England Report No. J17224/B GLP: yes Not published	Y	Taminco
IIA 2.8/03	Habeck C.	2009-06-10	N,N'Dimethylthiourea: determination of the partition coefficient (n-Octanol / Water) Harlan Laboratories Ltd., Itingen, Switzerland Report No. C42754 GLP: yes Not published	Y	Taminco
IIA 2.9.1 /02	Ericson JL	1990-08-21	Metam-Sodium - Hydrolysis at pH 5, 7 and 9 ICI Americas, RR 90-110B GLP Not published	Y	USA TF
IIA 2.9.1 /03	Betteley J	2002-02-12	Metam-sodium – Solubility in water (pH 5 and pH 9) Huntingdon Life Sciences, UCB809/013754 GLP Not published	Y	Taminco
IIA 2.9.1 /04	Kidd GD, Lowrie C, Davidson J	2005-09-01	Hydrolytic Stability of [¹⁴ C]-MITC in Buffered Aqueous Solution (amendment 1, 30-09-2005) Inveresk, 24450, project 206802 GLP Not published	Y	Taminco
IIA 2.9.2 /01	Betteley JMT	1997-12-08	Metam sodium – Physicochemical properties Huntingdon Life Sciences, FCC 152/963829 GLP Not published	Y	Taminco, FMC Foret
IIA 2.9.2 /02 IIA 2.9.3 /01	Draper WM, Wakeham DE	1993	Rate Constants for Metam-Sodium Cleavage and Photodecomposition in Water American Chemical Society, J. Agric. Food Chem., 41, pp. 1129-1133 Not GLP Published	N	publication
IIA 2.9.2 /03	Spurgeon C	1990-04-30	Metam-Sodium - Aqueous Photolysis at 25 °C ICI Americas, RR 90-091B GLP Not published	Y	USA TF
IIA 2.9.4 /01	Betteley J	2002-02-12	Metam sodium – Dissociation constant Huntingdon Life Sciences, UCB810/013755 GLP Not published	Y	Taminco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 2.9.4/02	Kelly K.	2009-09-29	Determination of dissociation constant and partition coefficient for purified (solid) Metam-K G.C. Laboratories Ltd., England Report No. J17224/B GLP: yes Not published	Y	Taminco
IIA 2.10 /01	Betteley J	2001-10-02	Metam sodium – Oxidative photodegradation (calculation) Huntingdon Life Sciences, UCB811/013383 GLP Not published	Y	Taminco, FMC Foret, Lainco
IIA 2.10 /02 IIA 7.2.2 /01	Parlar H	1987-03	Photochemical degradation of methyl isothiocyanate (MITC) in the gas phase Institute for ecological chemistry, 87/0498 Not GLP Not published	Y	USA TF
IIA 2.10 /03 IIA 7.2.2 /02	Zetzsch C	1992-01-16	Photochemical Oxidative Degradation of methyl-isothiocyanate in the gas phase Fraunhofer-Institut für Umweltechemie und Ökotoxikologie, PC91-1, BASF 92/10832 GLP Not published	Y	KST, Taminco
IIA 2.10 /04 IIA 7.2.2 /03	Zetzsch C	1992-12-21	Smog Chamber Investigation of the Tropospheric Degradation Paths of Methyl Isothiocyanate Fraunhofer-Institut of Toxicology and Aerosol Research, PC 92-1, BASF 92/11668 GLP Not published	Y	KST, Taminco
IIA 2.11.1 /01 IIA 2.11.2 /01	Betteley JMT	1997-12-08	Metam sodium – Physicochemical properties Huntingdon Life Sciences, FCC 152/963829 GLP Not published	Y	Taminco, FMC Foret
IIA 2.11.2 /02	Treman SP	2000-11-14	Metam-sodium: Determination of Auto-ignition temperature (liquids and gases) Safepharm, SPL 378/046 GLP Not published	Y	Taminco
IIA 2.11.2 /03	White G.A.	2009-02-12	Determination of autoflammability, flash point, explosive properties, and surface tension of Metam-K 690 g/l (Technical) product G.C. Laboratories Ltd., England Report No. J17223 GLP: yes Not published	Y	Taminco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 2.12/02	Knowles R.J.	2009-01-19	Determination of the flash point of the Metam-sodium 510 g/l formulation G.C. Laboratories Ltd., England Report No. J17220 GLP: yes Not published	Y	Taminco
IIA 2.12/03	White G.A.	2009-02-12	Determination of autoflammability, flash point, explosive properties, and surface tension of Metam-K 690 g/l (Technical) product G.C. Laboratories Ltd., England Report No. J17223 GLP: yes Not published	Y	Taminco
IIA 2.13 /01	Betteley JMT	1997-12-08	Metam sodium – Physicochemical properties Huntingdon Life Sciences, FCC 152/963829 GLP Not published	Y	Taminco, FMC Foret
IIA 2.13/02	White G.A.	2009-02-12	Determination of autoflammability, flash point, explosive properties, and surface tension of Metam-K 690 g/l (Technical) product G.C. Laboratories Ltd., England Report No. J17223 GLP: yes Not published	Y	Taminco
IIA 2.14 /01	Betteley JMT	1997-12-08	Metam sodium – Physicochemical properties Huntingdon Life Sciences, FCC 152/963829 GLP Not published	Y	Taminco, FMC Foret
IIA 2.14 /02	Lumsden AM	2000-06-01	Metam sodium 510 g/l aqueous solution: determination of surface tension Safepharm Laboratories Limited, SPL 378/036 GLP Not published	Y	Taminco
IIA 2.14 /03	Van de Putte M	1997-12-12	Determination of the surface tension of a metam K solution UCB Reserach Laboratory Gent, W/RL/9712/004 Not GLP Not published	Y	Taminco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 2.14/04	White G.A.	2009-02-12	Determination of autoflammability, flash point, explosive properties, and surface tension of Metam-K 690 g/l (Technical) product G.C. Laboratories Ltd., England Report No. J17223 GLP: yes Not published	Y	Taminco
IIA 2.15 /01	Betteley J	2001-07-25	Metam sodium – Oxidising properties Huntingdon Life Sciences UCB 812/013400 GLP Not published	Y	Taminco
IIA 2.15/02	White G.A.	2009-02-12	Determination of autoflammability, flash point, explosive properties, and surface tension of Metam-K 690 g/l (Technical) product G.C. Laboratories Ltd., England Report No. J17223 GLP: yes Not published	Y	Taminco

A.2.2 Physical and chemical properties of the formulations (Annex IIIA 2)

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIIA 2.1 /01	Van Hecke S, Van de Putte M, Demuynck M	2001-03-19	Metam 510 g/l – Description of the physical state, color and odor UCB Research Laboratory, W/RL/200101/001 Not GLP Not published	Y	Taminco
IIIA 2.1 /02	Ambroz Hahn	2002-01-25	Determination of color, physical state, odor, density, and pH for metam-potassium 54% ABC Laboratories, 47104 GLP Not Published	Y	Taminco
IIIA 2.2.1	Betteley JMT	1997-12-08	Metam sodium – Physicochemical properties Huntingdon Life Sciences, FCC 152/963829 GLP Not Published	Y	Taminco, FMC Foret
IIIA 2.2.2	Betteley J	2001-07-25	Metam sodium – Oxidising properties Huntingdon Life Sciences, UCB 812/013400 GLP Not Published	Y	Taminco, FMC Foret, Lainco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIIA 2.3	Tremain SP	2000-11-14	Metam-sodium: Determination of Auto-ignition temperature (liquids and gases) Safepharm, SPL 378/046 GLP Not Published	Y	Taminco, FMC Foret, Lainco
IIIA 2.4.1 /01	Tognucci A	2003-03-31	Accelerated storage stability of Metam-sodium RCC Ltd, 846139 GLP Not Published	Y	Taminco
IIIA 2.4.1 /02	Van Hecke S, Van de Putte M, Demuyneck M	2001-03-19	Metam 510 g/l – Free alkalinity UCB Chemicals, W/RL/200101/002 Not GLP Not Published	Y	Taminco
IIIA 2.4.2 /01	Howes D	2003-05-14	Metam-sodium 510 g/l pH of a 1% aqueous solution Huntingdon Life Sciences, PFX 001/032863 GLP Not Published	Y	Taminco
IIIA 2.4.2 /02	Ambroz Hahn J	2002-01-25	Determination of color, physical state, odor, density, and pH for metam-potassium 54% ABC Laboratories, 47104 GLP Not Published	Y	Taminco
IIIA 2.5.2 /01	Lumsden AM	2000-06-02	Metam sodium 510 g/l aqueous solution: determination of viscosity Safepharm Laboratories Limited, SPL Project No. 378/037 GLP Not Published	Y	Taminco
IIIA 2.5.2 /02	Ambroz Hahn J	2002-02-28	Determination of viscosity for metam-potassium 54% ABC Laboratories, 47106 GLP Not Published	Y	Taminco
IIIA 2.5.3 /01	Lumsden AM	2000-06-01	Metam sodium 510 g/l aqueous solution: determination of surface tension Safepharm Laboratories Limited, SPL Project No. 378/036 GLP Not Published	Y	Taminco
IIIA 2.5.3 /02	Van de putte M, Demuyneck M	1997-12-12	Determination of the surface tension of a metam K solution UCB Reserach Laboratory, W/RL/9712/004 Not GLP Not Published	Y	Taminco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIIA 2.6.1 /01	Lumsden AM	2000-06-02	Metam sodium 510 g/l aqueous solution: determination of relative density Safepharm Laboratories Limited, SPL Project No. 378/038 GLP Not Published	Y	Taminco
IIIA 2.6.1 /02	Ambroz Hahn J	2002-01-25	Determination of color, physical state, odor, density, and pH for metam-potassium 54% ABC Laboratories, 47104 GLP Not Published	Y	Taminco
IIIA 2.7.1	Tognucci A	2003-03-31	Accelerated storage stability of Metam-sodium RCC Ltd, 846139 GLP Not Published	Y	Taminco
IIIA 2.7.2 /01	Lumsden AM	2000-05-31	Metam sodium 510 g/l aqueous solution: Determination of low temperature stability Safepharm Laboratories Limited, SPL Project No. 378/039 GLP Not Published	Y	Taminco
IIIA 2.7.2 /02	Sarff P	2002-11-07	Determination of the stability at 0°C for Metam-Potassium 54% ABC Laboratories, 47105-A GLP Not Published	Y	Taminco
IIIA 2.7.2 /03	Widmer H	2005-09-15	Low temperature stability of Metam sodium 510 g/l RCC Ltd., A21701 GLP Not Published	Y	Taminco
IIIA 2.7.2 /04	Widmer H	2005-09-15	Low temperature stability of Metam potassium 690 g/l RCC Ltd., A217121 GLP Not Published	Y	Taminco
IIIA 2.7.3 /01	Van Hecke S, Blom P, Demunck M	2003-04-17	Metam sodium 510 g/l aqueous solution. Shelf Life. Taminco Research Laboratory, W/RL/200303001 Not GLP Not Published	Y	Taminco
IIIA 2.7.3 /02	Tognucci A	2004-12-23	Determination of the storage stability of metam potassium (shelf life) RCC Ltd., 846298 GLP Not Published	Y	Taminco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIIA 2.8.2	Van Hecke S, Blom P, Demunck M	2003-03-31	Metam 510 g/l – Persistent foaming Taminco Gent, W/RL/200303/002 Not GLP Not published	Y	Taminco
IIIA 2.8.2/02	Knowles R.J.	2009-03-02	Determination of persistent foam for the Metam-K 690 g/l formulation G.C. Laboratories Ltd., England Report No. J17221 GLP: yes Not published	Y	Taminco
IIIA 2.8.4	Tognucci A	2003-03-31	Accelerated storage stability of Metam-sodium RCC Ltd, 846139 GLP Not Published	Y	Taminco
IIIA 2.8.5	Van Herreweghe B	2007-06-05	Metam sodium 510 g/l – Insoluble Material Taminco N.V. Report W/RL/200706/001 Non GLP Not published	Y	Taminco
IIIA 2.8.5	Van Herreweghe B	2007-06-05	Metam potassium 690 g/l – Insoluble Material Taminco N.V. Report W/RL/200706/002 Non GLP Not published	Y	Taminco

