FINAL REGISTRATION REPORT

Part B

Section 6

Mammalian Toxicology

Detailed summary of the risk assessment

Product code: BAS 765 00 F

Product name(s): Daxur

Chemical active substance(s):

Mefentrifluconazole, 100 g/L
Kresoxim-methyl, 150 g/L

Central Zone

Zonal Rapporteur Member State: Poland

CORE ASSESSMENT

(authorization)

Applicant: BASF

Submission date: May 2021

MS Finalisation date: 03/11/2021

Version history

When	What
12/2020	Initial dRR – BASF DocID 2020/2083950
02/2021	Dossier sent for evaluation to Merit Mark (PL)
05/2021	Update dRR – BASF DocID 2021/2016696 Additional in-vivo skin irritation study available, resulting in classification change, amendments marked yellow
08/2021	zRMS finalised evaluation
11/2021	Evaluation after commenting period - RR

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Evaluator comments:
The text highlighted in grey was provided by the evaluator.

6 Mammalian Toxicology (KCP 7)

6.1 Summary

Table 6.1-1: Information on BAS 765 00 F

Product name and code	BAS 765 00 F
Formulation type	Suspension concentrate (SC)
Active substance(s) (incl. content)	Mefentrifluconazole (BAS 750 F): 100 g/L Kresoxim-methyl (BAS 490 F): 150 g/L
Function	fungicide
Product already evaluated as the 'representative formulation' during the approval of the active substance(s)	No
Product previously evaluated in another MS according to Uniform Principles	No

* Information on the detailed composition of BAS 765 00 F can be found in the confidential dRR Part C.

Justified proposals for classification and labelling

According to the criteria given in Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008, the following classification and labelling with regard to toxicological data is proposed for the preparation:

Table 6.1-2: Justified proposals for classification and labelling for BAS 765 00 F according to Regulation (EC) No 1272/2008

Hazard class(es), categories:	Skin Irrit. 2 Skin Sens. 1 Carc. 2
Hazard pictograms or Code(s) for hazard pictogram(s):	 GHS08, GHS07
Signal word:	Warning
Hazard statement(s):	H315: Causes skin irritation H317: May cause an allergic skin reaction H351: Suspected of causing cancer
Precautionary statement(s): ~~General:~~ ~~Prevention:~~ ~~Response:~~ ~~Storage~~ ~~Disposal~~	**WARNING SECTION OF THE LABEL (first page):** P202: Do not handle until all safety precautions have been read and understood P261: Avoid breathing mist/spray. P280: Wear protective gloves. P302+PP352: IF ON SKIN: Wash with plenty of water. P308 + P313: IF exposed or concerned: Get medical advice/attention **Other section of the label:** P102: Keep out of reach of children. P264: Wash contaminated body parts thoroughly after handling. P362 + P364: Take off contaminated clothing and wash it before reuse. P272: Contaminated work clothing should not be allowed out of the workplace. And P280 as follows: „*Stosować rękawice ochronne oraz odzież roboczą (kombinezon) w trakcie przygotowywania cieczy roboczej oraz odzież roboczą w trakcie wykonywania zabiegu*” “Wear protective gloves and work wear (coverall) during mixing/loading and work wear during application”. ~~P201: Obtain special instructions before use.~~ ~~P103: Read carefully and follow all instructions~~ ~~P303 + P352: IF ON SKIN (or hair): Wash with plenty of water~~ Storage: P405: Store locked up Disposal: P501: : Dispose of contents/container to hazardous or special waste collection point. **Section First aid:** P101: If medical advice is needed, have product container or label at hand. P302+P352: IF ON SKIN: Wash with plenty of water. P333+P313: If skin irritation or rash occurs: Get medical advice/attention. P308 + P313: IF exposed or concerned: Get medical advice/attention.
Additional labelling phrases:	To avoid risks to man and the environment, comply with the instructions for use. [EUH401]
	Contains isothiazolinones (CIT/MIT and BIT). May produce an allergic reaction. [EUH208]

Table 6.1-3: Summary of risk assessment for operators, workers, bystanders and residents for BAS 765 00 F

	Result	PPE / Risk mitigation measures
Operators	Acceptable	~~Gloves during mixing/loading.~~ Classification of the product and exposure assessment: protective gloves and work wear during mixing/loading, workwear during application.
Workers	Acceptable	Workwear
Bystanders	Acceptable	None
Residents	Acceptable	None

No unacceptable risk for operators, workers, bystanders and residents was identified when the product is used as intended and provided that the PPE/ risk mitigation measures stated in

Table 6.1-3 are applied. A summary of the critical uses and the overall conclusion regarding exposure for operators, workers and bystanders/residents is presented in the following table.

Table 6.1-4 Critical uses and overall conclusion of exposure assessment

1	2	3	4	5	6	7	8	9	10			
Use-No.*	**Crops and situation (e.g. growth stage of crop)**	**F, Fn, Fpn G, Gn, Gpn or I ****	**Application**		**Application rate**		**PHI (d)**	**Remarks:**	**Acceptability of exposure assessment**			
			Method / Kind (incl. application technique ***	**Max. number (min. interval between applications) a) per use b) per crop/ season**	**Max. application rate kg as/ha a)** mefentriflu-conazole **b)** kresoxim-methyl	**Water L/ha min / max**			**Operator**	**Worker**	**Bystander**	**Residents**
5, 6, 7, 8, 9, 10, 11, 12	Cereals (wheat, barley, rye, triticale) (BBCH 30-69)	F	Spraying, LCTM	a) 2 (14 d) b) 2 (14 d)	a) 0.10 b) 0.15	100 - 300	35	critical gap for operator, worker, bystander or resident exposure based on EFSA AOEM				

* Use number(s) in accordance with the list of all intended GAPs in Part B, Section 0 should be given in column 1

** F: professional field use, Fn: non-professional field use, Fpn: professional and non-professional field use, G: professional greenhouse use, Gn: non-professional greenhouse use, Gpn: professional and non-professional greenhouse use, I: indoor application

*** e.g. LC: low crops, HC: high crop, TM: tractor-mounted, HH: hand-held

$ if first application after BBCH 49; min. 21 days spray interval.

Explanation for column 10 “Acceptability of exposure assessment”

A	Exposure acceptable without PPE / risk mitigation measures
R	Further refinement and/or risk mitigation measures required
N	Exposure not acceptable/ Evaluation not possible

Noticed data gaps are:

- data gap 1
- data gap 2
- data gap 3

6.2 Toxicological Information on Active Substance(s)

Information regarding classification of the active substances and on EU endpoints and critical areas of concern identified during the EU review are given in Table 6.2-1.

Table 6.2-1: Information on active substance(s)

	BAS 750 F	**BAS 490 F**
Common Name	Mefentrifluconazole	Kresoxim-methyl
CAS-No.	1417782-03-6	143390-89-0
Classification and proposed labelling With regard to toxicological endpoints (according to the criteria in Reg. 1272/2008, as amended)		
Hazard classes (s), categories:	Skin Sens. 1	Carc. 2
Code(s) for hazard pictogram(s):	 (Exclamation mark - GHS07)	 (Health hazard - GHS08)
Signal word:	Warning	
Hazard statement(s):	H317: May cause an allergic skin reaction	H351: Suspected of causing cancer.
Precautionary statement(s):	P261: Avoid breathing mist or vapour P272: Contaminated work clothing should not be allowed out of the workplace. P280: Wear protective gloves P303 + P352: IF ON SKIN (or hair): Wash with plenty of soap and water. P333 + P313: If skin irritation or rash occurs occurs: Get medical advice/attention. P362 + P364: Take off contaminated clothing and wash it before reuse. P501: Dispose of contents/container to hazardous or special waste collection point.	P202: Do not handle until all safety precautions have been read and understood. P280: Wear protective gloves/protective clothing/eye protection/face protection. P308 + P311: IF exposed or concerned: Call a POISON CENTER or doctor/physician. P405: Store locked up. P501: Dispose of contents/container to hazardous or special waste collection point.
Reference:	RAC Opinion (2018)	Com.Dir. 2001/59/EC (28th ATP); Reg. (EU) 1272/2008
Additional C&L proposal	None.	None.
Agreed EU endpoints		
AOEL systemic	0.035 mg/kg bw/d (no correction for oral absorption required)	0.9 mg/kg bw/d (corrected for 63% oral absorption)
AAOEL	0.15 mg/kg bw/d	Not allocated
Reference	EFSA Journal 2018; 16(7):5379	EFSA Journal 2010; 8(11):1891
Conditions to take into account/critical areas of concern with regard to toxicology		
Review Report/EFSA Conclusion for active substance	None related to toxicology	None related to toxicology

6.3 Toxicological Evaluation of Plant Protection Product

A summary of the toxicological evaluation for BAS 765 00 F is given in the following tables. Full summaries of studies on the product that have not been previously considered within an EU peer review process are described in detail in Appendix 2.

Table 6.3-1: Summary of evaluation of the studies on acute toxicity including irritancy and skin sensitisation for BAS 765 00 F

Type of test, species, model system (Guideline)	Result	Acceptability	Classification (acc. to the criteria in Reg. 1272/2008)	Reference
Acute oral toxicity, predicted from composition	LD_{50} > 2000 mg/kg bw	Yes	No classification	CLP 1272/2008
LD_{50} oral, rat (OECD 423)	LD_{50} > 5000 mg/kg bw	Yes	**No classification**	xxxxxxxxx 2019
Acute dermal toxicity, predicted from composition and supported by oral-to dermal extrapolation)	LD_{50} > 2000 mg/kg bw	Yes	**No classification**	CLP 1272/2008
Acute inhalation toxicity, predicted from composition)	LC_{50} > 5 mg/L	Yes	**No classification**	CLP 1272/2008
Skin corrosion / irritation, predicted from composition)	Non-irritant (calculation see Appendix 2)	No (see dRR part C)	Skin Irrit. 2, H315 ~~No classification~~	CLP 1272/2008
In vitro Skin irritation, EpiDerm (OECD 439)	Non-irritant	Yes	**No classification**	xxxxxxxxx 2019a
Skin irritation in rabbits (OECD 404)	Irritant	Yes	**Skin Irrit. 2; H315**	xxxxxxx 2021
Eye corrosion / irritation, predicted from composition)	Non-irritant (calculation see Appendix 2)	No (see dRR part C)	Eye Dam.1, H318 ~~No classification~~	CLP 1172/2008
In vitro Eye irritation, EpiOcular (OECD 492)	Non-irritant	Yes	**No classification**	xxxxxxx 2019b
In vitro Eye irritation, ICE test (OECD 438)	Inconclusive	Yes	No prediction can be made	xxxxxxx 2019
Eye irritation, Overall weight-of-evidence	Non irritant	Yes	**No classification**	See Appendix 2
Skin sensitisation predicted from composition)	Skin sensitiser	Yes	**Skin Sens 1, H317**	CLP 1172/2008
Supplementary studies for combinations of plant protection products	No data – not required	Yes / No / Supplementary		

