Document Title

Summary of the toxicological studies for Amidosulfuron WG 75

Data Requirements

EU Regulation 1107/2009 & EU Regulation 284/2013
Document MCP
Section 7: Toxicological studies

According to the guidance document SANCO/10181/2013 for preparing dossiers for the approval of a chemical active substance

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Version history

Date	Data points containing amendments or additions[1] and brief description	Document identifier and version number
2016-06-10	Original document submitted for AIR	M-557153-01-1
2016-10-13	Correction of formulation name in last paragraph on page 14	M-557153-02-1

[1] It is suggested that applicants adopt a similar approach to showing revisions and version history as outlined in SANCO/10180/2013 Chapter 4 How to revise an Assessment Report

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CP 7 TOXICOLOGICAL STUDIES ON THE PLANT PROTECTION PRODUCT

This document provides detailed summaries of new studies which were not available at the time of the first EU review of amidosulfuron and were therefore not evaluated for the Annex I inclusion of this active substance. Existing studies already submitted for the first EU review are found evaluated in the Draft assessment report (DAR) or its Addenda; in the present document these studies are therefore only briefly referenced, marked in grey shade. In exemption from this, upon specific request by the RMS expressed at the pre-application meeting, studies that have been submitted as part of the confirmatory data post Annex I are summarised and discussed as 'new information', even though they have undergone review for the EU by former RMS AGES Austria and are found summarised in the 'Addendum to monograph prepared in the context of post Annex I procedure (new Annex II data)', December 2010 (rev. 1 Feb. 2011) and are reflected in the updated EU List of Endpoints of December 2010.

Complete reports to all studies are included in the electronic dossier provided by Bayer CropScience. The numbering and the headlines correspond to latest EU requirements.

For transparent overall data interpretation and risk assessment, key endpoints derived from both old and new studies are listed in overview tables, where applicable. For easy discrimination, new information is printed black, whilst existing information is repeated in grey shaded font.

CP 7.1 Acute toxicity

Summary of acute toxicity

The existing studies indicate that the acute toxicity of the formulation Amidosulfuron WG 75 is very low with an oral LD50 of > 5000 mg/kg bw, a dermal LD50 of > 4000 mg/kg bw and an inhalative LC50 of > 5mg/L. The formulation had no skin and eye-irritating effects which would require labelling, and was not skin-sensitizing in a Buehler and LLNA test.

The only new study is an LLNA test with this formulation, as summary is provided below under CPA 7.1.6.

An overview of the studies is given in the following table:

Study/Parameter	Species/Gender	Results	Reference
Acute oral toxicity	Rat, male and female	LD50: > 5000 mg/kg bw	[redacted]; 1989; M-123295-01-1
Acute dermal toxicity	Rat, male and female	LD50: > 4000 mg/kg bw	[redacted]; 1989; M-123295-01-1
Acute inhalation toxicity	Rat, male and female	LC50: > 5 mg/L air	[redacted]; 1989; M-123292-01-1
Acute skin irritation	Rabbit	No irritation	[redacted]; 1988; M-123130-01-1
Acute eye irritation	Rabbit	No irritation	[redacted]; 1989; M-123140-02-1
Sensitization	Buehler test in female Guinea pigs	No sensitization	[redacted]; 1997; M-142799-01-1
Sensitization	Mouse, female	No sensitization	[redacted]; 2010; M-366308-01-1

Classification/labelling:
Based on the study results, no classification/labelling according to Regulation (EC) No 1272/2008 (CLP) is proposed.