A.3 Further information

None

A.4 Classification, packaging and labelling

None

A.5 Methods of analysis

A.5.1 Methods of analysis for the active substance (Annex IIA 4)

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 4.1.1 /01	Blom P, Demuyneck M	2002-08	Metamsodium- All Qualities. Active ingredient based on CS2 content UCB, 09E3411 Not GLP Not published	Y	Taminco
IIA 4.1.1 /02	CIPAC	1967	CIPAC method 20/13/M/1.3 Metam-sodium aqueous solutions CIPAC, 20/13/M/1 Not GLP published	N	public
IIA 4.2.1 /01	Meyers TJ	1988-10-20	Determination of Methyl Isothiocyanate (MITC) in crops Richmond Research Center, ICI Americas, WRC 88-43 Not GLP Not published	Y	USA TF
IIA 4.2.1 /02	Wheals IB	1993-09-13	MITC: Independent Laboratory confirmation of an Analytical method for the Determination of Residues of the Metabolite Methyl Isothiocyanate (MITC) in Crops Zeneca, RJ1508B-93JH107 GLP Not published	Y	USA TF
IIA 4.2.1 /03	McKay JC	1990-07-13	Determination of Metam-sodium in crops Richmond Research Center, ICI, WRC 89-47-RR 90-394B Not GLP Not published	Y	USA TF
IIA 4.2.1 /04 [added in June 2008 – peer reviewed in June 2008]	Mayer F.	1985	Method 234: Methyl mustard oil (MITC) – Gas chromatographical determination – Soil and tomatoes BASF Doc ID 1985/1000325 Not published	N	KST Taminco (access)

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
II A 4.2.1/05 <i>[added in June 2008 – peer reviewed in June 2008]</i>	Benz A., Mackenroth C.	2003	Validation of the analytical method 234/2: Determination of Methyl iso-thiocyanate (MITC, Reg.No. 250 285) in various plant matrices and soil BASF AG, Agrarzentrum Limburgerhof; Limburgerhof; Germany Fed.Rep. 2002/1004118 Yes unpublished	Y	KST Taminco (access)
II A 4.2.1/06 <i>[added in June 2008 – peer reviewed in June 2008]</i>	Wormald, S.	2005	Independent laboratory validation of analytical methodology for the determination of methyl iso-thiocyanate in lettuce and lemons. Central Science Laboratory (CSL), Sand Hutton, York, United Kingdom KST 2005/001) Yes unpublished	Y	KST Taminco (access)
IIA 4.2.1/07	Wormald S.	2009-07-17	Validation of Analytical Methodology for the Determination of Methyl Iso-Thiocyanate in Carrot and Corn salad. FERA, York, U.K. Report No. FSGD-052 GLP: yes Not published	Y	Taminco
IIA 4.2.1/08	Wormald S.	2010-02-03	Validation of Analytical Methodology for the Determination of Methyl Iso-Thiocyanate in Cucumber, Egg Plant and Grape FERA, York, U.K. Report No. FSGD-082 GLP: yes Not published	Y	Taminco
IIA 4.2.1/09	Wormald S.	2009-09-17	Validation of analytical methodology for the determination of N,N'-dimethylthiourea in carrot, corn salad, tomato and soil FERA, York, UK Report No. FSGD-051 GLP: yes Not published	Y	Taminco
IIA 4.2.1/10	Wormald S.	2010-02-03	Validation of analytical methodology for the determination of N,N'-dimethylthiourea in Cucumber, Egg Plant, Pepper, Strawberry, Potato and Grape FERA, York, UK Report No. FSGD-081 GLP: yes Not published	Y	Taminco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 4.2.2 /01 IIA 4.2.4 /01	Rooseboom -Reimers A	2002-06-27	Validation of an analytical method for the determination of methyl isothiocyanate (MITC) from air monitoring tubes and soil + amendments 1 to 3 TNO Nutrition and Food Research, TNO V4211 GLP Not published	Y	Taminco, FMC Foret, Lainco
IIA 4.2.2 /02	Meyers TJ	1986-01-22	Determination of metam-sodium in soil Richmond Research Center, Stauffer RRC 86-06 Not GLP Not published	Y	USA TF
IIA 4.2.2/03	Wormald S.	2009-09-17	Validation of analytical methodology for the determination of N,N'-dimethylthiourea in carrot, corn salad, tomato and soil FERA, York, UK Report No. FSGD-051 GLP: yes Not published	Y	Taminco
IIA 4.2.3 /01	Rooseboom -Reimers A	2002-10-09	Validation of an analytical method for the determination of methyl isothiocyanate in water, according to SANCO/825/00 + amendment 01 TNO Nutrition and Food Research, V4440 GLP Not published	Y	Taminco; FMC Foret, Lainco
IIA 4.2.3 /02	Miles CJ	1992-06-10	Potassium N-methyldithiocarbamate (PNMDC) analytical method validation in freshwater Toxicon, J9110001a GLP Not published	Y	USA TF
IIA 4.2.3 /03	Miles CJ	1992-06-10	Potassium N-methyldithiocarbamate (PNMDC) analytical method validation in filtered saltwater Toxicon, J9201013a GLP Not published	Y	USA TF
IIA 4.2.3 /04	Miles CJ	1993-01-13	Potassium N-methyldithiocarbamate (PNMDC) analytical method validation in unfiltered saltwater Toxicon, J2101013b GLP Not published	Y	USA TF

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 4.2.4 /02	Rooseboom-Reimers A	2001-	Analysis of study samples for MITC by GC-NPD from HLB study 101 and 102 TNO Nutrition and Food Research, TNO V4294 GLP Not published	Y	Taminco
IIA 4.2.4 /03	Leung SC	1982-08-26	Methyl isothiocyanate from metham-sodium – determination in air Stauffer Richmond research center, RCC-82-35 Not GLP Not published	Y	USA TF
IIA 4.2.4 /04	Tuinstra LGMTh, Ebbers AE, van Neer ThCH	1986-01-10	Het ontwikkelen van een bepalingmethode voor de grondontsmettingsmiddelen 1,3-dichloorpropeen en methylisothiocyanaat Rikilt, 86.02 Not GLP Published	N	-
IIA 4.2.4 /05	Schouten, A.	2007-05-22	Validation of an analytical method for the determination of MITC on coconut charcoal air sampling tubes TNO Report V7111 GLP Not published	Y	Taminco
IIA 4.2.5 /01	Grosshans F	2004-05-19	Validation of BASF Method 557/0: The determination of Reg.No. 507 6613 (Metabolite of Dazomet) in body fluids BASF AG, 2004/1013758 GLP Not published	Y	KST, Taminco
IIA 4.2.5 /02	Wolf, S.	2006-10-27	Development and validation of a residue analytical method for methylisothiocyanate in liver RCC Study number A69972 GLP Not published	Y	Taminco
	Wormald S.	2009-12-03	Validation of analytical methodology for the determination of Methyl Iso-Thiocyanate in arthropods FERA, York, UK Report No. FSGD-053 GLP: yes Not published	Y	Taminco

A.5.1 Methods of analysis for the formulations (Annex IIIA 5)

none

A.6 Toxicology and metabolism (Annex IIA 5; Annex IIIA 7)

A.6.1 Toxicology and metabolism of the active substance (Annex IIA 5)

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 5.1.1 /01	Hawkins DR, Elsom LF, Girkin R	1987-11-12	The biokinetics and metabolism of 14C-metam sodium in the rat ██████████ HRC/BSF 455/6/7/8875 GLP Not published	Y	USA TF
IIA 5.1.3 /01	Stewart FP	1991-10-07	Pilot dermal absorption study with 14C-Metam Sodium in female rats ██████████ CTL/C/2463 GLP Not published	Y	USA TF
IIA 5.1.3 /02	Stewart FP	1992-11-30	Metam-Sodium: in vivo percutaneous absorption study in the rat ██████████ CTL/C/2843 GLP Not published	Y	USA TF
IIA 5.1.3 /03	Clowes HM	1993-10-15	Metam sodium: in vitro absorption through rat and human skin ██████████ CTL/P/4118 GLP Not published	Y	USA TF
IIA 5.2.1 /01	Baldrick P, Healing G	1991-01-07	Acute Oral Toxicity to rats of metam sodium ██████████ HRC 901046D/UCB 366/AC GLP Not published	N	Taminco
IIA 5.2.1 /02	Sulaiman SM	2002-10-11	Acute oral toxicity study (acute toxic class method) with metam potassium aqueous solution in wistar rats ██████████ 3377/02 GLP Not published	Y	Taminco
IIA 5.2.1 /03	Kieczka H, Kirsch P	1986-10-15	Report on the study of acute oral toxicity of the rat based on OECD and EPA (FIFRA) of MITC ██████████ 86/281 Not GLP Not published	Y	BASF, Taminco
IIA 5.2.2 /01	Baldrick P, Healing G	1991-01-07	Acute dermal toxicity to rats of metam sodium ██████████ HRC 90955D/UCB 367/AC GLP Not published	N	Taminco
IIA 5.2.2 /02	Sulaiman SM	2002-10-11	Acute dermal toxicity study (Acute toxic Class Method) with metam potassium aqueous solution	Y	Taminco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
			in wistar rats [REDACTED] 3378/02 GLP Not published		
IIA 5.2.2 /03	Kirsch P, Hildebrand B	1987-01-15	Report on the study of the acute dermal toxicity of the rat based on OECD and EPA (FIFRA) of MITC [REDACTED] 87/014 Not GLP Not published	Y	BASF, Taminco
IIA 5.2.3 /01	Jackson GC, Hardy CJ	1992-01-08	Acute inhalation toxicity in rats, 4 hours exposure [REDACTED] HRC UCB 37191206 GLP Not published	N	USA TF
IIA 5.2.3 /02	Gelbke H-P, Klimisch H-J	1986-11-06	Acute inhalation toxicity LC50 4 hours (rat) liquid aerosol study of metam sodium [REDACTED] 86/346 GLP Not published	N	USA TF
IIA 5.2.3 /03	Venugopala Rao K	2002-12-31	Acute inhalation toxicity study with metam potassium aqueous solution in wistar rats [REDACTED] 3379/02 GLP Not published	Y	Taminco
IIA 5.2.3 /04	Jackson GC et al	1981-04-09	Methyl isothiocyanate: Acute inhalation toxicity in rats, 4 hour exposure [REDACTED] BSF 378/801109, 81/082 GLP Not published	Y	KST, Taminco
IIA 5.2.4 /01	Liggett MP, McRae LA	1991-01-07	Skin irritation to rabbits with metam sodium [REDACTED] HRC 90997D/UCB 368/SE GLP Not published	N	Taminco
IIA 5.2.4 /02	Kirsch P, Rieczka H	1986-10-27	Report on the study of the acute dermal irritation/corrosivity to the intact dorsal skin of the white rabbit based on OECD and EPA (FIFRA) of MITC [REDACTED] 86/319 Not GLP Not published	N	KST, Taminco
IIA 5.2.4 /03	Kirsch, Grundler	1982-03-01	Report on the study of the acute irritation/corrosion to the intact dorsal skin of White Rabbits [REDACTED] 88/0476	N	USA TF