Table 6.3-2: Additional toxicological information relevant for classification/labelling of BAS 765 00 F

	Substance (Concentration in product, % w/w)	Classification of the substance (acc. to the criteria in Reg. 1272/2008)	Reference	Classification of product (acc. to the criteria in Reg. 1272/2008)
Toxicological properties of active substance(s) (relevant for classification of product)	Mefentrifluconazole (9.17% (w/w)) Kresoxim-methyl (13.8 % (w/w))	Skin Sens 1; H317 (criteria ≥ 1%) Carc. 2; H351 (criteria ≥ 1%)	RAC Opinion, 2018 Reg. 1272/2008	Skin Sens 1; H317 (criteria ≥ 1%) Carc. 2; H351 (criteria ≥ 1%)
Toxicological properties of non-active substance(s) (relevant for classification of product)	Reaction mass of 5-chloro-2-methyl-4-iso-thiazolin-3-one and 2-methyl-2H-isothiazol-3-one (0.00117% (w/w))	Skin Sens 1; H317 (criteria ≥ 0.0015%)	Reg. 1272/2008	EUH208 (criteria ≥ 0.00015%)
	1,2-benzisothiazolin-3-one (0.036% (w/w))	Skin Sens 1; H317 (criteria ≥ 0.05%)	Reg. 1272/2008	EUH208 (criteria ≥ 0.005%)
Toxicological properties of non-active substance(s) (relevant for classification of product)	Alkohols, C12-18, ethoxylated, propoxylated Plurafac LF 1304 Alkohols, C12-18, ethoxylated, propoxylated (≥3%)	Acute Tox. 4, H302[2] Acute Tox. 4 H312[2] Eye Dam. 1, H318[2] Skin Irrit,2, H315[2] Aquatic Acute 1, H400[2] Aquatic Chronic 3, H412[2] [2)] acc. to ECHA notifications (worst scenario)	Reg. 1272/2008	Eye Dam.1, H318 Skin Irrit.2, H315 (sum of te ingridients, for details see dRR part C)
Toxicological properties of non-active substance(s) (relevant for classification of product)	Polyoxyethylene-polyoxypropylene copolymer	Eye Irrit. 2, H319 [2] Skin Irrit,2, H315[2] [2)] acc. to ECHA notifications (worst scenario)	Reg. 1272/2008	Skin Irrit.2, H315 (sum of te ingridients, for details see dRR part C)
Further toxicological information	No data – not required			

* Please use concentration range or concentration limit (e.g. 1-10 % or > 1 %) as provided in MSDS.
** Material safety data sheet by the applicant

6.4 Toxicological Evaluation of Groundwater Metabolites

Comments of zRMS:	**Mefentrifluconazole** The harmonised classification of 1,2,4-triazole is as follows: Acute Tox 4, H302; Eye Irrit 2, H19; ~~Repr 2, H361d~~. Repr. 1B, 360FD (17thATP) Taking into account the guidelines (SANCO/221/2000-rev. 10-final), metabolites which are qualified for classification in any category of reproductive toxicity **are considered to be relevant and their concentration in in drinking water must not exceed 0.1 µg/L.** If the product BAS 765 00 F is used in accordance with the list of intended uses presented in the GAP Table the maximal estimated PECgw of the metabolite amounts to 0.056 µg/L, i.e. acceptable concentration. **Kresoxim-methyl** Acc. to Regulation 1272/2008, the parent substance is classified as carcinogen (Carc. 2, H351). Acc. to SANCO/221/2000-rev. 10-final, the metabolites are considered to be toxicological relevant. The maximal PECgw for metabolites: BF 490-1 (acid of kresoxim-methyl) and BF 490-5 (diacid of kresoxim-methyl) amounts to 0.016 and 0.012 µg/L, respectively, what is below the acceptable concentration for drinking water.

All concentrations for metabolites mefentrifluconazole and kresoxim-methyl are predicted to stay below 0.1 µg/L – no groundwater assessment is required (see Section 8.8 of this dossier).

6.5 Dermal Absorption (KCP 7.3)

Dermal absorption studies performed with BAS 765 00 F are not available. Default dermal absorption estimates will therefore be applied for model estimations of non-dietary exposure to the active ingredients contained in BAS 765 00 F. Following the Guidance on Dermal absorption (EFSA Journal 2017; 15(6):4873), default values for water-based formulation types will be used in the absence of experimental data. Since BAS 765 00 F is a water-based suspension concentrate (SC), the default values to be used for the active ingredients are 10% for the undiluted concentrate and 50% for the spray-strength dilutions.

A summary of the dermal absorption rates for the active substances in BAS 765 00 F is presented in the following table.

Table 6.5-1: Dermal absorption rates for active substances in BAS 765 00 F

	Mefentrifluconazole		**Kresoxim-methyl**	
	Value	**Reference**	**Value**	**Reference**
Concentrate	10 % (default)	EFSA Journal 2017; 15(6):4873 Table 2 (p. 19)	10 % (default)	EFSA Journal 2017; 15(6):4873 Table 2 (p. 19)
Dilutions (all dilutions)	50 % (default)	EFSA Journal 2017; 15(6):4873 Table 2 (p. 19)	50 % (default)	EFSA Journal 2017; 15(6):4873 Table 2 (p. 19)

6.5.1 Justification for proposed values - mefentrifluconazole

No data on dermal absorption for mefentrifluconazole in BAS 765 00 F is available. Justifications for default values according to Guidance on Dermal Absorption (EFSA Journal 2017; 15(6):4873) are presented in the following table.

Table 6.5-2: Default dermal absorption rates for mefentrifluconazole

	Value	Justification for value	Acceptability of justification
Concentrate	10 %	BAS 765 00 F is a suspension concentrate (SC). Therefore, the default value for water-based formulation types such as suspension concentrates, was selected.	yes
Dilution	50 %	See justification above.	yes

6.5.2 Justification for proposed values – kresoxim-methyl

No data on dermal absorption for kresoxim-methyl in BAS 765 00 F is available. Justifications for default values according to Guidance on Dermal Absorption (EFSA Journal 2017; 15(6):4873) are presented in the following table.

Table 6.5-3: Default dermal absorption rates for kresoxim-methyl

	Value	Justification for value	Acceptability of justification
Concentrate	10 %	BAS 765 00 F is a suspension concentrate (SC). Therefore, the default value for water-based formulation types such as suspension concentrates, was selected.	yes
Dilution	50 %	See justification above.	yes

6.6 Exposure Assessment of Plant Protection Product (KCP 7.2)

Table 6.6-1: Product information and toxicological reference values used for exposure assessment

Product name and code	BAS 765 00 F	
Formulation type	SC	
Category	Fungicide	
Container size(s), short description	0.15, 0.25, 0.5, 1 L PA/PE (Coex) or f-HDPE bottles, opening 42 mm inner Ø 1, 3, 5, 10, 20, 50 L PA/PE (Coex) or f-HDPE containers, opening 52-54 mm inner Ø	
Active substance(s) (incl. content)	**Mefentrifluconazole (BAS 750 F)** 100 g/L	**Kresoxim-methyl (BAS 490 F)** 150 g/L
AOEL systemic	0.035 mg/kg bw/d	0.9 mg/kg bw/d
Acute AOEL systemic	0.15 mg/kg bw/d	Not assigned
Inhalation absorption	100%	100%
Oral absorption	100%	63%
Dermal absorption	Concentrate: 10% Dilution: 50% (Default values as recommended by EFSA Guidance 2017)	Concentrate: 10% Dilution: 50% (Default values as recommended by EFSA Guidance 2017)

6.6.1 Selection of critical use(s) and justification

The critical GAP(s) used for the exposure assessment of the plant protection product is/are shown in Table 6.1-4. A list of all intended uses within the Central Zone is given in Part B, Section 0.

Justification

BAS 765 00 F is intended to be used in cereals only, thus vehicle-mounted downward spraying to field crops is the only application equipment to be considered.
The GAP selected for exposure assessment of BAS 765 00 F yields the highest exposure based on two applications at the maximum application rate of 1 L product/ha and thus identified as “Critical GAP” (uses #5 – #12). Other proposed cereal uses involve only single applications (uses #1 – #4), or allow two applications but with a lower application rate of 0.6 g product/ha (uses #9 – #12).

6.6.2 Operator exposure (KCP 7.2.1)

Comments of zRMS:	The estimations of operator exposure to active substances contained in BAS 765 00 F (based on AOEM) performed by the Applicant are correct. Conclusions: According to the estimation based on AOEM, the use of BAS 765 00 F containing Mefentrifluconazole (100 g/L) and Kresoxim-methyl (150 g/L) **causes unacceptable health risk for unprotected operator** (using workwear) in terms of acute local effects and systemic exposure. If the operator is equipped with PPE (protective gloves) and workwear during mixing and loading, the exposure decreases to the acceptable level, i.e. below the AOEL and AAOEL values. Considering the exposure data and toxicological properties of the product BAS 765 00 F, the following sentence regarding the use of PPE is recommended by the evaluator to be placed in the label: „*Stosować rękawice ochronne oraz odzież roboczą (kombinezon) w trakcie przygotowywania cieczy roboczej oraz odzież roboczą w trakcie wykonywania zabiegu*" "Wear protective gloves and work wear (coverall) during mixing/loading and work wear during application".

6.6.2.1 Estimation of operator exposure

A summary of the exposure models used for estimation of operator exposure to the active substances during application of BAS 765 00 F according to the critical use(s) is presented in Table 6.6-2. Outcome of the estimation is presented in Table 6.6-3. Detailed calculations are in Appendix 3.

Table 6.6-2: Exposure models for intended uses

Critical use(s)	Cereals (wheat, barley, rye, triticale), outdoor spraying (max. 1 L product/ha)
Model(s)	EFSA guidance AOEM [European Food Safety Authority (2014) Guidance on the Assessment of Exposure for 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.]