CP 7.1.1 Oral toxicity

Report: KCP 7.1.1/01 [redacted]; 1989; M-123295-01-1
Title: Hoe 075032 - water dispersible granular 75 % (Code: Hoe 075032 00 WG75 A103)
Testing for acute oral toxicity in the male and female Wistar rat
Report No.: A40549
Document No.: M-123295-01-1
Guideline(s): OECD: 401 (1987); USEPA (=EPA): § 81-1
Guideline deviation(s): --
GLP/GEP: **yes**

CP 7.1.2 Dermal toxicity

Report: KCP 7.1.2/01 [redacted]; 1988; M-121562-01-1
Title: Hoe 075032 - water dispersible granules 75 % (Code: Noe 075032 00 WG75 A103)
Testing for acute dermal toxicity in the male and female Wistar rat
Report No.: A39992
Document No.: M-121562-01-1
Guideline(s): OECD: 402 (1987); USEPA (=EPA): § 81-2
Guideline deviation(s): --
GLP/GEP: **yes**

CP 7.1.3 Inhalation toxicity

Report:	KCP 7.1.3/01[redacted],;[redacted]; 1989; M-123292-01-1
Title:	4-hour, acute dust inhalation toxicity study with Hoe 075032 - water dispersible granules (75%) Hoe 075032 OH WG75 A103 in rats
Report No.:	A40548
Document No.:	M-123292-01-1
Guideline(s):	OECD: 403 (1981); USEPA (=EPA): § 81-3
Guideline deviation(s):	--
GLP/GEP:	**yes**

CP 7.1.4 Skin irritation

Report:	KCP 7.1.4/01[redacted]ダ[redacted]; 1988; M-123130-01-1
Title:	Hoe 075032 - water dispersible granules (Code: Hoe 075032 00 WG75 A103) Testing for primary dermal irritation in the rabbit
Report No.:	A40452
Document No.:	M-123130-01-1
Guideline(s):	OECD: 405 (1981); USEPA (=EPA): § 81-5
Guideline deviation(s):	--
GLP/GEP:	**yes**

CP 7.1.5 Eye irritation

Report:	KCP 7.1.5/01[redacted],;[redacted]; 1989; M-123140-02-1
Title:	Hoe 075032 - water dispersible granules (Code: Hoe 075032 00 WG75 A103) Testing for primary eye irritation in the rabbit
Report No.:	A41105
Document No.:	M-123140-02-1
Guideline(s):	OECD: 405 (1981); USEPA (=EPA): § 81-4
Guideline deviation(s):	--
GLP/GEP:	**yes**

CP 7.1.6 Skin sensitization

Report:	KCP 7.1.6/01[redacted],; 1997; M-142799-01-1
Title:	Amidosulfuron; water dispersible granule; 75 % (Code: Hoe 075032 00 WG75 A110) Testing for sensitizing properties in the Pirbright-White guinea pig according to the technique of BUEHLER
Report No.:	A51702
Document No.:	M-142799-01-1
Guideline(s):	EU (=EEC): 92/69 B.6.; JMAF: 1985; OECD: 406; USEPA (=EPA): § 81-6
Guideline deviation(s):	--
GLP/GEP:	**yes**

Report:	KCP 7.1.6/02[redacted]; 2010; M-366308-01-1
Title:	Amidosulfuron WG 75 - Evaluation of potential skin sensitization in the local lymph node assay in the mouse
Report No.:	SA 10001
Document No.:	M-366308-01-1
Guideline(s):	O.E.C.D. guideline 429 (2002); US-EPA OPPTS 870.2600 (2003)
Guideline deviation(s):	not specified
GLP/GEP:	**yes**

Executive summary:
In this study the potential of Amidosulfuron WG 75, an agrochemical formulation containing the active ingredient Amidosulfuron (AE F075032) at 74.8% w/w (batch N°: EFKE001914, Specification N°:102000000550-02), to induce skin sensitization using the murine Local Lymph Node Assay was assessed.

Twenty-five female CBA/J mice were allocated to 5 groups of five animals each:
- one control group received the vehicle, 1% Pluronic Acid L-92® in water.
- three groups received the test substance at a concentration of 25 and 50% in vehicle or 100% neat substance.
- one positive control group received 30% alpha-Hexylcinnamaldehyde (CAS N° 101-86-0, batch N°: MKAA2596) in vehicle.