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
			Not GLP not published		
IIA 5.2.5 /01	Liggett MP, McRae LA	1991-01-07	Eye irritation to rabbits with metam sodium ██████████ HRC 90998D/UCB 369/SE: GLP Not published	N	Taminco
IIA 5.2.5 /02	Prakash PJ	2002-10-11	Acute eye irritation/corrosion study with metam potassium aqueous solution in new zealand white rabbits ██████████ 3381/02 GLP Not published	Y	Taminco
IIA 5.2.6 /01	Parcell BI, Denton S M	1991-01-07	Delayed contact hypersensitivity in the guinea-pig with metam sodium ██████████ HRC 901002D/UCB 370/SS GLP Not published	N	Taminco
IIA 5.2.6 /02	Merkel DJ	2002-12-02	Metam potassium. Dermal sensitization study in guinea pigs (Magnusson-Kligman method) ██████████ 12086 GLP Not published	Y	Taminco
IIA 5.2.6 /03	Kieczka H, Kirsch P	1986-12-02	Report on the maximization test for the sensitizing potential of MITC in guinea pig ██████████ 86/374 Not GLP Not published	Y	KST, Taminco
IIA 5.3.1 /01	Whiles AJ	1990-12-11	Metam Sodium: pilot drinking water study in mice ██████████ CTL/L/3466 Not GLP Not published	Y	USA TF
IIA 5.3.1 /02	Cave DA	1991-01-18	Metam sodium: 21 day drinking water study in rats ██████████ CTL/T/2716 Not GLP Not published	Y	USA TF
IIA 5.3.2 /01	Whiles AJ	1991-09-26	Metam Sodium: 90 day drinking water study in mice with a 28 day interim kill ██████████ CTL/P/3185 GLP Not published	Y	USA TF
IIA 5.3.2 /02	Allen SL	1991-09-26	Metam Sodium: 90 day drinking water study in rats ██████████ CTL/P/3213 GLP Not published	Y	USA TF

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 5.3.2 /03	Brammer A	1992-11-11	Metam Sodium: 90-day oral dosing study in dogs [REDACTED] CTL/P/3679 GLP Not published	Y	USA TF
IIA 5.3.2 /04	Brammer A	1993-05-24	Metam sodium: assessment of recovery in dogs [REDACTED] CTL/L/5204 Not GLP Not published	Y	USA TF
IIA 5.3.2 /05	Harling RJ, Massey JE, Buist DP, Edgarm HH, Street AE, Brown G, Majeed SK, Gopinath C	1986-03-25	Methyl Isothiocyanate: Oral toxicity study in Beagle Dogs (Final Report – Repeated administration for 13 weeks) [REDACTED] Tox/86/203-218 GLP Not published	Y	Taminco (access)
IIA 5.3.2 /06	Brammer A	1994-05-23	Metam sodium: 1 year oral toxicity study in dogs [REDACTED] CTL/P/4196 GLP Not published	Y	USA TF
IIA 5.3.3 /01	Knapp HF	1983-08-31	Subchronic inhalation study with vapam technical in rats [REDACTED] T-11006 Not GLP Not published	Y	USA TF
IIA 5.3.3 /02	Duffell SJ	1992-10-29	Metam-sodium: a CTL re-examination of liver sections from a sub-chronic inhalation study with vapam technical in rats [REDACTED] CTL/T/2815 GLP Not published	Y	USA TF
IIA 5.3.3 /03	Leuschner F	1979-02-12	3-weeks-toxicity of Metam Fluid (methyl-dithio carbamic sodium) lot BAS 00500N – called for short ‘Metam Fluid’ – during local administration in rabbits [REDACTED] 79/0140 Not GLP Not published	Y	USA TF
IIA 5.3.3 /04	Klimisch H-J, Deckhardt K, Hasenohrl K, Hildebrand B	1987-07-03	Study on the Subchronic Inhalation Toxicity of Methyl Isothiocyanate in Wistar Rats (4-Week Study) [REDACTED] 87/0244 (translation of report 87/039) GLP Not published	Y	USA TF
IIA 5.4.1 /01	Mackay JM	1996-10-14	Review of metam sodium genetic toxicology [REDACTED] CTL/P/5287 GLP	Y	USA TF

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
			Not published		
IIA 5.4.1 /03	Engelhardt G	1987-06-05	Report on the Study of Metam Sodium in the AMES test BASF, 87/0208 GLP Not published	N	USA TF
IIA 5.4.1 /04	Gelbke H-P, Engelhardt G	1986-01-28	Report on the study of Methylisothiocyanate in the Ames test BASF AG, 83/010 Not GLP Not published	Y	KST, Taminco
IIA 5.4.1 /05	Jagannath DR	1989-03-13	Report on the mutagenicity test on MITC in the recombination assays with bacillus subtilis strains H17 (rec+) and M45 (rec-) Hazleton Laboratories, 10538-0-404, BASF 89/0098 GLP Not published	N	KST, Taminco
IIA 5.4.1 /06	Engelhardt G	1987-08-03	Report on the study for gene mutations in vitro of Metam sodium in Chinese Hamster Ovary Cells (HGPRT locus) with and without metabolic activation BASF, 87/0280 GLP Not published	Y	USA TF
IIA 5.4.1 /07	Gelbke HP, Engelhardt G	1987-03-09	Report on the in vitro cytogenetic investigations in human lymphocytes with metam sodium BASF, 87/0116 GLP Not published	N	Taminco
IIA 5.4.1 /08	Mackay JM	1996-06-07	Metam sodium: in vitro cytogenetic assay in human lymphocytes CTL, CTL/E/0103 GLP Not published	Y	USA TF
IIA 5.4.1 /09	Engelhardt G, Gelbke H-P	1987-05-26	Report on the in vitro cytogenetic investigations in human lymphocytes with Methylisothiocyanate BASF AG, 87/0184 GLP Not published	Y	BASF, Taminco
IIA 5.4.1 /10	Nihon Schering K.K., Shionogi & Co	1990-02-20	Summary of Toxicity data on Methyl Isothiocyanate (MITC) Agrochemical div., Nihon Schering K.K. and Shionogi & Co., Ltd. Japan, J. Pesticide Sci. 15, 297-304 Not GLP Published	N	publication

Metam
Belgium

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August 2007

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Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 5.4.1 /11	Cifone MA	1987-07-01	Report on the Mutagenicity test on metam sodium in the rat primary hepatocyte unscheduled DNA Synthesis assay [REDACTED] 9736-0-447, BASF 87/0240 GLP Not published	Y	USA TF
IIA 5.4.1 /12	Hoorn AJW	1987-03-27	Report on the mutagenicity test on metam sodium in the REC-Assay with Bacillus Subtilis [REDACTED] BASF 87/0163 (HLA) GLP Not published	N	USA TF
IIA 5.4.2 /01	Barber G, Mackay JM	1996-04-18	Metam sodium: an evaluation in the mouse micronucleus test (in vivo) [REDACTED] CTL/E/0104 GLP Not published	Y	USA TF
IIA 5.4.2 /02	Allen JA, Proudlock RJ, Pugh LC	1985-12-13	Technical methylisothiocyanate (MITC) : Mouse micronucleus test [REDACTED] TOX85051, TOX/85/203-2 GLP Not published	Y	Taminco (access)
IIA 5.4.2 /03	Gelbke HP, Engelhardt G	1987-06-30	Cytogenetic study in vivo of Metam-Sodium in Chinese hamsters bone marrow chromosome analysis, single oral administration [REDACTED] 87/0238 GLP Not published	Y	USA TF
IIA 5.5.1/01	Allen SL	1991-03-28	Metam Sodium: Pilot drinking study in rats [REDACTED] CTL/L/3844 Not GLP Not published	Y	USA TF
IIA 5.5.1 /02	Rattray NJ	1994-05-23	Metam Sodium: Two year drinking study in rats Zeneca CTL, CTL/P/4139 GLP Not published	Y	USA TF
IIA 5.5.1 /03	Rattray NJ	1994-07-11	First amendment to metam sodium: 2 year drinking study in rats [REDACTED] CTL/P/4139 GLP Not published	Y	USA TF
IIA 5.5.1 /04	Brown D	1984-02	T27/2 Methyl isothiocyanate: a chronic oral (drinking water) toxicity and carcinogenicity study in the rat (part 1 and 2) [REDACTED] 2611-14/1R Not GLP Not published	Y	Taminco (access)