Table 6.6-3: Estimated operator exposure

Cereal application: vehicle-mounted, outdoor downward spraying		**Mefentrifluconazole (BAS 750 F)**		**Kresoxim-methyl (BAS 490 F)**	
Application rate: 1 L product/ha		0.1 kg a.s./ha		0.15 kg a.s./ha	
Longer-term exposure					
Model data	**Level of PPE**	**Total absorbed dose (mg/kg/day)**	**% of RVNAS (AOEL)**	**Total absorbed dose (mg/kg/day)**	**% of RVNAS (AOEL)**
EFSA AOEM 75th percentile Body weight: 60 kg	no PPE work wear - arms, body and legs covered	0.0351	100	0.0489	5.4
	PPE gloves and work wear - arms, body and legs covered during mixing/loading and work wear - arms, body and legs covered during application.	0.0073	21%	0.0109	1.2%
Acute exposure					
Model data	**Level of PPE**	**Total absorbed dose (mg/kg/day)**	**% of RVAAS (AAOEL)**	**Total absorbed dose (mg/kg/day)**	**% of RVAAS (AAOEL)***
EFSA AOEM 75th percentile Body weight: 60 kg	no PPE work wear - arms, body and legs covered	0.171	114	n.a.	n.a.
	PPE gloves and work wear - arms, body and legs covered during mixing/loading and work wear - arms, body and legs covered during application.	0.069	46%	n.a.	n.a.
* AAOEL not assigned (n.a.) for Kresoxim-methyl at EU level					

6.6.3 Measurement of operator exposure

Since the operator exposure estimations carried out indicated that the acceptable operator exposure level (AOEL) will not be exceeded under conditions of intended uses and considering above mentioned personal protective equipment (PPE), a study to provide measurements of operator exposure was not necessary and was therefore not performed.

6.6.4 Worker exposure (KCP 7.2.3)

Comments of zRMS:	The estimations of worker exposure to active substances contained in BAS 765 00 F (based on AOEM) performed by the Applicant are correct. Conclusions: According to the estimation based on AOEM, the use of BAS 765 00 F containing Mefentrifluconazole (100 g/L) and Kresoxim-methyl (150 g/L) **does not cause unacceptable health risk for unprotected worker** (using workwear) becasue the exposure levels to active substances are below the AOEL values. Nevertheless, it is forbidden to re-enter area treated with BAS 765 00 F until spray deposit on plant surfaces has dried. Bearing in minds the hygienic rules and the classification of the product (H317, including the risk to the most sensitive individuals and no dose-effect relationship in case of sensitization potential), the use of protective gloves is recommended by the evaluator during inspection of the treated area.

6.6.4.1 Estimation of worker exposure

Table 6.6-4 shows the exposure model(s) used for estimation of worker exposure after entry into a previously treated area or handling a crop treated with BAS 765 00 F according to the critical use(s). Outcome of the estimation is presented in
Table 6.6-5. Detailed calculations are in Appendix 3.

Table 6.6-4: Exposure models for intended uses

Critical use(s)	Cereals (wheat, barley, rye, triticale), outdoor spraying (max. 1 L product/ha)
Model	EFSA guidance [European Food Safety Authority (2014) Guidance on the Assessment of Exposure for 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 .]

Table 6.6-5: Estimated worker exposure

Model data	Level of PPE	Mefentrifluconazole (BAS 750 F)		Kresoxim-methyl (BAS 490 F)	
		Total absorbed dose (mg/kg bw/day)	% of RVNAS (sys. AOEL)	Total absorbed dose (mg/kg bw/day)	% of RVNAS (sys. AOEL)
Number of applications and application rate: 2 applications, 1 L product/ha, 14-day treatment interval		2 x 0.10 kg a.s./ha		2 x 0.15 kg a.s./ha	
2 hours/day(1) TC [cm^2/person/h] (2) - potential exposure: 12500 - no PPE: 1400 - PPE: not assigned Body weight: 60 kg	Potential exposure	0.108	308	0.162	18
	workwear(3)	0.012	34	0.018	2.0
	… plus gloves (4)	n.a.	n.a.	n.a.	n.a.

(1) 2 h/day for professional applications for maintenance or scouting of cereals;
(2) EFSA guidance model
(3) no PPE: Workwear - Arm, body and legs covered
(4) with PPE: Work wear and gloves - Hands, arm, body and legs covered
n.a. = not assigned, since no TC available for this exposure scenario

6.6.4.2 Refinement of generic DFR value (KCP 7.2)

Since the worker exposure estimations carried out indicated that the acceptable operator exposure level (AOEL) will not be exceeded under conditions of intended uses and considering above mention PPE, a study to provide measurements of dislodgeable foliar residues was therefore not performed.

6.6.4.3 Measurement of worker exposure

Since the worker exposure estimations carried out indicated that the acceptable operator exposure level (AOEL) will not be exceeded under conditions of intended uses and considering above mention PPE, a study to provide measurements of worker exposure was not necessary and was therefore not performed.

6.6.5 Bystander and resident exposure (KCP 7.2.2)

Comments of zRMS:	The results of bystander and resident exposure estimations to active substances contained in the formulation BAS 765 00 F presented by the applicant are accepted. **Mefentrifluconazole:** The reference value acutely toxic active substance (RVAAS) for mefentrifluconazole is appointed. Consequently, the estimations of exposure for bystander and resident have been calculated separately. According to the estimation based on AOEM, the use of BAS 765 00 F does not cause unacceptable health risk for bystander and resident; the exposure values are below the AOEL and AAOEL values for this active substance. **Kresoxim-methyl:** The reference values acutely toxic active substance (RVAAS) for kresoxim-methyl is not allocated. Consequently, it is assumed that the estimation of bystander exposure is covered by the calculation of resident exposure towards this substance. According to the estimation based on AOEM, the use of BAS 765 00 F does not cause unacceptable health risk for bystander and resident; the exposure value is below the AOEL for this active substance. **Summary and conclusions:** The **incidental short-time exposure of bystander and resident (children and adult**) to mefentrifluconazole and kresoxim-methyl contained in the formulation BAS 765 00 F **causes no risk** to human health if the product is used in accordance to the intended uses listed in the GAP Table.

6.6.5.1 Estimation of bystander and resident exposure

Table 6.6-6 shows the exposure model(s) used for estimation of bystander and resident exposure to mefentrifluconazole and kresoxim-methyl. Outcome of the estimation is presented in Table 6.6-7. Detailed calculations are in Appendix 3.

Table 6.6-6: Exposure models for intended uses

Critical use(s)	Cereals (wheat, barley, rye, triticale), outdoor spraying (max. 1 L product/ha)
Model	EFSA guidance [European Food Safety Authority (2014) Guidance on the Assessment of Exposure for 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 .]

Table 6.6-7: Estimated bystander and resident exposure

Cereal application: vehicle-mounted, outdoor downward spraying		**Mefentrifluconazole (BAS 750 F)**		**Kresoxim-methyl (BAS 490 F)**	
Application rate: 1.5 L product/ha		**2 x 0.1 kg a.s./ha**		**2 x 0.15 kg a.s./ha**	
Model data for bystander: Drift rate: 8.50% (2-3 m buffer) 95th percentile data		**Total absorbed dose (mg/kg bw/day)**	**% of RVAAS (Acute AOEL)**	**Total absorbed dose (mg/kg bw/day)**	**% of RVAAS (Acute AOEL)***
1-3 year old child Body weight: 10 kg	Spray drift	0.0305	20	n.a.	n.a.
	Vapour	0.0011	0.71	n.a.	n.a.
	Surface deposits	0.0042	2.8	n.a.	n.a.
	Entry into treated crops	0.0145	9.7	n.a.	n.a.
Adults Body weight: 60 kg	Spray drift	0.0083	5.5	n.a.	n.a.
	Vapour	0.00023	0.15	n.a.	n.a.
	Surface deposits	0.0018	1.2	n.a.	n.a.
	Entry into treated crops	0.0081	5.4	n.a.	n.a.
Model data for residents: Drift rate: 5.60% (2-3 m buffer) 75th percentile data		**Total absorbed dose (mg/kg/day)**	**% of RVNAS (AOEL)**	**Total absorbed dose (mg/kg/day)**	**% of RVNAS (AOEL)**
1-3 year old child Body weight: 10 kg	Spray drift	0.0134	38	0.0201	2.2
	Vapour	0.0011	3.1	0.0011	0.12
	Surface deposits	0.0014	4.0	0.0020	0.22
	Entry into treated crops	0.0145	42	0.0218	2.4
	All pathways (mean)	0.0211	60	0.0310	3.4
Adults Body weight: 60 kg	Spray drift	0.0032	9.2	0.0048	0.5
	Vapour	0.0002	0.66	0.0002	0.03
	Surface deposits	0.0006	1.7	0.0009	0.10
	Entry into treated crops	0.0081	23	0.0121	1.3
	All pathways (mean)	0.0086	25	0.0128	1.4

6.6.5.2 Measurement of bystander and/or resident exposure

Since the bystander and/or resident exposure estimations carried out indicated that the acceptable operator exposure level (AOEL) for Mefentrifluconazole and Kresoxim-methyl will not be exceeded under conditions of intended uses and considering above mentioned risk mitigation measures, a study to provide measurements of bystander/resident exposure was not necessary and was therefore not performed.

6.6.6 Combined exposure

Comments of zRMS:	The results of risk assessment of combined exposure of operator, worker and bystander/resident are accepted. The sum of individual Hazard Quotients for mefentrifluconazole and kresoxim-methyl is significantly below 1.0 for all scenarios.

The product is a mixture of two active substances.

6.6.6.1 Exposure Assessment of Mefentrifluconazole and Kresoxim-methyl in BAS 765 00 F

Note: The combined toxicological effect of these active substances has not been investigated with regard to repeated dose toxicity.

At the first tier, combined exposure is calculated as the sum of the component exposures without regard to the mode of action or mechanism/target of toxicity. Initially, the individual Hazard Quotients (HQ) are calculated for all active substances in the PPP by assessing the exposure according to appropriate models and dividing the individual exposure levels by the respective systemic AOEL. This is equivalent to the predicted exposure as % of systemic AOEL from Table 6.6-3 converted to decimal. The Hazard Index (HI) is the sum of the individual HQs.

Table 6.6-8: Acute risk assessment from combined exposure

Application scenario	Active Ingredient	Estimated exposure / RVNAS or RVAAS (HQ)
Operators – vehicle-mounted outdoor downward spraying with PPE [longer-term exposure]	mefentrifluconazole	0.21
	kresoxim-methyl	0.012
	Cumulative risk Operators (HI)	**0.22**
Workers – crop inspection (worst case)	mefentrifluconazole	0.34
	kresoxim-methyl	0.020
	Cumulative risk Workers (HI)	**0.36**
Bystander (worst-case: child exposure resulting from spray drift)	mefentrifluconazole	0.20
	kresoxim-methyl	n.a.*
	Cumulative risk Bystander – Child (HI)	**n.a***
Resident – Child (all pathways)	mefentrifluconazole	0.60
	kresoxim-methyl	0.034
	Cumulative risk Resident – Child (HI)	**0.64**
Resident – Adult (all pathways)	mefentrifluconazole	0.25
	kresoxim-methyl	0.014
	Cumulative risk Resident – Adult (HI)	**0.26**

* No AAOEL was assigned for kresoxim-methyl; risk assessment for long-term exposure of residents is used for bystander risk assessment

The Hazard Index is < 1 for all exposure scenarios. Thus, combined exposure to all active substances in BAS 765 00 F is not expected to present a risk for operators, workers, bystanders and residents. No further refinement of the assessment is required.