The test substance and the vehicle were applied on external surfaces of each ear (25 µL/ ear) for three consecutive days (Days 0, 1 and 2) at the appropriate concentrations. On Day 5, the cell proliferation in the draining auricular lymph nodes was measured by incorporation of tritiated thymidine and the obtained values were used to calculate proliferation indices.

No mortality and no relevant clinical signs were observed during the study. No cutaneous reactions were observed in the vehicle, reference control or treated groups.

The proliferation index values of the test substance were 1.8 (±0.9), 2.0 (±1.0) and 1.8 (±0.5) at treatment concentrations of 25, 50 and 100%, respectively.

The proliferation index value of the positive control alpha-Hexylcinnamaldehyde was 4.4 (±2.2) at a treatment concentration of 30%.
The formulation Amidosulfuron WG 75 was found to be non-sensitizing in the Local Lymph Node Assay.

I. Materials and methods

A. Materials

1. Test material:

Identification:	Amidosulfuron WG 75
Physical appearance:	Beige granules
Batch:	EFKE001914
Content:	Amidosulfuron (AE F075032) at 74.8% w/w
CAS no.:	not specified
Storage condition:	25 ± 5°C
Expiry date:	August 10, 2011

2. Vehicle and/or positive control: The test item was formulated in 1% Pluronic Acid L92®
Positive control: alpha-Hexylcinnamaldehyde (HCA) is a well-known sensitizer

3. Test animals

Species:	Mice
Strain:	CBA/J mice
Age:	8 weeks old
Sex:	Female, nulliparous, non-pregnant
Weight at dosing:	19.0-22.6 grams
Source:	[redacted], [redacted], France.
Acclimation period:	at least 5 days before study begin
Diet:	A04C-10, S.A.F.E. ([redacted], [redacted], [redacted], France)
Water:	softened tap water from the municipal water supply was available ad libitum.
Housing:	Mice were housed individually in suspended, stainless steel, wire-mesh cages
Environmental conditions :	
Temperature:	20-24°C
Humidity:	40-70 %
Air changes:	10-15/hour
Photoperiod:	12 hours

B. Study design and methods

1. In-life dates: Start: February 15, 2010
End: February 20, 2010

2. Animal assignment and treatment:
The animals were assigned to the groups as follows:

Groups	Test item concentration	No. of animals
Negative (vehicle) control (1% Pluronic)	-	5
Amidosulfuron WG 75	25	5
Amidosulfuron WG 75	50	5
Amidosulfuron WG 75	100	5
Positive control (HCA)	30	5

Each mouse was topically dosed once daily with 25 µL of the formulation using micro pipette, to the dorsal surface of each ear. Mice were dosed on Days 0, 1 and 2.

There was no run off of the formulation during the application. The applied dose remained on the ears so a realistic skin exposure to the formulation was achieved.

On Day 5, animals were moved into an animal room within a Radiation Controlled Zone. Each mouse was placed individually in a retention box, intravenously injected via the tail vein with 250 µL of sodium chloride (0.9%) containing approximately 20 µCi of [methyl-3H]-Thymidine and placed in a

plastic cage for 5 hours. Five hours (±30 min) after intravenous injection, the mice were sacrificed by an overdose of Pentobarbital.

The draining auricular lymph nodes from each mouse were placed in an individual tube containing physiological saline and were disaggregated by crushing with a plastic piston. A cell suspension was obtained, free of connective tissue.

3. Determination of proliferation indices:
Cell suspensions were washed with 4 mL of 0.9% physiological saline, centrifuged for 20 minutes at 1800 rpm and the pellets obtained were re-suspended in 2 mL of 5% trichloroacetic acid (TCA) and stored overnight at 5±3°C. After a final centrifugation, the pellets were re-suspended in 1 mL of saline, mixed and then placed for approximately 25 mins in an Ultrasonic Bath to ensure a thoroughly dispersed suspension. Once prepared cell suspensions were added to numbered scintillation pots containing 19 mL of scintillation fluid and assayed in a beta-counter.