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Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 5.5.1 /05	Brown D	1988-06	A chronic oral (drinking water) toxicity and carcinogenicity study in the rat – addendum ██████████ 2611-14/1R GLP Not published	Y	Taminco (access)
IIA 5.5.1 /06	Iwan J, Kaiser R, Hollihn U	1988-10-12	T27/2 Rat Chronic/Oncogenicity. Answers to questions posed by EPA reviews ██████████ T27/2 Not GLP Not published	Y	Taminco (access)
IIA 5.5.2 /01	Horner SA	1994-04-20	Metam sodium: Two year drinking study in mice ██████████ CTL/P/4095 GLP Not published	Y	USA TF
IIA 5.5.2 /02	Pistel F	1994-10-02	Assessment of the carcinogenic potential of Metam sodium ██████████ 152-001 Not GLP Not published	Y	Taminco
IIA 5.5.2 /03	Satoh R et al	1980-12	Methyl isothiocyanate (MITC): 2 year oral toxicity and oncogenicity study with methyl isothiocyanate in albino mice (106 week final report) ██ T52 Not GLP Not published	Y	Taminco (access)
IIA 5.5.2 /04	Shigeshi Toyoshima	1982	Methyl isothiocyanate: Two-year oral toxicity study in albino mice (106-week final report), Volume III – stability test of methyl isothiocyanate (MITC) in animal drinking water (trials 1 and 2) ██████████ T52 Vol III Not GLP Not published	Y	Taminco (access)
IIA 5.5.2 /05	Shigeshi Toyoshima	1982	Methyl isothiocyanate: Two-year oral toxicity study in albino mice (106-week final report), Volume IV – stability test of methyl isothiocyanate (MITC) in animal drinking water (trials 3 and 4) ██████████ T52 Vol IV Not GLP Not published	Y	Taminco (access)
IIA 5.5.2 /06	Kashima M, Sato H	1985-04	Methyl isothiocyanate: two-year oral toxicity in albino mice (106-week final report) Addendum to final report ██ ██████████ T52 addend	Y	Taminco (access)

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
			Not GLP Not published		
IIA 5.5.2 /07	Hiraide Y	1988-08-29	Methyl isothiocyanate: two-year oral toxicity study in albino mice T52 amend 1, T52 addendum [REDACTED] T52 amend, T52 addendum Not GLP Not published	Y	Taminco (access)
IIA 5.6.1 /01	Milburn GM	1993-12-23	Metam sodium: multigeneration study in the rat [REDACTED] CTL/P/3788 GLP Not published	Y	USA TF
IIA 5.6.1 /02	Barker L	1987-12-23	Technical methyl isothiocyanate (MITC): 2 generation oral (drinking water) reproduction study in the rat T98 (part 1 and 2) [REDACTED] T98 TOX 87/203-21, 5289-194/8 GLP Not published	Y	Taminco (access)
IIA 5.6.1 /03	Jackson CM	1988-04-12	Technical methyl isothiocyanate (MITC) 2 generation oral (drinking water) reproduction study in the rat – addendum to the report [REDACTED] T 98 TOX 87/203-21 Not GLP Not published	Y	Taminco (access)
IIA 5.6.1 /04	Barker L	1986-02-13	T98A Technical methyl isothiocyanate (MITC): 2 generation oral (drinking water) reproduction study in the rat -Chemistry report [REDACTED] Report No 5289-194/8 Not GLP Not published	Y	Taminco (access)
IIA 5.6.2 /01	Hellwig J, Hildebrand B	1987-03-25	Report on the study of the prenatal toxicity of metam-sodium in rats after oral administration (gavage) + supplement [REDACTED] 87/0128 GLP Not published	Y	USA TF
IIA 5.6.2 /02	Rose	1991-12	Supplemental information on Historical Control Skeletal Variations in the Metam Sodium Rat Teratology Study Addendum to MRID 41577101 [REDACTED] 87/0128 Not GLP Not published	Y	USA TF
IIA 5.6.2 /03	Tinston DJ	1993-05-06	Metam sodium : dose range finding study in pregnant rat [REDACTED] CTL/T/2823 GLP	Y	USA TF

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
			Not published		
IIA 5.6.2 /04	Tinston DJ	1993-10-05	Metam sodium: developmental toxicity study in the rat [REDACTED] CTL/P/4052 GLP Not published	Y	USA TF
IIA 5.6.2 /05	Hellwig J, Hildebrand B	1987-09-02	Report on the study of the prenatal toxicity of MITC in rats after oral administration (gavage) [REDACTED] BASF 87/0326 GLP Not published	Y	BASF, Taminco
IIA 5.6.2 /06	Hodge MCE	1993-03-30	Metam sodium : dose range finding study in the rabbit [REDACTED] CTL/L/5197 Not GLP Not published	Y	USA TF
IIA 5.6.2 /07	Hodge MCE	1993-05-24	Metam-sodium: Dose Range Finding Study In The Pregnant Rabbit [REDACTED] CTL/T/2828 GLP Not published	Y	USA TF
IIA 5.6.2 /08	Hodge MCE	1993-09-06	Metam sodium: developmental toxicity study in the rabbit [REDACTED] CTL/P/4035 GLP Not published	Y	USA TF
IIA 5.6.2 /09	Hellwig J	1987-07-15	Report on the study of the prenatal toxicity of metam-sodium in rabbits after oral administration [REDACTED] 87/0255 GLP Not published	Y	USA TF
IIA 5.6.2 /10	Becker H, Sachsse K, et al.	1986-09-05	Report on the study of the embryotoxicity (including teratogenicity) in the rabbit with MITC [REDACTED] Itingen, 056687, BASF 86/395 GLP Not published	Y	BASF, Taminco
IIA 5.8.1 /01	Nihon Schering K.K. and Shionogi & Co.	1990-02-20	Summary of Toxicity data on Methyl Isothiocyanate (MITC) [REDACTED] [REDACTED] J. Pesticide Sci. 15, 297-304 Not GLP Published	N	publication
IIA 5.8.2/01	Lamb IC	1993-01-06	An Acute Neurotoxicity Study of Metam-Sodium In Rats [REDACTED] WIL-188009 GLP	Y	USA TF

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
			Not published		
IIA 5.8.2/02	Lamb IC	1993-09-27	The Effect of Metam-Sodium On Cholinesterase Following Acute Oral Exposure In The Rat [REDACTED] WIL-188010 GLP Not published	Y	USA TF
IIA 5.8.2/03	Allen SL	1994-04-29	Metam Sodium: Subchronic Neurotoxicity Study in Rats [REDACTED] CTL/P/4334 GLP Not published	Y	USA TF
IIA 5.8.2/04	Allen SL	1994-04-20	Metam Sodium: Subchronic Neurotoxicity Study in Rats - Individual Animal Data Supplement [REDACTED] CTL/P/4334 GLP Not published	Y	USA TF
IIA 5.8.2/05	Allen SL	1995-07-25	First Supplement to Metam Sodium: Subchronic Neurotoxicity Study in Rats [REDACTED] CTL/P/4334 GLP Not published	Y	USA TF
IIA 5.8.2/06	Allen SL	1995-10-17	Second Supplement to Metam Sodium: Subchronic Neurotoxicity Study in Rats [REDACTED] CTL/P/4334 Not GLP Not published	Y	USA TF
IIA 5.9.2 /01	Cone et al.	1994	Persistent Respiratory Health Effects After a Metam Sodium Pesticide Spill University of California, Chest 1994, 106(2):500-508 Not GLP Published	N	publication
IIA 5.9.3 /01	Kreutzer RA, Hewitt DJ and Draper WM	1993-03-16	An epidemiological Assessment of the Cantara Metam Sodium Spill California Dep. of Health, Emeryville and California Department of Health Services, Berkely, Environmental epidemiology 15, p209-230 Not GLP Published	N	publication

A.6.2 Toxicology and metabolism of the formulations (Annex III A 7)

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIIA 7.2.1 / 01	Mulder A, Roosjen Js, Dijksterhuis A	1994	Blootstelling van de toepasser aan methylisothiocyanaat tijdens de grondontsmetting met metam-natrium in het fabrieksaardappelgebied (<i>Exposure of the user to methylisothiocyanate during soil decontamination with Metam-sodium on industrial potato land</i>) Hilbrands laboratorium voor bodemziekten, 9410 Not published Not GLP	Y	Taminco, Cerexagri
IIIA 7.2.1 / 02	de Rooij M, Dijksterhuis A, van Aartrijk J	1993-03	Blootstelling van de toepasser aan methylisothiocyanaat tijdens de grondontsmetting van bloembollenpercelen met metam-natrium (<i>Exposure of the user to methylisothiocyanate during soil decontamination of bulb parcels with Metam-sodium</i>) Stichting laboratorium voor bloembollen-onderzoek Lisse Not published Not GLP	Y	Taminco
IIA 7.2.2 IIIA 7.2.1.2 IIIA 9.3	Links, IHM; Veldhof, RJG; Lurvink, MWM; Schouten, A; van Hemmen, JJ	2006-03-16	Operator exposure to methyl isothiocyanate (MITC) and methyl isocyanate (MIC), and air monitoring of MITC, MIC, carbon disulfide and methylamine following use of Metam-sodium TNO Zeist, V6654/01 GLP Not published	Y	Taminco
IIIA 7.2.1 / 03	Jarvis T	2004-11-18	Predicted emission rates of MITC into air in the EU using the FOCUS Groundwater Scenarios with the PRZM model Exponent International Ltd, TA18804-3 Not published Not GLP	Y	Taminco
IIIA 7.2.2 / 01	Saeed IAM, Rouse DI, Harkin JM	2000	Methyl isothiocyanate volatilization from fields treated with metam-sodium Pest Manag Sci, 56:813-817 Not published GLP	N	public

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIIA 7.2.2 /02	Van den Berg F	1993	Measured and computed concentrations of methyl isothiocyanate in the air around fumigated fields DLO Winand Staring Centre, Atmospheric Environment Vol 27A: 63-71 Not published GLP	Y	public
IIIA 7.2.3 /01	Schepel EG, Dijksterhuis A	2003	Operator and bystander inhalatory exposure to MITC during and after breaking of the seal after soil fumigation with Metam-sodium (including tunnel measurements) HLB, 193, project 2266 Published Not GLP	Y	Taminco
IIIA 7.2.3 /02	den Tonkelaar WAM, Heidema LF	1988-11-21	Emissie en verspreiding van methylisothiocyanaat bij grondontsmetting van kassen (Emission and spreading of methyl isothiocyanate with soil decontamination in glasshouses TNO, R 88/194A Not published Not GLP	N	Taminco, KST, Cerexagri, Bayer CS
IIIA 7.2.3 /03	Thouvenin, I	2008	Determination of operator and worker inhalation exposure and air monitoring of methyl isothiocyanate (MITC) following drip irrigation with Nemasol® 510	Y	Taminco

Published data not provided by the company and used in the DAR by the RMS:

Annex point	Authors	Title	Published
IIA 5.1.1 /01	Lam, WW, Kim JH, Sparks, SE, Quistad, G and Casida JE, 1993	Metabolism in rats and mice of the soil fumigants of metam, methyl isothiocyanate and Dazomet	J.Agric.Food Chem., 41, 1497-1502
IIA 5.2.1	Thompson, RW, Valentine, HL and Valentine WM., 2002	In vivo and in vitro hepatotoxicity and GSH interactions of N-methyldithiocarbamate in the rat.	Toxicol. Sci., 70, 269-280.
IIA 5.2.1	Stephen B. Pruett ¹ , Qiang Zheng, Carlton Schwab and Ruping Fan, 2005	Sodium Methyldithiocarbamate Inhibits MAP Kinase Activation through Toll-like Receptor 4, Alters Cytokine Production by Mouse Peritoneal Macrophages, and Suppresses Innate Immunity	Toxicological Sciences 87(1) :75-85
IIA 5.3	Brittebo, E.,1997	Metabolism-dependent activation and toxicity of chemicals in nasal glands.	Mutation Research, 380, 61-75

Annex point	Authors	Title	Published
IIA 5.3	California Environmental Protection Agency, 2004	Metam sodium risk characterization document. Medical toxicology branch Department of Pesticide Regulation	-
IIA 5.3	Harkema, JR, 1990	Comparative pathology of the nasal mucosa in laboratory animals exposed to inhaled irritants	Environ. Health Perspect. 85, 1990, 231-238
IIA 5.3	Gaskell, BA, 1990	Nonneoplastic changes in the olfactory epithelium-experimental studies	Environ. Health Perspect. 85, 1990, 275
IIA 5.3	Morgan, DL., price, H., O'Connor, R., Seely, JC., Ward, SM, Wilson, RE., and Cunningham, M, 2000	Upper respiratory tract toxicity of inhaled methylvinyl ketone in F344 rats and B6C3F1 mice	Toxicol Sci, 58, 182-194.
IIA 5.4	Fekadu Kassie, Brenda Laky, Eva Nobis, Michael Kundi and Siegfried Knasmüller, 2001	Genotoxic effects of methyl isothiocyanate	Mutation Research/Genetic Toxicology and Environmental Mutagenesis Volume 490, (1) , 25 , 1-9
IIA 5.5.2	Joan E. Denton, 2003	Comments and recommendations on the Draft Metam sodium risk characterization document prepared by the department of pesticide regulation California Environmental Protection Agency Memorandum to: Gary T. Patterson, Ph.D., Chief Medical Toxicology Branch Department of Pesticide Regulation 830 K Street Sacramento, California 95814-3510 FROM: Anna M. Fan, Ph.D., Chief Pesticide and Environmental Toxicology Section	Memorandum
IIA 5.5.2	Cohen, S.M, 2002	Comparative pathology of proliferative lesions of the urinary bladder	Toxicologic Pathology gy, 30, 663-671.
IIA 5.5.8	Keil, D., Padgett, E., Barnes, D. and Pruett, 1996	Role of decomposition products in sodium methyldithiocarbamate induced immunotoxicity	J. toxicol. Environ Health, 5 ; 47 (5) :479-492
IIA 5.5.8	Pruett et al., 1992	Immunotoxicological characteristics of sodium methyldithiocarbamate	Fundam. Appl. Toxicol, 18(1)40-17

Annex point	Authors	Title	Published
IIA 5.6.1	Goldman et al., 1994	Blockade of ovulation in the rat by the fungicide metam sodium: relationship between effects on the luteinizing hormone surge and alterations in hypothalamic catecholamines	Neurotoxicology and Teratol., 16 (3), 257-268
IIA 5.8.1	John R. Froines, 2002	The Department of Pesticide Regulation's document: Evaluation of methyl isothiocyanate (MITC) as a toxic air contaminant. Regulation's draft report titled "Evaluation of Methyl Isothiocyanate (MITC) as a Toxic Air Contaminant").	Scientific Review Panel, California, based on the Panel's review of the Department of Pesticide
IIA 5.8.1	1997	State of California, California Environmental Protection Agency AIR RESOURCES BOARD, Ambient Air Monitoring for MITC and MITC after a Soil Injection Application of Metam Sodium in Kern County during August 1995.	Engineering and Laboratory Branch Monitoring and Laboratory Division Test Report No. C94-046A Report
IIA 5.8.1	G. A. Boorman, R. Brown, B. N. Gupta, L. C. Uraih and J. R. Bucher. 1987	Pathologic changes following acute methyl isocyanate inhalation and recovery in B6C3F1 mice	Toxicology and Applied Pharmacology, 87, Issue 3, 446-456
IIA 5.8.1	Mitsumori, K, Boorman, G.A., Gupta, B.N., and Bucher, J.R. 1987	Four-day repeated inhalation and recovery study of methyl isocyanate in F344 rats and B6C3F1 mice.	Fund. Appl Toxicol 9:480-495
IIA 5.8.1	Sethi N, Dayal R, Singh RK, 1989	Acute and subacute toxicity study of inhaled methyl isocyanate in Charles Foster rats.	Ecotoxicol Environ Saf. 1989, 18(1):68-74
IIA 5.8.1	Schwetz, et al, 1987	Methylisocyanate: reproductive and developmental toxicology studies in Swiss mice.	Environ Health perspect., 72, 149-152
IIA 5.8.1	Shelby, MD, Allen, JW, Caspary, W, Haworth, S., Ivett, J, Kligerman, A., Luke, CA, Mason, J., Myer, B., Tice, RR., Valencia, R and Zeiger, E, 1987	Results of in vitro and in vivo genetic toxicity tests on methyl isocyanate	Environ Health perspect., 72, 183-187

Annex point	Authors	Title	Published
IIA 5.8.1	David W. Herr, Jaimie E. Graff, Virginia C. Moser, Kevin M. Crofton, Peter B. Little, Daniel L. Morgan and Robert C. Sills.	Inhalational Exposure to Carbonyl Sulfide Produces Altered Brainstem Auditory and Somatosensory-Evoked Potentials in Fischer 344N Rats	Toxicological Sciences 2007 95(1):118-135
IIA 5.9.2	O' Malley, Barry, Verder-Carlos and Rubin, 2004	Modeling of MITC air concentrations associated with community illnesses following metam sodium sprinkler application	Am J Ind Med.;46(1):1-15
IIA 5.9.2	Bowler et al. 1994	Aftermath of a Chemical Spill.	Psychological and Physiological Sequelae, NeuroToxicology, 15(3): 723 -730)
IIA 5.9.3	O'Malley M, Barry T, Ibarra M, Verder-Carlos M, Mehler L., 2005	Illnesses related to shank application of metam-sodium, Arvin, California, 2002.	J Agromedicine. 10(4):27-42
IIA 5.9.4	Koo D, Goldman L, Baron R. 1995	Irritant dermatitis among workers cleaning up a pesticide spill: California 1991.	Am J Ind Med. 27(4):545-53.
IIA 5.9.4	Cone JE, Wugofski L, Balmes JR, Das R, Bowler R, Alexeeff G, Shusterman D, 1994	Persistent respiratory health effects after a metam-sodium pesticide spill.	Chest, 106(2); 500-5008

A.7 Residue data

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 6.1 /01	Bieber WD, Krohn R	1989-01a	Investigations on the residues of metam-sodium in radishes grown on pretreated soil NATEC Institute, 89/0036 GLP Not published	Y	USA TF
IIA 6.1 /02	Bieber WD, Krohn R	1989-01b	Investigations on the residues of metam-sodium in chinese cabbage grown on pretreated soil NATEC Institute, 89/0037 GLP Not published	Y	USA TF
IIA 6.1 /03	Bieber WD, Krohn R	1989-01c	Investigations on the residues of metam-sodium in tomatoes grown on pretreated soil NATEC Institute, 89/0038 GLP Not published	Y	USA TF
IIA 6.1 /04	Davis ML, Campbell LA	1995-03-10	Nature of the residue of 14C-Metam-Sodium in turnip Battelle, SC920140 GLP Not published	Y	USA TF
IIA 6.3 /01	Jones PA	1988-11-28a	The magnitude of Metam-Sodium residues on Snap Beans Morse laboratories, Inc., PAL-ME-ICI-01 GLP Not published	Y	USA TF
IIA 6.3 /02	Jones PA	1988-12-05b	The magnitude of Metam-Sodium residues on Cucumbers Morse laboratories, Inc., PAL-ME-ICI-02 GLP Not published	Y	USA TF
IIA 6.3 /03	Jones PA	1988-11-18c	The magnitude of Metam-Sodium residues on Potatoes Morse laboratories, Inc., PAL-ME-ICI-03 GLP Not published	Y	USA TF
IIA 6.3 /04	Jones PA	1988-12-06d	The magnitude of Metam-Sodium residues on Mustard Greens Morse laboratories, Inc., PAL-ME-ICI-04 GLP Not published	Y	USA TF
IIA 6.3 /05	Jones PA	1988-12-07e	The magnitude of Metam-Sodium residues on Peppermint Morse laboratories, Inc., PAL-ME-ICI-05 GLP Not published	Y	USA TF

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 6.3 /06	Zick MA	1988-12-14a	The magnitude of Metam-Sodium residues on Basil Morse laboratories, Inc., PAL-ME-ICI-06 GLP Not published	Y	USA TF
IIA 6.3 /07	Zick MA	1988-12-13b	The magnitude of Metam-Sodium residues on Tobacco Morse laboratories, Inc., PAL-ME-ICI-07 GLP Not published	Y	USA TF
IIA 6.3 /08	Zick MA	1988-12-13c	The magnitude of Metam-Sodium residues on Cantaloupes Morse laboratories, Inc., PAL-ME-ICI-08 GLP Not published	Y	USA TF
IIA 6.3 /09	Jones PA	1988-12-13f	The magnitude of Metam-Sodium residues on Radish Morse laboratories, Inc., PAL-ME-ICI-09 GLP Not published	Y	USA TF
IIA 6.3 /10	Jones PA	1989-04-03a	The magnitude of Metam-Sodium residues on Leaf Lettuce Morse laboratories, Inc., PAL-ME-ICI-10 GLP Not published	Y	USA TF
IIA 6.3 /11	Cañez VM	1989-06-28a	The magnitude of Metam-Sodium residues on Green Onion Morse laboratories, Inc., PAL-ME-ICI-11 GLP Not published	Y	USA TF
IIA 6.3 /12	Cañez VM	1989-05-03b	The magnitude of Metam-Sodium residues on Head Lettuce Morse laboratories, Inc., PAL-ME-ICI-12 GLP Not published	Y	USA TF
IIA 6.3 /13	Jones PA	1989-04-03b	The magnitude of Metam-Sodium residues on Spinach Morse laboratories, Inc., PAL-ME-ICI-13 GLP Not published	Y	USA TF
IIA 6.3 /14	Jones PA	1989-04-03c	The magnitude of Metam-Sodium residues on Turnip Morse laboratories, Inc., PAL-ME-ICI-14 GLP Not published	Y	USA TF