Appendix 1 Lists of data considered in support of the evaluation

Tables considered not relevant can be deleted as appropriate.

MS to blacken authors of vertebrate studies in the version made available to third parties/public.

List of data submitted by the applicant and relied on

Data point	Author(s)	Year	**Title** **Company Report No.** **Source (where different from company)** **GLP or GEP status** **Published or not**	**Vertebrate study Y/N**	Owner
KCP 7.1.1/1	xxxxxxxxx	2019	BAS 765 00 F - Acute oral toxicity study in rats 2019/2034513 Bioassay - Labor fuer biologische Analytik GmbH, Heidelberg, Germany Fed.Rep. yes Unpublished	Yes	BASF
KCP 7.1.4/1	xxxxxxxxx	2019	BAS 765 00 F - In vitro skin irritation and corrosion Turnkey Testing Strategy 2019/2034430 BASF SE, Ludwigshafen/Rhein, Germany Fed.Rep. yes Unpublished	No	BASF

Data point	Author(s)	Year	**Title** **Company Report No.** **Source (where different from company)** **GLP or GEP status** **Published or not**	**Vertebrate study Y/N**	**Owner**
KCP 7.1.4/2	xxxxxxxxx	2021	BAS 765 00 F - Acute dermal irritation / corrosion in rabbits 2021/2009940 xxxxxxxxxxxxxxxxxxx yes Unpublished	Yes	BASF
KCP 7.1.5/1	xxxxxxxxx	2019	BAS 765 00 F in vitro eye irritation test (EIT) in recunstructed human cornea 2019/2034431 xxxxxxxxxxxxxxxxxxx yes Unpublished	No	BASF
KCP 7.1.5/2	xxxxxxxxx	2019	BAS 765 00 F: Isolated chicken eye test method for identifying (i) chemicals inducing serious eye damage and (ii) chemicals not requiring classification for eye Irritation or serious eye damage 2019/2040542 xxxxxxxxxxxxxxxx yes Unpublished	No	BASF

List of data submitted or referred to by the applicant and relied on, but already evaluated at EU peer review

BAS 765 00 F is a new product, no product studies have been evaluated previously

The following tables are to be completed by MS

List of data submitted by the applicant and not relied on

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Owner
KCP XX	Author	YYYY	Title Company Report N Source GLP/non GLP/GEP/non GEP Published/Unpublished	Y/N	Owner

List of data relied on not submitted by the applicant but necessary for evaluation

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Owner
KCP XX	Author	YYYY	Title Company Report N Source GLP/non GLP/GEP/non GEP Published/Unpublished	Y/N	Owner

Appendix 2 Detailed evaluation of the studies relied upon

BAS 765 00 F is an SC (suspension concentrate) that contains the active substances mefentrifluconazole (100 g/L) and kresoxim-methyl (150 g/L).

For toxicological evaluation of this product, alternatives to vertebrate animal testing were taken into consideration as far as could be scientifically justified. A weight-of-evidence approach was pursued to provide a sufficiently reliable assessment of the product's acute toxicity by oral, dermal and inhalation routes of exposure, and of its potential to cause skin irritation, eye irritation and skin sensitization:

a) Prediction of toxicity, based on toxicity data from active ingredient and co-formulants, as far as available

b) results of in-vitro studies, and

c) in the absence of available similar SC-type products containing both active substances, limited (acute oral toxicity) testing of the product in vertebrate animals to verify if the additivity assumption for predicting the health hazards from the product's composition according to CLP Regulation 1272/2008 (GHS approaches) – and as prerequisite for waiving acute dermal and acute inhalation toxicity studies.

d) Additional toxicological testing in vertebrate required for registration in non-EU27 countries has meanwhile been carried out and revealed a skin irritation potential in rabbits, which was not predicted using the GHS calculation approach or the Epiderm-test.

Availability of acute toxicity data of BAS 765 00 F components

An overview of the available safety data sheet information on acute toxicity classification of the individual components contained in BAS 765 00 F is given in the following table (co-formulants are number-coded corresponding to the numbering of co-formulants listed in Table 1.2-1 in Confidential Document Part C.

Table A 1: Overview of BAS 765 00 F ingredient MSDS information concerning acute toxicity C&L (CLP)

Ingredient	Conc [% w/w] (rounded)	Acute tox. C&L (MSDS)	Acute oral toxicity	Acute dermal toxicity	Acute inhalation toxicity	Skin Corr / Irrit	Eye Dam / Irrit	Skin Sens
Mefentriflu-conazole	9.52	H317	No	No	No	No	No	H317
Kresoxim-methyl	15.22	–	No	No	No	No	No	No
#3	6.42	–	No	No	No data	No	No	No
#4	4.62	–	No	(No)	No data	No	No	No
#5	4.62	H315	No	(No)	No data	H315	No	No data
#6	2.77	–	No	(No)	No	No	No	No
#7	0.92	H319	No	No	No data	No	H319	No
#8	0.46	–	No	No	No data	No	No	No
#9	0.37	–	No	(No)	No	No	No	No
#10	0.18	H314; H318; H317	No	No	No data	H314 (1)	H318 (2)	H317 (2)
#11	0.09	H314; H318; H317	No	No	No data	H314 (3)	H318 (3)	H317 (3)
#12	0.05	H319	No	No	No data	No	H319	No data
Water	54.74	–	No	No	No	No	No	No
% of product with acute toxicity data			100	100	83	100	100	95

1) contains 1-3% sodium hydroxide; 2) contains 1.48% CIT/MIT 3:1 (CAS No. 55965-84-9); 3) contains 20% BIT (CAS No. 2634-33-5)

The weight-of-evidence approach used to predict the classification of BAS 765 00 F for a certain acute toxicity endpoint is described at the beginning of the corresponding sub-sections of this Appendix.

A 2.1 Statement on bridging possibilities

For the water-based BAS 765 00 F (suspension concentrate), products of similar composition were not identified that appeared sufficiently useful for bridging. BAS 765 00 F is currently the only product developed that contains both active ingredients mefentrifluconazole and kresoxim-methyl.

In general, no evidence for increased toxicity is suggested from water-based formulations containing mefentrifluconazole at concentrations comparable or higher than in BAS 765 00 F. However, since the combination of mefentrifluconazole with kresoxim-methyl is unique, bridging to water-based mefentrifluconazole formulations was not considered useful.

In order to assess the likelihood for non-additive toxicity phenomena, an acute oral toxicity study was therefore performed with the BAS 765 00 F.

Comments of zRMS:	The explanation is accepted.

A 2.2 Acute oral toxicity (KCP 7.1.1)

Comments of zRMS:	In the view of current regulations (EC Regulation 1272/2008, EC Regulation 1107/2009, EC Regulation 1907/2006), *in vivo* tests on animals should be avoided. According to Directive 86/609/EEC, studies on animals shall be undertaken only where no other alternative methods which provide adequate reliability and quality of data, are available. In case of acute oral toxicity, it is possible to classify the product based on the composition of the product **BAS 765 00 F.** The ATE_{mix} of the product amounts to **5 400 mg/kg bw.** However, bearing in minds that the acute systemic toxicity of many formulations is not the sum of the ingredients' toxicity (additivity), but rather, ingredients in a formulation can interact to result in lower or higher toxicity than predicted by the GHS additivity formula (Corvaro et al., 2016[1]; Van Cott et al., 2018[2]). It seems reasonable and justified to use the results of *in vivo* studies if such have been generated and their results are available. The study presented by the applicant is accepted. In accordance with the provisions of the Regulation EC 1272/2008, the formulation **BAS 765 00 F** is non-toxic for oral route (because the acute oral LD_{50} exceeds 5000 mg/kg b.w.). Thus, **the formulation BAS 765 00 F does not require classification in regards to acute oral toxicity.** The results of the study are consistent with the results of calculation method. All in all, it is concluded that the formulation **BAS 765 00 F does not require classification in regards to oral toxicity.** [1] http://dx.doi.org/10.1016/j.yrtph.2016.10.007 [2] https://doi.org/10.1016/j.yrtph.2017.12.024

Data for assessment of acute oral toxicity is available for all 13 ingredients of the product. None of the active ingredients or co-formulants are classified for acute oral toxicity (see Table A 1). An acute oral toxicity classification is not indicated for BAS 765 00 F on the basis of its composition.

Since BAS 765 00 F represents a currently unique combination of active ingredients, an acute oral toxicity study in rats was performed to check if higher-than-expected toxicity occurs. The acute oral LD_{50} was higher than 5000 mg/kg bw. No mortality or clinical signs was observed in any of the six treated animals. A study summary is provided at the end of this chapter.

In conclusion, based on the weight-of-evidence taking into account the toxicological properties of the product's ingredients and their concentration, BAS 765 00 F does not require classification for acute oral toxicity according to Regulation (EC) No. 1272/2008.

A 2.2.1 Study 1

Reference:	CP 7.1.1/1
Report	BAS 765 00 F - Acute oral toxicity study in rats xxxxxxxxx 2019 Report No 10A041/19X033 BASF DocID 2019/2034513 Authority registration No
Guideline(s):	OECD 423 (2001), Comm. Reg. (EC) No 440/2008, JMAFF 8147, EPA 870.1100
Deviations:	No
GLP:	Yes (certified by Landesanstalt fuer Umwelt, Messungen und Naturschutz Baden-Wuerttemberg, Karlsruhe, Germany)
Acceptability:	Yes
Duplication (if vertebrate study)	No

Materials and methods

Test material (Lot/Batch No.)	BAS 765 00 F Batch No. FD-190128-0007 Purity/Content: - Mefentrifluconazole (BAS 750 F): 99.6 g/L - Kresoxim-methyl (BAS 490 F): 148.9 g/L
Species	Wistar rat (Crl:WI (Han) SPF)
No. of animals (group size)	3 female rats/group
Dose(s)	5000 mg/kg bw (two groups)
Exposure	Once by oral gavage
Vehicle/Dilution	Undiluted
Post exposure observation period	14 days
Remarks	None

Results and discussions

- No mortality was observed in the first test group receiving 5000 mg/kg bw of the formulation. Therefore, a second test group of three animals received a dose of 5000 mg/kg bw of the formulation. Again no mortality was observed [see Table A 2]. According to the test scheme of the OECD guideline no further dosing was necessary.
- No clinical signs of toxicity were observed.
- All animals gained weight in a normal range throughout the study period.
- There were no macroscopic pathological findings in the animals sacrificed at the end of the observation period.
-

Table A 2: Results of acute oral toxicity study in rats of BAS 765 00 F

Dose (mg/kg bw)	Toxicological results *	Duration of signs	Time of death	LD_{50} (mg/kg bw) (14 days)
Female rats				
5000	0/0/3	No clinical signs	No deaths	>5000
5000	0/0/3	No clinical signs	No deaths	

***** Number of animals which died/number of animals with clinical signs/number of animals used
hx: hours after administration at day 0; dx: days after administration

Conclusion

Under the study conditions, the acute oral LD_{50} of BAS 765 00 F in rats was higher than 5000 mg/kg bw.