The results were expressed as disintegrations per minute (DPM) per node. Stimulation Indices (SI) were calculated according to the following formula:

$$SI = \frac{\text{DPM of treated group}}{\text{DPM of control group}}$$

In addition, an individual stimulation index (SI) was calculated using the absolute DPM value for each mouse as the numerator and the mean DPM value for the vehicle control group as the denominator. Standard deviations (SD) were calculated for each test group on the group mean disintegration per minute (DPM) and the stimulation indices (SI).

4. Evaluation criteria:
A test substance is regarded as a skin sensitizer if one concentration of the test substance results in an increase of 3H-TdR incorporation of three-fold or greater, when compared to control values in the absence of skin irritation and if there is a dose-related response.

II. Results and discussion

A. Findings

The results are summarized in the following table:

Groups	Test item concentration	Mean stimulation index (SD)
Negative (vehicle) control (1% Pluronic)	-	-
Amidosulfuron WG 75	25	1.8 (0.9)
Amidosulfuron WG 75	50	2.0 (2.0)
Amidosulfuron WG 75	100	1.8 (0.5)
Positive control (HCA)	30	4.4 (2.2)

Stimulation indices lower than 3 were noted for Amidosulfuron WG 75 at all concentrations tested. The resulting calculated stimulation index values were 1.8, 2.0, and 1.8 at concentrations of 25 %, 50 and 100 % (w/w), respectively.

There were no confounding effects of irritation or toxicity, so the proliferation values are considered to reflect the sensitization effects of the test and positive control substances.

III. Conclusions

In conclusion, under the conditions of the present assay Amidosulfuron WG 75 was found to be a non-sensitizing formulation in the Local Lymph Node Assay at all concentrations tested.

CP 7.1.7 Supplementary studies on the plant protection product

Not required by Commission Regulation (EU) No 284/2013 in the case of Amidosulfuron WG 75.

CP 7.1.8 Supplementary studies for combinations of plant protection products

Not applicable. This plant protection product is not planned to be combined with other plant protection products.

CP 7.2 Data on exposure

CP 7.2.1 Operator exposure

Risk assessment for operator

Dermal Absorption
The default values provided by the recent EFSA guidance[1] document on dermal absorption were used: 25% for neat formulation and 75% for spray dilution for amidosulfuron as it is present at a concentration >50 g/kg.

Acceptable Operator Exposure Level
The AOEL for amidosulfuron was derived from a 90 day and a 1 year dog study (100% oral absorption and a safety factor of 100) resulting in an AOEL of 1.4 mg/kg bw/day (EFSA Scientific Report 116. (2007).

The formulation Amidosulfuron WG 75 containing 750 g/kg of amidosulfuron is intended to be used on cereals, flax and grass fields as an herbicide. The formulation is a water dispersible granule formulation (WG).
The application to grass/pasture will be used for exposure calculations as it represents the highest application rate and thus the worst case scenario. Treatment is achieved via downward vehicle-mounted spray application. The application parameters of the critical GAPs (cGAPs) are summarised in **Table CP 7.2.1-1**.

Table CP 7.2.1-1. Application parameters of Amidosulfuron WG 75 professional uses relevant to Operators

Application technique	Crop	F / G	Maximum dose rate		Spray volume (L/ha)	Number of applications	Application interval (days)
			(Kg/ha product)	(kg a.s./ha)			
Outdoor Vehicle-Mounted Downward Spraying	Grass/pasture (permanent grass)	F	0.06	0.045	200-400	1	-

Operator exposure estimation to Amidosulfuron WG 75 was calculated on the basis of the "EFSA Guidance on the assessment of exposure of operators, workers, residents and bystanders in risk

[1] EFSA Panel on Plant Protection Products and their Residues (PPR); Guidance on Dermal Absorption. EFSA Journal 2012;10(4):2665. [30 pp.] doi:10.2903/j.efsa.2012.2665.

assessment for plant protection products"2 for the application scenario: "outdoor vehicle-mounted downward", without and with PPE (Personal Protective Equipment). Exposure predictions were obtained out of the available version of the currently exposure calculation spreadsheet[3].