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 6.3 /15	Cañez VM	1989-05-03c	The magnitude of Metam-Sodium residues on Broccoli Morse laboratories, Inc., PAL-ME-ICI-15 GLP Not published	Y	USA TF
IIA 6.3 /16	Cañez VM	1989-06-27d	The magnitude of Metam-Sodium residues on Sweet Corn Morse laboratories, Inc., PAL-ME-ICI-16 GLP Not published	Y	USA TF
IIA 6.3 /17	Cañez VM	1989-06-28e	The magnitude of Metam-Sodium residues on Bulb Onion Morse laboratories, Inc., PAL-ME-ICI-17 GLP Not published	Y	USA TF
IIA 6.3 /18	Cañez VM	1989-05-03f	The magnitude of Metam-Sodium residues on Strawberry Morse laboratories, Inc., PAL-ME-ICI-18 GLP Not published	Y	USA TF
IIA 6.3 /19	Cañez VM	1989-05-09g	The magnitude of Metam-Sodium residues on Tomato Fruit Morse laboratories, Inc., PAL-ME-ICI-19 GLP Not published	Y	USA TF
IIA 6.3 /20	Cañez VM	1989-07-28h	The magnitude of Metam-Sodium residues on Cabbage Morse laboratories, Inc., PAL-ME-ICI-20 GLP Not published	Y	USA TF
IIA 6.3 /21	Cañez VM	1989-08-18i	The Magnitude of Metam Sodium Residues on Garlic Morse laboratories, Inc., PAL-ME-ICI-21 GLP Not published	Y	USA TF
IIA 6.3 /22	Bacher R	2003	Lückenindikation 2003 für Schnitt- und Feldsalat : Untersuchung auf Rückstände nach Behandlung mit Metam-Fluid (Wirkstoff: Metam-Natrium) – Intermediate report + 3 BBA-Berichtsbogen (Sampling reports) PTRL Europe, B712-4 G GLP Not published	Y	DLR Neustadt Germany

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 6.3/22	Miserocchi G.	2008-10-14	Residue of methyl isothiocyanate (MITC) in lettuce, pepper and tomato at harvest in protected crop following one application of Tamisol 510 in pre-planting, Italy, 2008 S.P.F. GAB Italia s.r.l., Ferrara, Italy Report No. 08083RMC - I132 GLP: yes Not published	Y	Taminco
IIA 6.3/23	Miserocchi G.	2010-01-29	Residue of Methyl isothiocyanate (MITC) and 1,3-dimethylthiourea (DMTU) in carrot at harvest in open field conditions following one pre-drilling application of Tamisol 510/Solasan/Metam 510, , Italy, Belgium, United Kingdom, 2009 SPF S.r.l, Italy Study number 09048RCR, Trials number B104, GB105, I106, I107 GLP: yes Not published	Y	Taminco
IIA 6.3/24	Miserocchi G.	2010-02-02	Residue of Methyl isothiocyanate (MITC) and 1,3-dimethylthiourea (DMTU) in tomato at harvest in protected crop following one pre-planting application by drip irrigation of Tamisol 510/Solasan, Italy, Belgium, 2009 SPF S.r.l, Italy Study number 09050RTO, Trials number B112, I113, I114, I115 GLP: yes Not published	Y	Taminco
IIA 6.3/25	Miserocchi G.	2010-02-12	Residue of Methyl isothiocyanate (MITC) and 1,3-dimethylthiourea (DMTU) in cucumber at harvest in protected crop following one pre-planting application by drip irrigation of Tamisol 510/Metam sodio 50, Italy, Spain, 2009 SPF S.r.l, Italy Study number 09058RCU, Trials number I127, I128 GLP: yes Not published	Y	Taminco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 6.3/26	Miserocchi G.	2010-02-12	Residue of Methyl isothiocyanate (MITC) and 1,3-dimethylthiourea (DMTU) in green pepper at harvest in protected crop following one pre-planting application by drip irrigation of Tamisol 510/Metam sodio 50, Italy, Spain, 2009 SPF S.r.l, Italy Study number 09059RGP, Trials number I129, I130 GLP: yes Not published	Y	Taminco
IIA 6.3/27	Miserocchi G.	2010-02-12	Residue of Methyl isothiocyanate (MITC) and 1,3-dimethylthiourea (DMTU) in aubergine at harvest in protected crop following one pre-planting application by drip irrigation of Tamisol 510/Metam sodio 50, Italy, Spain, 2009 SPF S.r.l, Italy Study number 09060RAU, Trials number I131, S132 GLP: yes Not published	Y	Taminco

A.8 Environmental fate and behaviour

A.8.1 Environmental fate and behaviour of the active substance (Annex IIA 7)

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 7.1.1.1.1 /01	Burnett TJ	1987-05-08	VapamR aerobic soil metabolism Stauffer Chemical Company, PMS-226, MRC-87-21 GLP Not published	Y	USA TF
IIA 7.1.1.1.1 /02	Hall BE, Lowrie C, Morris A	2004-11-24	The degradation of [14C]-Metam Sodium and its Principal Degradation Product [14C]-MITC in Four Fresh Field Soils Inveresk, 24253 GLP Not published	Y	Taminco
IIA 7.1.1.1.2 /01	Burnett TJ	1987-05-08	VapamR anaerobic soil metabolism Stauffer Chemical Company, PMS-194, MRC-87-22 GLP Not published	Y	USA TF
IIA 7.1.1.1.2 /02	Burnett TJ	1985-11-26	Photo-degradation of Vapam® on soil Stauffer Chemical Company, PMS – 166 MRC 85-07 Not GLP Not published	Y	USA TF
IIA 7.1.1.1.2 /03	Haag WR, Irwin K, Mill T	1989-01-12	Photolysis of Metam-Sodium on Soil ICI Americas Inc., SRI 5915-3 GLP Not published	Y	USA TF
IIA 7.1.1.2.1 /01	Hall BE, Lowrie C, Morris A	2004-11-24	The degradation of [14C]-Metam Sodium and its Principal Degradation Product [14C]-MITC in Four Fresh Field Soils Inveresk, 24253 GLP Not published	Y	Taminco
IIA 7.1.1.2.1 /02	Burnett TJ	1987-05-08	VapamR aerobic soil metabolism Stauffer Chemical Company, PMS-226, MRC-87-21 GLP Not published	Y	USA TF
IIA 7.1.1.2.1 /03	Völkel W.	2010-01-22	14C-N-N'-dimethylthiourea: Degradation and Metabolism in Four Soils Incubated under Aerobic Conditions Innovative Environmental Services Ltd. (IES), Witterswil, Switzerland Report No. 143 01 034 GLP: yes Not published	Y	Taminco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 7.1.1.2.1/04	McMillan C.	2010-01-20	Determination of modelling endpoints for DMTU from laboratory degradation studies using ModelMaker4.0, according to Focus Kinetics. Cambridge Environmental Assessments, ADAS UK Ltd., Boxworth, Cambridge, United Kingdom Report No. CEA.525 GLP: yes Not published	Y	Taminco
IIA 7.1.1.2.1/05	Terry A.	2010-01-21	An Evaluation of the Fate in Soil of MITC under Aerobic Conditions Cambridge Environmental Assessments, ADAS, Boxworth, Cambridge, United Kingdom Report No. CEA.435 GLP: no Not published	Y	Taminco
IIA 7.1.1.2.1/06	McMillan C.	2010-01-20	Determination of modelling endpoints for MITC from laboratory degradation studies using ModelMaker4.0, according to Focus Kinetics. Cambridge Environmental Assessments, ADAS UK Ltd., Boxworth, Cambridge, United Kingdom Report No. CEA.526 GLP: no Not published	Y	Taminco
IIA 7.1.1.2.2 /01	Iwata Y	1989-11-28	Vapam®: Field Dissipation Study for Terrestrial Uses Leland, Mississippi, 1989 ICI Americas Inc. + Morse Laboratories, RR 89-064B GLP Not published	Y	USA TF
IIA 7.1.1.2.2 /02	Iwata Y	1989-11-28	Vapam: Field Dissipation Study for Terrestrial Uses Visalia, California, 1989 ICI Americas Inc. + Morse Laboratories, RR 89-065B GLP Not published	Y	USA TF
IIA 7.1.1.2.2 /03	Anonymous	1986-08-22	Metam sodium groundwater data call-in California field dissipation study Stauffer Chemical Company Not GLP Not published	Y	USA TF

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 7.1.1.2.2 /04	Anonymous	1986-03-07	Metam sodium groundwater data call-in Washington field dissipation studies Stauffer Chemical Company Not GLP Not published	Y	USA TF
IIA 7.1.1.2.2 /05	McKay JC	1987-10-15	Vapam® Field Dissipation study Stauffer Chemical Company, RRC 87-92 Not GLP Not published	Y	USA TF
IIA 7.1.2 /01	Dohn DR	1988-10-14	Stability of Metam-Sodium in Soil/Water Mixtures ICI WRC, PMS-317/WRC 88-61 Not GLP Not published	Y	USA TF
IIA 7.1.2 /02	Vonk JW, van den Hoven AM, van Osenbrugge n WA	1985-12-9	Adsorption of metham-sodium on ditch-bottom sludge TNO, 85/03964/1306-14798/HV/GK R85/338 Not GLP Not published	N	Taminco
IIA 7.1.2 /03	Komatsu K	1990-03-23	Methyl Isothiocyanate: Adsorption in soil Japan Food Research Laboratories TM 82070013, BASF 90/10431 Not GLP Not published	Y	KST, Taminco
IIA 7.1.2/04	Völkel W.	2009-09-04	14C-N,N'-dimethylthiourea: adsorption/desorption on soil Innovative Environmental Services Ltd. (IES), Witterswil, Switzerland Report No. 143 01 011 GLP: yes Not published	Y	Taminco
IIA 7.1.2/05	Herrchen M.	2009-06-03	Determination of the Adsorption/Desorption of Methyl isothiocyanate (MITC) Fraunhofer-Institute for Molecular Biology and Applied Ecology, Germany Report No. KST-008/7-13/1 GLP: yes Not published	Y	KST + Taminco
IIA 7.1.3.1 /01	Betteley J	2002-06-18	Metam Sodium – Soil Adsorption by HPLC Huntingdon Life Sciences Ltd., UCB 841/022456 GLP Not published	Y	Taminco, Buckman