A 2.3 Acute percutaneous (dermal) toxicity (KCP 7.1.2)

Comments of zRMS:	According to the additivity formula, the ATE_{mix} of the product amounts to **22 000 mg/kgb.w.** Moreover, an inter-route extrapolation seems to be applicable. Taking into account test results from the available acute oral toxicity test with BAS 765 00 F (oral LD50 > 5000 mg/kg bw) and applying oral-to-dermal extrapolation, it can be assumed that the formulation BAS 765 00 F does not require classification with regard to dermal acute toxicity in the view of the predicted low acute oral toxicity. Conclusion: Taking into account the composition of the product and applying oral-to-dermal extrapolation, the formulation **BAS 765 00 F does not require classification with regard to dermal acute toxicity.**

Data for assessment of acute dermal toxicity is available for 100% of the product's composition, either actual study data or based on oral-to-dermal extrapolation (in the case of co-formulants #4, #5, #6, and #9). None of the ingredients of the product require classification for acute dermal toxicity (see Table A 1). Therefore, an acute dermal toxicity classification is not indicated for BAS 765 00 F on the basis of its composition. Also applying oral-to-dermal extrapolation from the available acute oral toxicity test with BAS 765 00 F (oral LD_{50} > 5000 mg/kg bw) does not give rise to any concern (even if unrealistic systemic bioavailability is assumed), due to the predicted low acute oral toxicity of the product.

Thus, BAS 765 00 F does not require classification for acute dermal toxicity according to Regulation (EC) No. 1272/2008.

A 2.4 Acute inhalation toxicity (KCP 7.1.3)

Comments of zRMS:	According to additivity formula, the ATE_{mix} of the product amounts to **54.3 mg/l** therefore is greater than 5 mg/L. Moreover, an inter-route extrapolation seems to be applicable. Taking into account test results from the available acute oral toxicity test with BAS 765 00 F (oral LD50 > 5000 mg/kg bw) and applying oral-to-inhalation extrapolation, it can be assumed that the formulation BAS 765 00 F does not require classification with regard to inhalation acute toxicity in the view of the predicted low acute oral toxicity. Conclusion: Taking into account the composition of the product and applying oral-to-inhalation extrapolation, the formulation **BAS 765 00 F does not require classification with regard to inhalation acute toxicity.**

Data for assessment of acute inhalation toxicity is available for 5 product ingredients comprising approx. 83% of the total composition (see Table A 1). None of the co-formulants with data indicate a concern for acute inhalation toxicity. Only three of the remaining eight co-formulants without acute inhalation data are present at concentrations above 1% (w/w): co-formulants #3 (6.46%), #4 (4.62%) and #5 (4.62%). All three ingredients are not classified for oral toxicity or eye irritation. Applying oral-to-inhalation extrapolation as suggested according to the CLP Guidance Document of ECHA (Guidance on the application of CLP criteria, Version 5.0, July 2017, section 3.1.3.3.5), the resulting inhalation ATE values would necessarily be greater than 5 mg/L for the three co-formulants and would therefore not require consideration in the GHS calculation algorithm. Consequently, no components in the product present at concentrations above 1% are considered to pose an acute inhalation toxicity hazard. Therefore, classification of BAS 765 00 F for acute inhalation toxicity is not required.

The available acute oral toxicity study with BAS 765 00 F indicates the product is non-toxic (oral LD50 >5000 mg/kg bw), as was predicted from the product composition. This fact provides reassurance that the additivity algorithm of GHS can be applied to predict the classification based on its composition in general. Moreover, since the available evidence does not give rise to concern for skin or eye irritating properties of BAS 765 00 F (see sections A.2.5 and A.2.6), the product is unlikely to cause irritation to mucous membranes of the respiratory tract. On these grounds, oral-to-inhalation toxicity extrapolation would also be possible from the available acute oral toxicity study with BAS 765 00 F, and likewise, a classification for acute inhalation toxicity would not be triggered from this assessment.

In the BASF data base, we found two products that contain two of the three co-formulants at concentrations comparable or higher than contained in BAS 765 00 F. In these studies, no acute inhalation toxicity hazard was identified. The composition of these SC-type formulations are not sufficiently similar to BAS 765 00 F to justify a full read-across, but may be considered supplemental information in an overall weight-of-evidence assessment to justify why vertebrate animal testing of BAS 765 00 F is not needed. Summaries of the two studies and composition details can be provided upon request.

Table A 3: Results of acute inhalation toxicity studies with SC-type formulations containing either coformulants #3 and #4 or #3 and #5

	Co-formulant Concentration			Acute LC50	Reference
	#3	#4	#5		(BASF DocID)
Product					
BAS 765 00 F (SC)	6.42%	4.59%	4.59%	> 5 mg/L	predicted (CLP)
BAS 763 00 F (SC)	6.51%	4.65%	–	> 2 mg/L*	2019/2076343
BAS 514 42 H (SC)	3.07%	–	32.9%	> 5 mg/L	1992/10154

* maximum attainable concentration

In conclusion, the available data is considered sufficient to justify non-classification of BAS 765 00 F for

acute inhalation toxicity, based on product composition and route-to-route extrapolation in line with CLP Guidance recommendations.

A 2.5 Skin irritation (KCP 7.1.4)

Comments of zRMS:	According to the CLP Regulation, the sum of relevant components classified as Skin Irrit 2, H315 amounts to **12.425 %.** It is above the generic concentration limit **that triggers classification of the mixture in regard to the skin irritation** (≥ 10 %). The results of classification obtained using calculation method justify the use of the experimental data for the purpose of product evaluation. The study presented by the applicant is accepted. The results of *in vitro* test (EpiDerm™ test, SCT, OECD 431) indicate that the product **BAS 765 00 F shows no corrosive potential.** The relative mean viability of the tissues amounts to 101.2 ± 6.7 and 105.7 ± 1.7 % of negative control for 3 and 60 min. of the exposure, respectively. The results of *in vitro* test (EpiDerm™ test, SIT, OECD 439) indicate that **BAS 765 00 F** shows no irritant potential. The relative mean viability of the tissue after 1-h exposure followed by 42-h incubation period amounts to 101.1% of the negative control). The results of the study are not consistent with the results of additive formula. At the time the expert assessed data presented above, the applicant provided the results of the new study required for registration in non-EU countries. The results of *in vivo* study (OECD 404, Acute dermal irritation / corrosion in rabbits, Höger and Lammert, 2021) showed a clear skin irritation potential. The results of *in vivo* experimental data are decisive for the product classification. Conclusions: All in all, it is concluded that the formulation **BAS 765 00 F requires classification in respect to skin irritation/corrosion: Skin Irrit 2, H315).**

Data for assessment of skin irritation is available for all 13 ingredients of the product. Co-formulant #5 (4.62% in the product) is classified as Skin Irrit. 2; H315; Ten ingredients of the product comprising 95% of the composition do not require classification (see Table A 1). Co-formulant #10 contained at 0.18% in the product is classified as skin corrosive in Cat 1B, since it contains up to 3% sodium hydroxide and has a pH value of up to 12.5; this is of no relevance to BAS 765 00 F, which pH value was 7.0, and therefore triggers no concern for corrosivity. Co-formulant #11 contained at 0.09% in the product is also classified as skin corrosive in Cat 1B, based on its CIT:MIT (3:1) content at 1.48%; however, the resulting CIT+MIT concentration of 0.00117% in BAS 765 00 F is clearly below the trigger concentration of 1% for consideration in the additivity approach according to GHS criteria and CLP Regulation 1272/2008. Therefore, CIT:MIT (3:1) does not need to be considered for assessment of the skin irritation potential of BAS 765 00 F. The total product concentration of skin irritating ingredients of 4.6% is below the generic concentration limit (GCL) of 10%. Thus, based on skin irritation data available for the components, product classification as skin irritant would not be triggered according to GHS criteria.

When tested in-vitro in the EpiDerm™ test (OECD 431/439), BAS 765 00 F showed no evidence for a relevant skin irritation potential (viability 101.1% after 1-h exposure followed by 42-h incubation period, compared to the negative control).

However, when tested in rabbits, BAS 765 00 F showed a clear skin irritation potential. According to published literature (Kolle et al. (2017a)[1]; Kolle et al. (2012)[2]), the OECD in-vitro skin irritation test method (OECD TG 439) is not considered suitable as stand-alone method for predicting the classification of a complex pesticide formulation. However, also the GHS calculation approach failed to correctly predict the skin irritancy of BAS 765 00 F. No studies with products containing comparable levels of co-formulant #5

[1] Kolle, S. N., Ravenzwaay, B. v., and Landsiedel, R. (2017a). Regulatory accepted but out of domain: In vitro skin irritation tests for agrochemical formulations. Regul Toxicol Pharmacol 89, 125-130
[2] Kolle, S. N., Sullivan, K. M., Mehling, A., van Ravenzwaay, B., and Landsiedel, R. (2012). Applicability of in vitro tests for skin irritation and corrosion to regulatory classification schemes: Substantiating test strategies with data from routine studies. Regulatory Toxicology and Pharmacology 64, 402-414.

were available for bridging to BAS 765 00 F, but all tested products that contained co-formulant #5 (at 9-14%, in the presence of further skin irritating ingredients) were skin irritating in rabbits.

Based on the results of the in-vivo rabbit study, it is concluded that BAS 765 00 F requires classification as skin irritant.