Details of calculations are given in **CP 7.2.1.1**. The results of exposure calculations are summarised in **Table CP 7.2.1-2**.

Table CP 7.2.1-2. Predicted systemic operator exposure] as a proportion of the AOEL

Application technique	PPE	Total systemic exposure (mg a.s./kg bw/day)[3)]	% of AOEL[4)]
Outdoor vehicle-mounted downward	Without PPE[1)]	0.1070	**7.64**
	With PPE[2)]	0.0086	**0.62**

[1)] work wear – arms, body and legs covered, bare hands;
[2)] work wear – arms, body and legs covered, gloves;
[3)] 60 kg body weight; dermal absorption 25% concentrate and 75% dilution; inhalation absorption 100%;
[4)] AOEL= 1.4 mg/kg bw/day.

Assessment
The results of the calculations reveal that the situation is favourable for operator for the intended outdoor uses of **Amidosulfuron WG 75** for grass/pasture fields.

The exposure predictions of systemic operator exposure account for 8% and 1% of the AOEL (1.4 mg/kg bw/day), while operating vehicle-mounted downward application equipment, without and with PPE, respectively.

Conclusion
Based on above presented results there is no unacceptable risk anticipated for the operator with the intended uses of **Amidosulfuron WG 75 G** for grass/pasture fields.

[2] EFSA (European Food Safety Authority), 2014. Guidance on the assessment of exposure of operators, workers, residents and bystanders in risk assessment for plant protection products. EFSA Journal 2014;12(10):3874, 55 pp., doi:10.2903/j.efsa.2014.3874
[3] EFSA (European Food Safety Authority), 2014. Exposure calculation spreadsheet. Available at http://www.efsa.europa.eu/fr/efsajournal/doc/3874ax1.zip. Version of 30.03.2015.

CP 7.2.1.1 Estimation of operator exposure

Operator exposure estimations to **Amidosulfuron WG 75 G** were calculated on the basis of EFSA[1,2]. Summaries of assumptions and the calculation details are presented in **Table CP 7.2.1.1-1**.

Table CP 7.2.1.1-1. Predicted systemic exposure to Amidosulfuron according to EFSA. (Downward spraying. Vehicle-mounted. Without and with PPE)

Substance	Amidosulfuron	Formulation = Wettable granules, soluble granules	Application rate-0.45 kg a.s. /ha	Spray dilution = 2.25 g a.s./l	Vapour pressure = low volatile substances having a vapour pressure of $<5*10^{-3}$Pa
Scenario	Grassland and lawns / Outdoor / Downward spraying / Vehicle-mounted			Buffer = 2-3	Number applications = 1, Application interval = 365 days
Percentage Absorption	Dermal for product = 25	Dermal for in use dilution = 75	Oral = 100	Inhalation = 100	
RVNAS	1.4 mg/kg bw/day		RVAAS	mg/kg bw/day	
DFR	3 µg a.s./cm² per kg a.s./ha		DT_{50}	30 days	

Operator Model	Mixing, loading and application AOEM			
Potential exposure	Longer term systemic exposure mg/kg bw/day	0.1743	% of RVNAS	12.45%
		Without PPE		
Mixing and Loading	Gloves = No	Clothing = Work wear - arms, body and legs covered	RPE = None	Soluble bags = No
Application	Gloves = No	Clothing = Work wear - arms, body and legs covered	RPE = None	Closed cabin = No
Exposure (including PPE options above)	Longer term systemic exposure mg/kg bw/day	0.1070	% of RVNAS	**7.64%**
		With PPE		
Mixing and Loading	Gloves = Yes	Clothing = Work wear - arms, body and legs covered	RPE = None	Soluble bags = No
Application	Gloves = Yes	Clothing = Work wear - arms, body and legs covered	RPE = None	Closed cabin = No
Exposure (including PPE options above)	Longer term systemic exposure mg/kg bw/day	0.0086	% of RVNAS	**0.62%**

PPE = Personal Protective Equipment
RVNAS = Reference value non acutely toxic active substance

CP 7.2.1.2 Measurement of operator exposure

Since the risk assessments carried out indicated that the AOEL for **amidosulfuron** was not be exceeded under practical conditions of use, a study to provide a measure of operator exposure under field conditions was not necessary and was therefore not carried out.