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 7.1.3.3 /01	Fritsch HJ, Huber R	1995	Basamid granular – a halogen-free soil disinfectant BASF AG, Acta Hort. 382,76-85 Not GLP Published	N	public
IIA 7.2.1.3.1 /01	Hanstveit A.O.	2003-07-16	Biodegradation of metam sodium in an aerobic water/sediment system TNO, V4091/01 revised final report GLP Not published	Y	Taminco, Buckman, Cerexagri, FMC Foret, Lainco
IIA 7.2.1.3.2 /01	Cohen SP	1993-03-12	Potassium N-methyldithiocarbamate (PNMDC) Aerobic aquatic metabolism of PNMDC Center for Hazardous Materials Research, ME 9100132 GLP Not published	Y	USA TF
IIA 7.2.1.3.2 /02	Cohen SP	1992-09-21	Potassium N-methyldithiocarbamate (PNMDC) Anaerobic aquatic metabolism of PNMDC Center for Hazardous Materials Research, ME 9100133 GLP Not published	Y	USA TF
IIA 7.2.1.3.2 /03	Cohen SP	1993-03-12	Potassium N-methyldithiocarbamate (PNMDC) Supplemental report: Anaerobic aquatic metabolism of PNMDC. Isolation and identification of metabolites Center for Hazardous Materials Research, ME 9100133 GLP Not published	Y	USA TF
IIA 7.2.1.3.2/04	Mason P., Terry A.	2010-22-01	ESTIMATION OF VOLATILISATION OF METHYL ISOTHIOCYANATE (MITC) FROM SEDIMENT/WATER SYSTEMS AT 12°C, AND CONSEQUENCES FOR CHRONIC AQUATIC ECOTOXICOLOGY RISK Cambridge Environmental Assessments, ADAS, Boxworth, Cambridge, United Kingdom Report No. CEA.537 GLP: no Not published	Y	Taminco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 7.4 /01	Notenboom J, Verschoor A, van der Linden A, van de Plassche E, Reuter C	1999-11	Pesticides in ground water: occurrence and ecological impacts RIVM, 601506002 Not GLP Published	N	public
IIA 7.4 /02	Anonymous	1984	The IPS Raw Water Monitoring and in depth analysis of the occurrence of the active ingredients of pesticides in drinking water resources IPS Not GLP Published	N	public
IIA 7.4 /03	Jüttner F	1992	Flavour compounds in weakly polluted rivers as a means to differentiate pollution sources Wat. Sci. Tech., Vol 25, No 2, pp 155-164 Not GLP Published	N	public
IIA 7.4 /04	Van den Berg F, Roos AH, Tuinstra LGMTh, Leistra M	1988-10	Concentrations of methyl isothiocyanate in the air near villages in the northeast of the Netherlands IOB + Rikilt Not GLP Not published	N	Taminco, KST, Cerexagri, Bayer

A.8.2 Environmental fate and behaviour of the formulations (Annex IIIA 9)

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIIA 9.2.1 /01	Jarvis T	2004-11-16	Predicted environmental concentrations of metam-sodium (as MITC) in groundwater in the EU using the FOCUS groundwater scenarios with the PRZM model Exponent International Ltd, TA 18804-1 Not published Not GLP	Y	Taminco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIIA 9.2.1 /02	Jarvis T	2007-06-29	Predicted environmental concentrations of metam-sodium (as MITC) in groundwater in the EU using the FOCUS groundwater scenarios with the PRZM and PEARL models Exponent International Ltd, TA 18804-1A Not published Not GLP	Y	Taminco
IIIA 9.2.1/03	Franey-Gardiner M., Terry A.	2010-01-22	PREDICTED ENVIRONMENTAL CONCENTRATIONS OF N,N'-DIMETHYLTHIOUREA (DMTU) IN GROUNDWATER IN THE EUROPEAN UNION USING THE FOCUS GROUNDWATER SCENARIOS Cambridge Environmental Assessments, ADAS, Boxworth, Cambridge, United Kingdom Report No. CEA.534 GLP: no Not published	Y	Taminco
IIIA 9.2.1/04	Terry A., Franey-Gardiner M., McMillan C.	2009-01-22	PREDICTED ENVIRONMENTAL CONCENTRATIONS OF METHYL ISOTHIOCYANATE (MITC) IN GROUNDWATER IN THE EUROPEAN UNION USING THE FOCUS GROUNDWATER SCENARIOS Cambridge Environmental Assessments, ADAS, Boxworth, Cambridge, United Kingdom Report No. CEA.532 GLP: no Not published	Y	Taminco
IIIA 9.2.3 /01	Jarvis T	2004-11-16	Predicted environmental Concentrations of Metam-Sodium (as MITC) in Surface water for Selected Uses in the EU using the FOCUS surface water scenarios Exponent International Ltd., TA 18804-2 Not published Not GLP	Y	Taminco
IIIA 9.2.3 /01	Jarvis T	2007-06-29	Predicted environmental Concentrations of Metam-Sodium (as MITC) in Surface water for Selected Uses in the EU using the FOCUS surface water scenarios Exponent International Ltd., TA 18804-2A Not published Not GLP	Y	Taminco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIIA 9.2.3/03	Terry A., Franeý-Gardiner M.	2010-01-25	Predicted environmental concentrations of methyl isothiocyanate (MITC) in surface waters in the European Union using the FOCUS Surface Water Scenarios. Cambridge Environmental Assessments ADAS Boxworth, Cambridge, United Kingdom Report No. CEA.533 GLP: no Not published	Y	Taminco
IIIA 9.2.3/04	Terry A., McMillan C.	2010-22-01	PREDICTION OF REDEPOSITION OF MITC TO SURFACE WATERS IN THE EU FOLLOWING APPLICATION OF METAM-SODIUM Cambridge Environmental Assessments, ADAS, Boxworth, Cambridge, United Kingdom Report No. CEA.535 GLP: no Not published	Y	Taminco
IIIA 9.2.3/05	Hughes G.O.	2010-01-25	FOCUS Surface Water Scenario Contextualisation for Potatoes and Root Vegetables. Cambridge Environmental Assessments ADAS United Kingdom Report No. CEA.538 GLP ; no Not published.	Y	Taminco
IIIA 9.3/01	Terry A.	2010-22-01	FATE OF METHYL ISOTHIOCYANATE (MITC) IN AIR Cambridge Environmental Assessments, ADAS, Boxworth, Cambridge, United Kingdom Report No. CEA.536 GLP: no Not published	Y	Taminco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIIA 9.3	Mulder A, Roosjen Js, Dijksterhuis A	1994	Blootstelling van de toepasser aan methylisothiocyanaat tijdens de grondontsmetting met metam-natrium in het fabrieksaardappelgebied (Exposure of the user to methylisothiocyanate during soil decontamination with Metam-sodium on industrial potato land) Hilbrands laboratorium voor bodemziekten, 9410 Not published Not GLP	Y	Taminco, Cerexagri
IIIA 9.3	de Rooij M, Dijksterhuis A, van Aatrijk J	1993-03	Blootstelling van de toepasser aan methylisothiocyanaat tijdens de grondontsmetting van bloembollenpercelen met metam-natrium (Exposure of the user to methylisothiocyanate during soil decontamination of bulb parcels with Metam-sodium) Stichting laboratorium voor bloembollen-onderzoek Lisse Not published Not GLP	Y	Taminco
IIIA 9.3	Links, IHM; Veldhof, RJG; Lurvink, MWM; Schouten, A; van Hemmen, JJ	2006-03-16	Operator exposure to methyl isothiocyanate (MITC) and methyl isocyanate (MIC), and air monitoring of MITC, MIC, carbon disulfide and methylamine following use of Metam-sodium TNO Zeist, V6654/01 GLP Not published	Y	Taminco
IIIA 9.3	Jarvis T	2004-11-18	Predicted emission rates of MITC into air in the EU using the FOCUS Groundwater Scenarios with the PRZM model Exponent International Ltd, TA18804-3 Not published Not GLP	Y	Taminco
IIIA 9.3	Saeed IAM, Rouse DI, Harkin JM	2000	Methyl isothiocyanate volatilization from fields treated with metam-sodium Pest Manag Sci, 56:813-817 Not published GLP	N	public

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIIA 9.3	Van den Berg F	1993	Measured and computed concentrations of methyl isothiocyanate in the air around fumigated fields DLO Winand Staring Centre, Atmospheric Environment Vol 27A: 63-71 Not published GLP	N	public
IIIA 9.3	Schepel EG, Dijksterhuis A	2003	Operator and bystander inhalatory exposure to MITC during and after breaking of the seal after soil fumigation with Metam-sodium (including tunnel measurements) HLB, 193, project 2266 Published Not GLP	Y	Taminco
IIIA 9.3	den Tonkelaar WAM, Heidema LF	1988-11-21	Emissie en verspreiding van methylisothiocyanaat bij grondontsmetting van kassen (Emission and spreading of methyl isothiocyanate with soil decontamination in glasshouses TNO, R 88/194A Not published Not GLP	N	Taminco, KST, Cerexagri, Bayer CS

A.9 Ecotoxicology

A.9.1 Ecotoxicology of the active substance (Annex IIA 8)

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 8.1.1 /01	Munk R	1985-12	Avian single dose oral LD50 Metam sodium (aqueous solution) to the Bobwhite quail ██████████ 86/0521 Not GLP Not published	Y	USA TF
IIA 8.1.1/02	Ross DB, Cameron MM, Roberts NL review by Mc Lane DJ	1977	Data evaluation record. – The Acute Oral Toxicity (LD50) of Methyl Isothiocyanate to the Mallard Duck According to E.P.A. Guidelines ██ Project No. SHG 135-WL/77330 GLP: not known Not published	Y	Taminco (DER)
IIA 8.1.2 /01	Pedersen CA, Solatycki AM	1993-09-01	Metam Concentrate: 8 Day acute Dietary LC50 study in Bobwhite quail ██████████ 127-001-01 GLP Not published	Y	USA TF
IIA 8.1.2 /02	Pedersen CA, Solatycki AM	1993-09-01	Metam Concentrate: 10 Day Acute Dietary LC50 Study in Mallard Ducklings ██████████ 127-002-02 GLP Not published	Y	USA TF
IIA 8.2.1 /01	Gelbke HP, Munk R	1986-04	Report on the study of acute toxicity of metam-sodium in rainbow trout (<i>Salmo gairdneri</i> Rich.) ██████████ 86/0511 Not GLP Not published	Y	USA TF
IIA 8.2.1 /02	Carr KA, Wheat JV	1992-06-10	Potassium N-methyldithiocarbamate (PNMDC): Acute Toxicity to Rainbow trout, <i>Oncorhynchus mykiss</i> , under flow-through test conditions ██ J9110001d GLP Not published	Y	USA TF
IIA 8.2.1 /03	Howard DJ, Johnston CD	1971-01-25	Vapam: Safety evaluation on Rainbow trout ██ RIC0658 Not GLP Not published	Y	USA TF