A 2.5.1 Study 1

Reference:	CP 7.1.4/1
Report	BAS 765 00 F - In vitro skin irritation and corrosion Turnkey Testing Strategy xxxxxxxxxxxx 2019 Report No: 69V0041/19A005 BASF DocID 2019/2034430 Authority registration No
Guideline(s):	OECD 431, OECD 439, Commission Regulation (EC) No 440/2008 - Part B No. B.40 bis, Commission Regulation EU No. 640/2012 of 06 July 2012 - B.46
Deviations:	No
GLP:	Yes (certified by Landesamt fuer Umwelt, Wasserwirtschaft und Gewerbeaufsicht, Mainz, Germany)
Acceptability:	Yes
Duplication (if vertebrate study)	No

Materials and methods

Test material (Lot/Batch No.)	BAS 765 00 F Batch No. FD-190128-0007 Purity/Content: - Mefentrifluconazole (BAS 750 F): 99.6 g/L - Kresoxim-methyl (BAS 490 F): 148.9 g/L pH value: ca. 7.0 (undiluted, determined in test facility)	
Test system	Reconstructed in vitro human skin model, EpiDerm™	
Principle of the method	Induced cytotoxicity (loss of viability) is expressed as the reduction of mitochondrial dehydrogenase activity measured by reduction of MTT conversion to blue-colored formazan, in comparison to a negative control. The test substance's ability of direct MTT reduction did not impair the study result as demonstrated by the concurrently performed exposure of control tissues inactivated by freezing (performed with corrosion test, only).	
	Skin Corrosivity test (SCT) OECD 431	***Skin Irritation test (SIT) OECD 439***
No. of tissues per exposure and group	2	3
Exposure	50 µL (3 min), 50 µL (1 h)	30 µL (1 h)
Vehicle / dilution	Tested undiluted	Tested undiluted
Post-exposure incubation period	Not applicable	42 h
Positive control	8 N potassium hydroxide	5% (w/v) sodium dodecyl sulfate (SDS)
Negative control	De-ionized water	Phosphate-buffered saline (PBS)
Assessment	***Mean tissue viability (% of negative control)***	
Corrosive (optional subcategory 1A) [a]	3 min: < 50	–
Corrosive (opt. subcategory 1B and 1C) [a]	3 min: ≥ 50 and 1 hour: < 15	–
Non-corrosive	3 min: ≥ 50 and 1 hour: ≥ 15	–
Irritant	–	1 +42 hours: ≤ 50
Non-Irritant	–	1 +42 hours: > 50

[a] According to the current OECD Guideline 431 a sub-categorization is possible based on the results. However, the sub-categorization into 1A is highly over-predictive as stated in the guideline and differentiation into sub-category 1B or 1C is not possible. If the test substance is identified to be corrosive by SCT and a transport classification is needed, the Corrositex® test (OECD 435) should be performed, if applicable, to confirm classification as 1A or to differentiate between 1B and 1C.

Results and discussions

Table A 4: in-vitro skin corrosion / irritation of BAS 765 00 F

Parameter	Negative control (NC)	Test item	Positive control
	viable tissue	viable tissue	viable tissue
Exposure: 3 min			
OD_{570} tissue I	1.909	1.873	0.185
OD_{570} tissue II	1.626	1.705	0.164
mean OD_{570}	1.768	1.789	0.174
Viability (% of NC)	**100.0 ± 11.3**	**101.2 ± 6.7**	**9.9 ± 0.8**
Exposure: 1 h			
OD_{570} tissue I	1.968	2.065	0.118
OD_{570} tissue II	1.895	2.019	0.140
mean OD_{570}	1.932	2.042	0.129
Viability (% of NC)	**100.0 ± 2.7**	**105.7 ± 1.7**	**6.7 ± 0.8**
Exposure:1 h + post-exposure incubation: 42 h			
OD_{570} tissue I	1.687	1.711	0.059
OD_{570} tissue II	1.812	1.690	0.061
OD_{570} tissue III	1.687	1.841	0.068
mean OD_{570}	1.729	1.747	0.062
Viability (% of NC)	**100.0 ± 4.2**	**101.1 ± 4.7**	**3.6 ± 0.3**

NC = negative control (deionised water), PC = positive control (8 N KOH); OD_{570} = optical density by λ = 570 nm

Conclusion

In the in vitro test with human reconstituted epidermis, BAS 765 00 F did not demonstrate a skin irritation potential (mean tissue viability 101.1% of the negative control). In the corrosivity assay, mean tissue viability values at 3 minutes of ≥ 50% of the negative control and at one hour of ≥ 15% of the negative control indicated that BAS 765 00 F was not corrosive under the conditions of this assay. On the basis of these results, the product does not meet the criteria for classification as skin irritant.

A 2.5.2 Study 2

Reference:	CP 7.1.4/2
Report	BAS 765 00 F - Acute dermal irritation / corrosion in rabbits xxxxxxxxx 2021 Report No: 18H0041/19X216 BASF DocID 2021/2009940 Authority registration No
Guideline(s):	OECD 404 (2002), (EC) No 440/2008 of 30 May 2008 laying down test methods pursuant to (EC) No 1907/2006 of European Parliament and of Council on the REACH - Part B No. L 142, EPA 870.2500, JMAFF No 12 Nosan No 8147
Deviations:	No
GLP:	Yes (certified by Landesamt fuer Umwelt, Messungen und Naturschutz Baden Wuerttemberg, Karlsruhe, Germany)
Acceptability:	Yes
Duplication (if vertebrate study)	No

Materials and methods

Test material (Lot/Batch No.)	BAS 765 00 F Batch No. FD-190128-0007 Purity/Content: - Mefentrifluconazole (BAS 750 F): 99.6 g/L - Kresoxim-methyl (BAS 490 F): 148.9 g/L
Species	Rabbit, New Zealand White (Crl:KBL (NZW) - Charles River (SPF))
No. of animals (group size)	3 females
Initial test using one animal	Yes
Exposure	0.5 mL (4 hours, semi-occlusive)
Vehicle/Dilution	None
Post exposure observation period	14 days
Remarks	pH-value: approx. 7 (undiluted test item)

Results and discussions

Table A 5: Skin irritation of BAS 765 00 F

Animal No.		Scores after treatment *								Mean scores (24-72 h)	Reversible
		0 h	1 h	24 h	48 h	72 h	7 d	14 d	21 d		
1	Erythema Edema	1 0	2 0	3 1	3 1	3 0	3S 0	2S 0	0 0	3.0 0.7	Day 21
2	Erythema Edema	2 0	2 0	2 0	2 0	2 0	1S 0	0 0	-	2.0 0.0	Day 14
3	Erythema Edema	2 0	3 0	3 0	3 0	3 0	2 0	1 0	0 0	3.0 0.0	Day 21

***** scores in the range of 0 to x; S = scaling

Clinical signs:	No clinical signs of systemic toxicity were observed. Mean scores over 24, 48 and 72 hours for each animal were 3.0, 2.0 and 3.0 for erythema and 0.7, 0.0 and 0.0 for edema. The cutaneous reactions were reversible in all animals within 21 days after removal of the patch (study termination).

Conclusion

Under the experimental conditions, BAS 765 00 F is a skin irritant. Thus, BAS 765 00 F is to be classified with Skin Irrit. 2, H315 (‘Causes skin irritation’), according to Regulation (EC) No. 1272/2008.

A 2.6 Eye irritation (KCP 7.1.5)

Comments of zRMS:	Taking account the *worst scenario* classification based on additivity formula and according to the CLP regulation, the sum of concentrations of the ingredients classified as Eye Dam.1 and Skin Corr.1 amounts to **4.6934 %** and is above generic concentration limit that triggers classification of the mixture in regards to eye damage (≥ 3 %). Acc. to Polish Authorities, the results of classification obtained using calculation method presented above justify the use of the experimental data for the purpose of product evaluation. The studies presented by the applicant are accepted. In the Isolated Chicken Eye test (OECD 438), **BAS 765 00 F** caused marked retention of fluorescein (Category IV) but only slight effects on cornea opacity (Category II) and cornea swelling (Category II); microscopic examination of the corneas did not reveal any morphological changes. Such a combination of endpoints according OECD Guideline criteria causes that prediction of eye irritation potential could not be made based on treatment with **BAS 765 00 F**. Additional testing is required to establish definitive classification. The results of *in vitro* test (EpiOcular™ test, OECD 492) indicate that the product **BAS 765 00 F** shows no eye damage/irritant potential. The relative mean viability of the tissues amounts to 85.9%. Therefore, the formulation **BAS 765 00 F is considered as non-irritant/damage to eye** (substance is considered as "non category" if the mean percent tissue viability after exposure and post-exposure incubation is more than 60% of negative control). The results of the study are not consistent with the results of calculation. The results of experimental data are decisive for the product classification. <u>Conclusions:</u> All in all, it is concluded that the formulation **BAS 765 00 F does not require classification in respect to eye irritation/corrosion.**

Data for assessment of eye irritation is available for all 13 ingredients of the product (see Table A 1). Co-formulants #10 (0.18%) and #11 (0.08%) are classified with Eye Dam. 1; H318 and Co-formulants #7 (0.92%) and #12 (0.05%) are classified with Eye Irrit.2; H319. The remaining 9 ingredients comprising in total ca. 99% of the product composition were identified as non-irritants. According to mixture classification algorithms of GHS, the concentration of the eye damaging ingredients #6 and #11 and of the eye irritating co-formulants #7 and #12 are all below the 1% trigger and therefore would not need to be considered further. In addition, the total concentration of eye irritant / eye corrosive ingredients is below the 10% trigger for classification of the mixture as eye irritant: (10x Eye Dam. Cat. 1 + Eye Irrit. Cat. 2) = 2.6 + 0.97 = 3.57%).

A pH value of ca. 7.1 was determined for undiluted BAS 765 00 F, indicating no concern for corrosivity (see KCP 2.4.2; Kroehl, 2020; DocID 2020/2031007). Thus, based on eye damage/irritation data available for the components, and pH value of BAS 765 00 F, product classification as eye irritant would not be triggered according to GHS/CLP criteria.

When BAS 765 00 F was investigated in-vitro, the EpiOcular™ test (OECD 492) gave no evidence for an eye irritating potential. This test method has been shown to be sufficiently reliable for predicting true negative in-vivo study outcomes in tests with agrochemical formulations (Kolle et al. 2017)

In the Isolated Chicken Eye test (OECD 438), treatment with BAS 765 00 F caused marked retention of fluorescein (Category IV) but only slight effects on cornea opacity (Category II) and cornea swelling (Category II); microscopic examination of the corneas did not reveal any morphological changes. A prediction of eye irritation potential could not be made based on this study outcome following OECD Guideline criteria.

Based on the overall weight- of evidence, the available data indicates that classification as eye irritant is

not required for BAS 765 00 F according to Regulation (EC) No. 1272/2008.