CP 7.2.2 Bystander and resident exposure

Risk assessment for bystander and resident

The EFSA guidance has proposed a number of changes to current practice in assessing exposure to plant protection products. These changes include the introduction of acute risk assessments and the application of an AAOEL value (Acute Acceptable Operator Exposure Level) – a term used to describe a reference value against which acute non-dietary exposures (i.e. those that might be incurred in a single day) could be assessed. Currently, however, no methodology is available for setting an AAOEL. Non-dietary risk exposure is primarily via dermal and inhalation routes. Thus, the derivation of an AAOEL will differ from the procedure of setting an ARfD, which is used in dietary risk assessments where oral exposure is relevant. It will require careful evaluation, expert judgment or even additional data to determine which toxicological information should be used for AAOEL setting. It is therefore proposed that an acute risk assessment is made when an agreed guideline is available for establishing an AAOEL. The following risk assessment therefore considers the longer term exposure which will be compared with the AOEL. In this context only resident exposure is calculated using the EFSA model[4] and is considered as covering the bystander exposure.

The intended outdoor uses comprise grass/pasture fields. Treatment is achieved via downward vehicle-mounted spray application. The application parameters of the critical GAPs (cGAPs), following a risk envelope approach, are summarised in **Table 7.2.2-1**

Table 7.2.2-1. Critical GAP for bystander and resident exposure assessment

Application technique	Crop	F / G	Maximum dose rate		Spray volume (L/ha)	Number of applications	Application interval (days)
			(Kg/ha product)	(kg a.s./ha)			
Outdoor Vehicle-Mounted Downward Spraying	Grass/pasture (permanent grass)	F	0.06	0.045	200-400	1	-

Consideration on estimation of resident exposure

Resident exposure estimations to Amidosulfuron WG 75 are estimated using the EFSA model[5] with the relevant scenario "Tractor-mounted/trailed boom sprayer: hydraulic nozzles". Details of calculations are given in **CP 7.2.2.1**. The results of exposure calculations are summarised in **Table 7.2.2-2**.

[4] EFSA (European Food Safety Authority), 2014. Guidance on the assessment of exposure of operators, workers, residents and bystanders in risk assessment for plant protection products. EFSA Journal 2014;12(10):3874, 55 pp., doi:10.2903/j.efsa.2014.3874

[5] EFSA Panel on Plant Protection Products and their Residues (PPR); Guidance on Pesticides Exposure Assessment of Operators, Worker, Residents and Bystanders, EFSA Journal 2014;12(10):3874.

Table 7.2.2-2. Predicted systemic bystander and resident exposure [mg amidosulfuron kg bw/day] as a proportion of the AOEL

Application Scenario	Exposure Scenario		Total systemic exposure (mg amidosulfuron/kg bw/day)*	% of AOEL**
Field Crop	Resident	Adult	0.0408	**2.92%**
		Children	0.0122	**0.87%**

* 60 and 10 kg body weight for adult and children respectively; dermal absorption 75% diluted spray; inhalation absorption 100%; ** 1.4 mg/kg bw/day.

Assessment
The results of the calculations reveal that the situation is favourable for bystanders and residents for the intended outdoor uses of Amidosulfuron WG 75 for grass fields.

Conclusion
Based on above presented results there is no unacceptable risk anticipated for bystanders and residents, both adults and children, exposed to amidosulfuron with the intended uses of Amidosulfuron WG 75.

CP 7.2.2.1 Estimation of bystander and resident exposure

The following definitions and assumptions for bystanders/residents may be applied.