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 8.2.1 /04	Zok S	2002-06-25	Methylisocyanate (metabolite of BAS 002 N, dazomet) acute toxicity study on the rainbow trout (<i>Oncorhynchus mykiss</i>) in a semistatic system over 96 hours [REDACTED] 2002/1006168 GLP Not published	Y	KST, Taminco
IIA 8.2.1 /05	Schupner J, Stachura B	1991-09-12	W150 MITC: The acute toxicity of MITC Technical to Rainbow trout, <i>Oncorhynchus mykiss</i> , in a flow through system [REDACTED] 502AF GLP Not published	Y	Bayer CropScience
IIA 8.2.1 /06	Gelbke HP, Munk R	1986-04	Report on the study of Acute Toxicity of Metam sodium in the Bluegill (<i>Lepomis Macrochirus</i> Raf.) [REDACTED] 86/0512 Not GLP Not published	Y	USA TF
IIA 8.2.1 /07	Lintott DR, Wheat JV	1992-06-10	Potassium N-methyldithiocarbamate: Acute Toxicity to Bluegill, <i>Lepomis macrochirus</i> , under flow-through test conditions [REDACTED] J9110001c GLP Not published	Y	USA TF
IIA 8.2.1 /08	Howard DJ, Johnston CD	1970-12-30	Vapam safety evaluation on Bluegill sunfish [REDACTED] T-2173 Not GLP Not published	Y	USA TF
IIA 8.2.1 /09	Schupner J, Stachura B	1991-09-04	W149 MITC: The acute toxicity of MITC Technical to Bluegill sunfish, <i>Lepomis macrochirus</i> , in a flow through system [REDACTED] 501AF GLP Not published	N	Bayer CropScience
IIA 8.2.1 /10	Sutherland GD, Lintott DR	1992-07-17	Potassium N-methyldithiocarbamate (PNMDC): Acute toxicity to the Sheepshead Minnow, <i>Cyprinodon variegatus</i> , under flow-through test conditions [REDACTED] J9201013d GLP Not published	Y	USA TF
IIA 8.2.1 /11	Howard DJ, Johnston CD	1970-12-14	Vapam Safety evaluation on <i>Cyprinodon variegatus</i> (Broad Killifish) [REDACTED] T-2175 Not GLP Not published	Y	USA TF

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 8.2.1 /12	Howard DJ, Johnston CD	1970-12-07	Vapam Safety Evaluation on Striped <i>Majatis</i> [REDACTED] T-2174 Not GLP Not published	Y	USA TF
IIA 8.2.2.1/01	Munk R	1990-02-23	Sublethal toxic effects on rainbow trout (<i>Salmo gairdneri</i> RICH. = <i>Oncorhynchus mykiss</i>) of Methylisothiocyanat (MITC) [REDACTED] 42F0761/895215, BASF 90/10055 GLP Not published	Y	KST, Taminco
IIA 8.2.4 /01	Bias, Merz	1985-05	Determination of the Acute toxicity of BASF 005 00 N metam sodium 510 g/l to the Waterflea <i>Daphnia Magna</i> Straus BASF AG, 85/0497 Not GLP Not published	Y	USA TF
IIA 8.2.4 /02	Ward GS	1993-02-22	Potassium N-methyldithiocarbamate (PNMDC): Acute Toxicity to the water flea, <i>Daphnia magna</i> , under flow-through test conditions Toxikon Environmental Sciences, J9110001b GLP Not published	Y	USA TF
IIA 8.2.4 /03	Dohmen GP	2002-07-22	Effect of Methylisothiocyanate on the immobility of <i>Daphnia magna</i> STRAUS in a 48 hour semi-static, acute toxicity test BASF AG, 58330, BASF 2002/ 1006188 GLP Not published	Y	KST, Taminco
IIA 8.2.4 /04	Maas JL	1990-	Toxicity Research with Thiourea Laboratory for Ecotoxicology, RIZA, AOCE: 4p (DUT) Not GLP Published	N	public
IIA 8.2.4 /05	Schupner JK	1991	The acute toxicity of MITC to <i>Daphnia magna</i> in a flow through system Nor-Am Chemical Company, 500 AF GLP Not published	N	Bayer CropScience
IIA 8.2.4 /06	Juarovisech KS, Lintott D	1992-07-02	Potassium N-methyldithiocarbamate (PNMDC): Acute toxicity to the Mysid, <i>Mysidopsis bahia</i> , Under Flow-Through test conditions Toxikon Environmental Sciences, J9201013c GLP Not published	Y	USA TF

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 8.2.4 /07	Lintott D, Ward SG	1993-01-15	Potassium N-methyldithiocarbamate (PNMDC): Acute effect on the new shell growth of Eastern Oyster, <i>Crassostrea virginica</i> Toxikon Environmental Sciences, J9201013e GLP Not published	Y	USA TF
IIA 8.2.5 /01	Jatzek	2001-11-30	Methylthiocyanat – Determination of the chronic effect on the reproduction of the water flea <i>Daphnia magna</i> STRAUS BASF AG, 99/0547/51/2BASF 2002/ 1000250 GLP Not published	Y	KST, Taminco
IIA 8.2.6 /01	Jenkins CA	2003-05-14	Metam sodium 510 g/l. Algal growth inhibition assay Huntingdon, UCB 833/023032 GLP Not published	Y	Taminco, Buckman
IIA 8.2.6 /02	Kubitza J	1998-09-15	Effect of Methyl isothiocyanate on the Growth of the Green Alga <i>Pseudokirchneriella subcapitata</i> BASF AG 48881, BASF 98/10767 GLP Not published	Y	KST, Taminco
IIA 8.2.6 /03	Kubitza J	2002-07-03	Effect of Methylisothiocyanate on the growth of the blue-green alga <i>Anabaena flos-aquae</i> BASF AG, 106691 –BASF 2002/ 1006170 GLP Not published	Y	KST, Taminco
IIA 8.2.8 /01	Junker M	2002-07-18	Effect of methyl isocyanate (metabolite of BAS 002 N, Dazomet) on the growth of <i>Lemna gibba</i> BASF AG, 121437, 2002/ 1006181 GLP Not published	Y	Taminco, KST
IIA 8.3.2 /01	Drexler A	2002-03-20	Extended laboratory study on the effects of Metam-Sodium on reproduction of rove beetles <i>Aleochara bilineata</i> exposed to soil residues aged under field conditions Ibacon, 9204071 GLP Not published	Y	Taminco, FMC Foret, Lainco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIA 8.3.2 /02	Meister A	2002-06-27	Extended laboratory study on the effects of Metam-Sodium on reproduction of the Collembola <i>Folsomia candida</i> exposed to soil residues aged under field conditions Ibacon, 9203016 GLP Not published	Y	Taminco, FMC Foret, Lainco
IIA 8.3.2 /03	Lühns U.	2007-07-19	Statement to the final report / Extended laboratory study on the effects of Metam-Sodium on reproduction of the Collembola <i>Folsomia candida</i> exposed to soil residues aged under field conditions Ibacon, 9203016 GLP Not published	Y	Taminco
IIA 8.4.2 /01	Lühns U	2002-09-19	Field Study to Evaluate the Effects of Metam-sodium on Earthworms Ibacon, 9201023 GLP Not published	Y	Taminco, FMC Foret, Lainco
IIA 8.4.2/02	Lühns U.	2007-07-19	Statement to Final Report: Field Study to Evaluate the Effects of Metam-sodium on Earthworms Ibacon, 9201023 GLP Not published	Y	Taminco
IIA 8.5 /01	Reis K-H	2002-05-31	Field study to Evaluate the Effects of Metam-Sodium on the Activity of the Soil Microflora Ibacon, 9202080 GLP Not published	Y	Taminco
IIA 8.6 /01	Sinha AP, Agnihotri VP, Singh K	1979	Effect of soil fumigation with vapam on the dynamics of soil microflora and their related biochemical activity Plant and Soil, 53, 89-98 Not GLP Published	N	public
IIA 8.6 /02	Welvaert W	1974	Evolution of the fungus flora following different soil treatments Agro-Ecosystems, 1, 157-168 Not GLP Published	N	public
IIA 8.7 /01	Van der Kerken K	2002-05	Activated sludge respiration inhibition test of Metam Sodium Lisec, WE-09-044 GLP Not published	Y	Taminco, Buckman, FMC Foret, Lainco

A.9.2 Ecotoxicology of the formulations (Annex IIIA 10)

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIIA 10.1.2/01	Noordam A, Bakker F	2010-02-01	Bird censuses on sterilized and unsterilized carrot plots in Les Landes, France during spring 2008. MITOX Consultants Unpublished Study number R-T006BIR GLP: no Not published	Y	Taminco
IIIA 10.1.4/01 IIIA 10.3/02	Bakker F; Roig J	2010-02-05	Metam sodium: A field study to determine residues in carrot field invertebrates as potential food items for birds and small mammals in SW France. Mitox Consultants Report N° T004IRW GLP:yes Not published	Y	Taminco
IIIA 10.1/01. IIIA 10.3/03	Brown KC	2010-01-26	The acute Risk to Birds and Mammals potentially exposed following proposed commercial use of Metam Sodium No report number GLP : no Not published	Y	Taminco
IIIA 10.2 /01	Farrelly E.	2004-11-22	Aquatic Risk Assessment for Metam-sodium and MITC Exponent International Limited Not published Not GLP	Y	Taminco
IIIA 10.3/01.	Bakker F, Reich T	2010-01-13	Small mammal survey on sterilized and unsterilized carrot plots and at the field perimeter in a commercial arable field in Les Landes, France during spring 2008. MITOX Unpublished study number R-T005SMA. GLP: no Not published	Y	Taminco
IIIA 10.5.2/01 IIIA 10.6.2/01	Aldershof S.	2010-01-13	A field trial to determine the effects of METAM-SODIUM on the non-target arthropod fauna of arable land in SW-France after one application in spring MITOX Consultants, Amsterdam, The Netherlands Report No. T003FFW GLP: yes Not published	Y	Taminco

Annex point / reference number	Author(s)	Date	Title Source (where different from company) Company, Report No GLP or GEP status (where relevant), Published or not	Data Protection Claimed Y/N	Owner
IIIA 10.6.1/01	Brown K.	2009	Position paper to address the risk to earthworms from metam-sodium Ecotoxicologist and Environmental Consultant, Plymouth, Devon, PL7 4EB England GLP: no Not published	Y	Taminco
10.6.2/02	Bakker F	2010	Bakker F.(2010) A field trial to determine the effects of METAM-SODIUM on the non-target arthropod fauna of arable land in SW-France after one application in spring. Additional argumentation for recovery of Collembola and Gamasida. MITOX Consultants Unpublished Study Number T003FFW (additional argumentation) GLP: yes Not published	Y	Taminco
10.9/01	Anonymous	2007	Material Safety Data Sheet Ekaland DMTU CR-CB Version : 1 Not GLP Published	N	Public