A 2.6.1 Study 1

Reference:	CP 7.1.5/1
Report	BAS 765 00 F – In Vitro Eye Irritation Test (EIT) in Reconstructed Human Cornea xxxxxxxxxxx 2019 Report No: 62V0041/19A004 BASF DocID 2019/2034431 Authority registration No
Guideline(s):	OECD 492 (2018) IATA for serious eye damage and eye irritation, Series on Testing and Assessment No. 263, 20 July 2017
Deviations:	No
GLP:	Yes (certified by Landesamt fuer Umwelt, Wasserwirtschaft und Gewerbeaufsicht, Mainz, Germany)
Acceptability:	Yes
Duplication (if vertebrate study)	No

Materials and methods

Test material (Lot/Batch No.)	BAS 765 00 F Batch No. FD-190128-0007 Purity/Content: - Mefentrifluconazole (BAS 750 F): 99.6 g/L - Kresoxim-methyl (BAS 490 F): 148.9 g/L pH value: ca. 7.0 (undiluted, determined in test facility)

EpiOcular™ Test

Test system	Reconstructed in vitro human ocular model, EpiOcular™
Principle of the method	The test substance is administered to the surface of the EpiOcular™ tissue. Induced cytotoxicity (loss of viability) is expressed as the reduction of mitochondrial dehydrogenase activity measured by reduction of MTT conversion to blue-colored formazan, in comparison to a negative control.
No. of tissues per test group	2
Pretest for detection of direct (= non-enzymatic) MTT reduction	In a pre-test, the test substance is incubated with the substrate MTT and checked for formazan formation, indicating "direct" MTT reduction. In this event, two additional "freeze-killed" tissues each for the test substance group and the negative control group are added to the standard test protocol. Based on the result of the pretest, it was judged that application of killed control tissues is not necessary.
Exposure	50 µL: 30 min
Vehicle / dilution	Tested undiluted
Post-exposure wash solution	Phosphate-buffered saline (PBS)
Post-exposure incubation period	2 hours
Positive control	Methyl acetate
Negative control	De-ionized water
Assessment	***Mean tissue viability*** *(% of negative control)*
Irritant	≤ 60
Non-irritant	> 60

Results and discussions

Table A 6: in-vitro eye corrosion / irritation of BAS 765 00 F (EpiOcular™ Assay)

Test substance		Tissue 1	Tissue 2	**Mean**	Inter-tissue variability [%]
Neg. control (NC)	mean OD_{570}	1.816	1.911	1.864	
	Viability [% of NC]	97.5	102.5	**100.0**	5.1
BAS 750 06 F	mean OD_{570}	1.672	1.528	1.600	
	Viability [% of NC]	89.7	82.0	**85.9**	7.8
Positive control (PC)	mean OD_{570}	0.556	0.361	0.459	
	Viability [% of NC]	29.8	19.4	**24.6**	10.5

NC = negative control (de-ionized water), PC = positive control (methyl acetate); OD_{570} = optical density by λ = 570 nm

The viability of reconstructed corneal tissues following exposure to BAS 765 00 F was 85.9% of the negative control value (thus higher than 60%), indicating no eye irritating properties of the test substance.

Conclusion

BAS 765 00 F is not identified as eye irritant in the in-vitro eye irritation test (EpiOcular™, OECD 492), based on a relative viability score of 85.9% compared to the negative control incubation.

Reference:	CP 7.1.5/2
Report	BAS 765 00 F - Isolated chicken eye test method for identifying (i) chemicals including serious eye damage and (ii) chemicals not requiring classification for eye Irritation or serious eye damage xxxxxxxxxxxxxx 2019 BASF DocID 2019/2040542 Authority registration No
Guideline(s):	OECD 438 (2018) Commission Regulation (EU) 1152/2010 – Test method B.48 of 8 December 2008 Council Regulation 440/2008 of 30 May 2008
Deviations:	No
GLP:	Yes (certified by Groupe Interministeriel des Produits Chimiques, Ivry-sur-Seine CEDEX, France)
Acceptability:	Yes
Duplication (if vertebrate study)	No

Materials and methods

Test material (Lot/Batch No.)	BAS 765 00 F Batch No. FD-190128-0007 Purity/Content: - Mefentrifluconazole (BAS 750 F): 99.6 g/L - Kresoxim-methyl (BAS 490 F): 148.9 g/L
Test system	Chicken eyes obtained from slaughter animals (ca. 7 wk old male or female chickens) used for human consumption
Principle of the method	The test substance is administered to the surface of the isolated chicken eye, so that the total surface of the cornea is evenly covered. After 10-second exposure, the eye is rinsed with saline. Corneal thickness (expressed as corneal swelling), corneal opacity and fluorescein retention are determined before (t=0) and after exposure, and histopathology of the corneas is performed.
No. of tissues per test group	3
Pre- and post-exposure incubation	The dissected eye ball was placed in a stainless steel clamp and transferred into a chamber kept at 32 °C. The entire cornea was continuously rinsed with physiological saline (32 °C) supplied by a peristaltic pump at a target rate of 0.1 – 0.15 mL/min. Eyes were removed from the chamber for treatment and post-treatment rinse and subsequently returned to the chamber.
Exposure	30 µL: 10 seconds
Vehicle / dilution	Tested undiluted
Post-exposure rinse	2x 10 mL physiological saline (0.9% aqueous NaCl solution)
Post-exposure assessment time point	0, 30, 75, 120, 180, 240 minutes
Negative control	0.9% aqueous NaCl (physiological saline) – 1 eye
Positive control	5% Benzalkonium chloride in physiological saline (BAC) – 2 eyes

Assessment

The three effect parameters corneal swelling, corneal opacity and fluorescein retention are scored at designated time points using an effect severity classification in one of four categories **I-IV** (not irritating; slightly irritating; moderately irritating; severely irritating). A prediction model assigns a final classification based on the combination of severity scores determined for the different parameters.

Endpoint	**Severity Category**
Corneal thickness / swelling Determined at each time-point according to following formula: $\frac{\text{corneal thickness t - corneal thickness } t0}{\text{corneal thickness } t0} \times 100$ The highest mean score determined from different time points taken for assessment.	**I** (0-5%), **II** (>5-12% or >75 minutes: >12-18%), **III** (< 75 minutes: 12-18% or >75 minutes: 26-32%), **IV** (< 75 minutes: 26-32% or >32%)
Corneal opacity score time point with area most densely opacified was taken for scoring. The highest mean score determined from different time points taken for assessment. Scores (comparable to Draize): 0 (no opacity) 0.5 (very faint opacity) 1 (scattered or diffuse area; iris details clearly visible) 2 (easily discernable translucent area, iris details slightly obscured) 3 (severe opacity, iris details not visible, pupil size barely discernable 4 (complete corneal opacity, iris invisible)	**I** (0.0-0.5), **II** (0.6-1.5), **III** (1.6-2.5), **IV** (2.6-4.0)
Fluorescein retention (at 30 min only) Scores: 0 (no fluorescein retention) 0.5 (very minor single cell staining) 1 (single cell staining scattered throughout the cornea area 2 (Focal or confluent dense single cell staining) 3 (Confluent large areas of the cornea retaining fluorescein)	**I** (0.0-0.5), **II** (0.6-1.5), **III** (1.6-2.5), **IV** (2.6-3.0)
Morphological effects (reported but not used for classification due to lack of established criteria)	These include "pitting" of corneal epithelial cells, "loosening" of epithelium, "roughening" of the corneal surface and "sticking" of the test substance to the cornea. These findings can vary in severity and may occur simultaneously. The classification of these findings is subject to the interpretation of the investigator.

Proposed criteria for classification according to UN GHS

Eye Dam. 1 (H318)	3x **IV** 2x **IV**
No Category	3x **I** 2x **I** and 1x **II** 2x **II** and 1x **I**
Other combinations	***No prediction can be made***

Results and discussions

Table A 7: Results of slit-lamp examination in in-vitro isolated chicken eye (ICE) test

Test material	Maximum mean score for: Swelling % (Irritation category)	Opacity (Irritation category)	Fluorescein retention (Irritation category)	Classification (CLP)
BAS 765 00 F	7 (**II**)	1.0* (**II**)	3.0 (**IV**)	**No prediction can be made.**
Positive ctrl (5% BAC)	39 (**IV**)	3.0** (**IV**)	3.0 (**IV**)	Eye Dam. 1
Negative ctrl	0 (**I**)	0.0* (**I**)	0.5 (**I**)	No classification

*no morphological effects were noted in exposed corneas of the negative control and of the test substance groups regardless of the examination time point.

** Blisters on the cornea were noted from 30 min post-dose with the positive control substance in eyes #1, #2 and #3.

BAS 765 00 F caused slight corneal swelling and corneal opacity (each Category II) and marked fluorescein retention (maximum mean score of 3.0, corresponding to Category IV). Microscopic examination of the corneas generally did not reveal morphological effects.

The negative control eye did not show any corneal effect and demonstrated that the general conditions during the tests were adequate. Microscopic examination of the cornea did not reveal any abnormalities.

The positive control BAC 5% caused severe corneal effects and demonstrated the validity of the ICE test to detect severe eye irritants.

Conclusion

The results obtained for BAS 765 00 F under the experimental conditions of the Isolated Chicken Eye test – 2x Category II + 1x Category IV – lead to the outcome “no prediction can be made” according to assessment criteria of OECD Guideline 438. Additional data is required to establish a definitive classification.

A 2.7 Skin sensitisation (KCP 7.1.6)

Comments of zRMS:	According to the Regulation 1272/2008, the sum of concentrations of the ingredients relevant for the additivity formula amounts to **9.57 %.** It is above the generic concentration limit that triggers classification of the mixture in regard to the skin sensitization. Conclusions: Taking into account the composition of the product, **the formulation BAS 765 00 F requires classification in respect to skin sensitization Skin Sens 1 (H317).**

No skin sensitisation test was performed for the product BAS 765 00 F.

Data for assessment of skin sensitization is available for >95% of the product's composition (see Table A 1). Skin sensitization information is missing for two co-formulants #4 (4.59%), and #12 (#0.05%).

The active ingredient mefentrifluconazole (9.17%) was found to be a skin sensitizer in the GPMT.

Low concentrations of the isothiazolinones CIT/MIT and BIT are contained in BAS 765 00 F due to their content in co-formulants #11+#6, and in #10, respectively (see Confidential Document Part C for details). The total concentrations of CIT/MIT and BIT are presented in Table A 8 below. The isothiazolinone contents in BAS 765 00 F are below the respective specific concentration limits for CIT/MIT (0.0015%) and BIT (0.05%) stipulated in the CLP Regulation 1172/2008, and therefore do not trigger classification of BAS 765 00 F as skin sensitizer, but require the labelling with H208: contains <<isothiazolinones>>; may cause an allergic reaction.