Bystanders and residents are not involved in application or handling plant protection products or the professional handling of treated crops.

Bystander/resident exposure may occur following foliar spray application outdoors. Bystander/resident exposure is calculated regarding the application scenario leading to the highest drift value. Application scenarios causing lower spray drift will be covered by this calculation and separate evaluations are not made. Exposure is calculated for adult and child residents.

Data used for the calculation

The following assumptions have been made in calculating resident exposure:

- The application rate is 0.6 Kg/ha of Amidosulfuron WG 75 resulting in 0.045 kg of amidosulfuron.

Table 7.2.2.1-1: Detailed calculations of resident exposure to amidosulfuron, absorbed dose and % of AOEL

Substance	Amidosulfuron	Formulation = Wettable granules, soluble granules	Application rate-0.45 kg a.s. /ha	Spray dilution = 2.25 g a.s./l	Vapour pressure = low volatile substances having a vapour pressure of <5*10-3Pa
Scenario	Grassland and lawns / Outdoor / Downward spraying / Vehicle-mounted			Buffer = 2-3	Number applications = 1, Application interval = 365 days
Percentage Absorption	Dermal for product = 25	Dermal for in use dilution = 75	Oral = 100	Inhalation = 100	
RVNAS	1.4 mg/kg bw/day		RVAAS	mg/kg bw/day	

Resident - child	Spray drift (75th percentile) mg/kg bw/day	0.0453	% of RVNAS	3.24%
	Vapour (75th percentile) mg/kg bw/day	0.0011	% of RVNAS	0.08%
	Surface deposits (75th percentile) mg/kg bw/day	0.0053	% of RVNAS	0.38%
	Entry into treated crops (75th percentile) mg/kg bw/day	0.0138	% of RVNAS	0.98%
	All pathways (mean) mg/kg bw/day	0.0408	% of RVNAS	**2.92%**
Resident - adult	Spray drift (75th percentile) mg/kg bw/day	0.0108	% of RVNAS	0.77%
	Vapour (75th percentile) mg/kg bw/day	0.0002	% of RVNAS	0.02%
	Surface deposits (75th percentile) mg/kg bw/day	0.0023	% of RVNAS	0.16%
	Entry into treated crops (75th percentile) mg/kg bw/day	0.0051	% of RVNAS	0.37%
	All pathways (mean) mg/kg bw/day	0.0122	% of RVNAS	**0.87%**

RVNAS = Reference value non acutely toxic active substance (equivalent to AOEL)

CP 7.2.2.2 Measurement of bystander and resident exposure

Since the exposure estimate carried out indicated that the health-based limit values (AOEL) will not be exceeded under practical conditions of use, a study to provide a measure of bystander and resident exposure was not necessary and was therefore not carried out.

CP 7.2.3 Worker exposure

Risk assessment for worker

The greatest potential for worker exposure following re-entry will be contamination *via* the skin. Risk of inhalation exposure during re-entry is generally confined to a brief period after application, while the product is drying, which will be rapid under outdoor conditions and would generally be avoided according to good agricultural practices.

Consideration on dermal exposure of workers
Worker exposure estimation to **Amidosulfuron WG 75** was calculated on the basis of the "*EFSA Guidance on the assessment of exposure of operators, workers, residents and bystanders in risk assessment for plant protection products*"[2]. Exposure predictions were obtained out of the available version of the exposure calculation spreadsheet[3].

Dermal exposure from contact with residues on foliage should be estimated as the product of the dislodgeable foliar residue (DFR), the transfer coefficient (TC) and the task duration (T):

Potential dermal exposure (PDE) in mg a.s./day = (DFR [µg/cm²] × TC [cm²/h] × T [h/day])/1 000

The default value for time of exposure should be taken as two hours for crop inspection and irrigation-type activities.

Consideration on Dislodgeable Foliar Residues (DFR)
As experimentally determined DFR data are not available, the initial DFR (DFR0 is the DFR just after application, it assumes that no dissipation will take place and that everything is dislodgeable) in a first tier assessment should assume 3 µg active substance/cm² of foliage/kg a.s. applied/ha; the value provided was regarded as highly conservative (EUROPOEM II, 2002)[4].

Transfer Coefficients:
The indicative TC values are based and modified from EUROPOEM II (2002)[5] and in consideration of US EPA values. US Re-entry Agricultural Transfert Factor (TF) data were used, recalculated by Health and Safety Executive to account for 75th percentile instead of arithmetic mean.
For crop inspection, a TC of 12 500 cm²/h was considered.

Predicted exposures are compared with the AOEL of amidosulfuron. Systemic exposure values assume the highest dermal absorption values. A body weight of 60 kg is assumed for the re-entry worker. Exposure estimates based proportions of the systemic AOELs accounted for by the estimates are summarised in the following Table. Detailed calculations are presented below.

Table CP 7.2.3-1: Summary of predicted worker exposures arising from the use of amidosulfuron in the Amidosulfuron WG 75 formulation and comparison with the AOEL

Active substance	Exposure scenario	Systemic exposure[3] (mg/kg bw/day)	AOEL (mg/kg bw/day)	% of AOEL
Amidosulfuron	Without PPE[1]	0.4219	1.4	**30.13**
	With PPE[2]	0.0473		**3.38**

[1] without working clothes- bare hands; [2] with working clothes- bare hands;
[3] 60 kg body weight; dermal absorption 25% concentrate and 75% dilution; inhalation absorption 100%;

Assessment
The exposure of workers entering treated areas is well within acceptable limits Amidosulfuron WG 75.

Conclusion
Based on above presented results there is no unacceptable risk anticipated for workers with the intended uses of Amidosulfuron WG 75 entering in grass fields for inspection. Working clothes must be worn during re-entry activities for safety reasons, according to good agricultural practices.

[6] [redacted] et al (2002) Post-application exposure of workers to pesticides in agriculture. Report of the re-entry working group. EUROPOEM II project. FAIR3 CT96-1406.

CP 7.2.3.1 Estimation of worker exposure

Details of calculations are presented in table CP 7.2.3.1-1.

Table CP 7.2.3.1-1 Predicted systemic worker exposure to amidosulfuron according to EFSA without and with PPE (fields inspection)

Substance	Amidosulfuron	Formulation = Wettable granules, soluble granules	Application rate-0.45 kg a.s. /ha	Spray dilution = 2.25 g a.s./l	Vapour pressure = low volatile substances having a vapour pressure of <5*10-3Pa
Scenario	Grassland and lawns / Outdoor / Downward spraying / Vehicle-mounted			Buffer = 2-3	Number applications = 1, Application interval = 365 days
Percentage Absorption	Dermal for product = 25	Dermal for in use dilution = 75	Oral = 100	Inhalation = 100	
RVNAS	1.4 mg/kg bw/day		RVAAS	mg/kg bw/day	
Worker - Inspection, irrigation	Potential exposure mg/kg bw/day		0.4219	% of RVNAS	**30.13%**
	Working clothing mg/kg bw/day		0.0473	% of RVNAS	**3.38%**

CP 7.2.3.2 Measurement of worker exposure

Since the exposure estimate carried out indicated that the acceptable operator exposure level (AOEL) will not be exceeded under practical conditions of use, a study to provide a measure of worker exposure was not necessary and was therefore not carried out.

CP 7.3 Dermal adsorption

In the absence of dermal absorption studies for amidosulfuron with the formulation Amidosulfuron WG 75 the default values of 25% for the concentrate and 75% for the diluted spray is used for amidosulfuron (EFSA guidance[7] document on dermal absorption).

CP 7.4 Available toxicological data relating to co-formulants

CONFIDENTIAL information - data provided separately (Document JCP)

[7] EFSA Panel on Plant Protection Products and their Residues (PPR); Guidance on Dermal Absorption. EFSA Journal 2012;10(4):2665. [30 pp.] doi:10.2903/j.efsa.2012.2665.