Table A 8: Isothiazolinone content in BAS 765 00 F

Isothiazolinone	In components	Total concentration in components	Component concentration in BAS 765 00 F	Concentration in BAS 765 00 F
CIT/MIT 3:1	#11 / #6	1.48%	0.09%	0.00117%
BIT	#10	20%	0.18%	0.03600%

Overall, the content of mefentrifluconazole exceeds the default 1% threshold concentration for skin sensitization classification applying GHS criteria. Thus, classification with Skin Sens. 1; H317 is required for BAS 765 00 F according to classification criteria of Commission Reg. No. 1172/2008.

A 2.8 Supplementary studies for combinations of plant protection products

No study data available.

A 2.9 Data on co-formulants (KCP 7.4)

A 2.9.1 Material safety data sheet for each co- formulant

Information regarding material safety data sheets of the co-formulants can be found in the confidential dossier of this submission (Registration Report - Part C).

A 2.9.2 Available toxicological data for each co-formulant

Available toxicological data for each co-formulant can be found in the confidential dossier of this submission (Registration Report - Part C).

A 2.10 Studies on dermal absorption (KCP 7.3)

No studies on dermal absorption are available for active ingredients formulated in BAS 765 00 F.

Non-dietary exposure estimations were conducted using default dermal absorption studies as recommended by the EFSA guidance on dermal absorption (EFSA Journal 2017; 15(6):4873) – see Chapter 6.5.

A 2.11 Other/Special Studies

None available.

Appendix 3 Exposure calculations

A 3.1 Operator exposure calculations (KCP 7.2.1.1)

A 3.1.1 Calculations for Mefentrifluconazole

Table A 9: Mefentrifluconazole: Input parameters for estimation of operator exposure (AOEM according to EFSA guidance) – no PPE: workwear

Application rate of active substance	**0.1**	kg a.s./ha	*i_AppRate*
Assumed area treated	**50**	ha/day	*d_AreaTreated*
Amount of active substance applied	**5**	kg a.s./day	*i_AmoutAS*
Dermal absorption of the product	**10%**		*i_AbsorpProduct*
Dermal absorption of in-use dilution	**50%**		*i_AbsorInuse*
Formulation type	**Soluble concentrates, emulsifiable concentrate, etc.**		
Indoor or Outdoor application	**Outdoor**		
Application method	**Downward spraying**		
Application equipment	**Vehicle-mounted**		
Season	**not relevant**		

	Exposure values	µg exposure/day mixed and loaded		Reference	Comment
		75th centile	95th centile		
Mixing and loading	Hands	**16767**	**62314**	AOEM	
	Body	**11058**	**114960**	AOEM	
	Head	**259**	**1423**	AOEM	
	Protected hands (gloves)	**98**	**990**	AOEM	
	Protected body (workwear or protective garment and sturdy footwear)	**99**	**731**	AOEM	
	Protected head (hood and face shield)	**4**	**81**	AOEM	
	Inhalation	**6**	**30**	AOEM	
	Protective Equipment	Select for inclusion		Penetration factor	Inhalation Protection factor
	Gloves	**No**			
	Clothing	work wear - arms, body and legs covered		Incl. in AOEM model	
	Head and respiratory PPE	None		1	1
	Water soluble bag	No		1	

	Exposure values	µg exposure/day applied		Reference	Comment
		75th centile	95th centile		
Application	Hands	**742**	**7449**	AOEM	
	Body	**415**	**2138**	AOEM	
	Head	**20**	**59**	AOEM	
	Protected hands (gloves)	**102**	**4021**	AOEM	
	Protected body (workwear or protective garment and sturdy footwear)	**11**	**28**	AOEM	
	Inhalation	**2**	**7**	AOEM	
	Protective Equipment	Select for inclusion		Penetration factor	Inhalation Protection factor
	Gloves	**No**			
	Clothing	work wear - arms, body and legs covered		Incl. in AOEM model	
	Head and respiratory PPE	None		1	1
	Closed cab	No		vehicle mounted upward spraying only	

Table A 10: Mefentrifluconazole: Estimation of operator exposure using the EFSA model – no PPE: workwear

1. Total

	Without RPE/PPE	With RPE/PPE
Longer term		
Total systemic exposure from mixing, loading and application (mg a.s./day)	3.405	2.107
Total systemic exposure from mixing, loading and application per kg body weight (mg/kg bw/day)	0.0567	0.0351
% of RVNAS	162%	100%
Acute		
Total systemic exposure from mixing, loading and application (mg a.s./day)	22.73	10.25
Total systemic exposure from mixing, loading and application per kg body weight (mg/kg bw/day)	0.379	0.171
% of RVAAS	253%	114%

Table A 10: Mefentrifluconazole: Estimation of operator exposure using the EFSA model – no PPE: workwear (cont'd)

2. DETAILS - Longer-term exposure

2.1 Mixing and loading

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	**1676.672**	**27.945**	*D15*i_AbsorpProduct*
Body	**1105.750**	**18.429**	*D16*i_AbsorpProduct*
Head	**25.942**	**0.432**	*D17*i_AbsorpProduct*
Inhalation	**5.976**	**0.100**	*D21*i_AbsorpInhalation*
Sum	**2814.340**	**46.906**	
With RPE/PPE (as selected above)			
Hands	**1676.672**	**27.945**	*D18*i_AbsorpProduct*
Body	**9.898**	**0.165**	*D19*i_AbsorpProduct or D15*i_AbsorpProduct*F24*
Head	**25.942**	**0.432**	*D20*i_AbsorpProduct or D17*i_AbsorpProduct*F25*
Inhalation	**5.976**	**0.100**	*D21*i_AbsorpInhalation*G25*
Sum	**1718.487**	**28.641**	
Water soluble bag	**1718.487**	**28.641**	*C70*F26*

2.2 Application

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	**370.808**	**6.180**	*D30*i_AbsorpInuse*
Body	**207.332**	**3.456**	*D31*i_AbsorpInuse*
Head	**9.799**	**0.163**	*D32*i_AbsorpInuse*
Inhalation	**2.319**	**0.039**	*D35*i_AbsorpInhalation*
Sum	**590.259**	**9.838**	
With RPE/PPE (as selected above)			
Hands	**370.808**	**6.180**	*D33*i_AbsorpInuse*
Body	**5.687**	**0.095**	*D34*i_AbsorpInuse or D31*i_AbsorpInuse*F38*
Head	**9.799**	**0.163**	*D32*i_AbsorpInuse*F39*
Inhalation	**2.319**	**0.039**	*D35*i_AbsorpInuse*G39*
Sum	**388.615**	**6.477**	

Table A 10: Mefentrifluconazole: Estimation of operator exposure using the EFSA model – no PPE: workwear (cont'd)

3. DETAILS - Acute exposure

3.1 Mixing and loading

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	**6231.4034**	**103.8567**	*E15*i_AbsorpProduct*
Body	**11495.9980**	**191.6000**	*E16*i_AbsorpProduct*
Head	**142.2787**	**2.3713**	*E17*i_AbsorpProduct*
Inhalation	**29.8370**	**0.4973**	*E21*i_AbsorpInhalation*
Sum	**17899.5171**	**298.3253**	
With RPE/PPE (as selected above)			
Hands	**6231.4034**	**103.8567**	*E18*i_AbsorpProduct*
Body	**73.1257**	**1.2188**	*E19*i_AbsorpProduct or E16*i_AbsorpProduct*F24*
Head	**142.2787**	**2.3713**	*E20*i_AbsorpProduct or E17*i_AbsorpProduct*F25*
Inhalation	**29.8370**	**0.4973**	*E21*i_AbsorpInhalation*G25*
Sum	**6476.6449**	**107.9441**	
Water soluble bag	**6476.6449**	**107.9441**	*C104*F26*

3.2 Application

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	**471.1483**	**7.8525**	*E30*i_AbsorpInuse*
Body	**150.6991**	**2.5117**	*E31*i_AbsorpInuse*
Head	**4.1666**	**0.0694**	*E32*i_AbsorpInuse*
Inhalation	**9.2714**	**0.1545**	*E35*i_AbsorpInhalation*
Sum	**635.2855**	**10.5881**	
With RPE/PPE (as selected above)			
Hands	**471.1483**	**7.8525**	*E33*i_AbsorpInuse*
Body	**1.9668**	**0.0328**	*E34*i_AbsorpInuse or E31*i_AbsorpInuse*F38*
Head	**4.1666**	**0.0694**	*E32*i_AbsorpInuse*F39*
Inhalation	**9.2714**	**0.1545**	*E35*i_AbsorpInuse*G39*
Sum	**486.5532**	**8.1092**	

Table A 11: Mefentrifluconazole: Input parameters for estimation of operator exposure (AOEM according to EFSA guidance) – PPE level: gloves (mixing/loading), workwear

Application rate of active substance	**0.15**	kg a.s./ha	*i_AppRate*
Assumed area treated	**50**	ha/day	*d_AreaTreated*
Amount of active substance applied	**5**	kg a.s./day	*i_AmoutAS*
Dermal absorption of the product	**10%**		*i_AbsorpProduct*
Dermal absorption of in-use dilution	**50%**		*i_AbsorInuse*
Formulation type	**Soluble concentrates, emulsifiable concentrate, etc.**		
Indoor or Outdoor application	**Outdoor**		
Application method	**Downward spraying**		
Application equipment	**Vehicle-mounted**		
Season	**not relevant**		

	Exposure values	µg exposure/day mixed and loaded		Reference	Comment
		75th centile	95th centile		
Mixing and loading	Hands	**16767**	**62314**	AOEM	
	Body	**11058**	**114960**	AOEM	
	Head	**259**	**1423**	AOEM	
	Protected hands (gloves)	**98**	**990**	AOEM	
	Protected body (workwear or protective garment and sturdy footwear)	**99**	**731**	AOEM	
	Protected head (hood and face shield)	**4**	**81**	AOEM	
	Inhalation	**6**	**30**	AOEM	
	Protective Equipment	Select for inclusion		Penetration factor	Inhalation Protection factor
	Gloves	**Yes**		Incl. in AOEM model	
	Clothing	work wear - arms, body and legs covered		Incl. in AOEM model	
	Head and respiratory PPE	None		1	1
	Water soluble bag	No		1	

Table A 11: Mefentrifluconazole: Input parameters for estimation of operator exposure (AOEM according to EFSA guidance) – PPE level: gloves (mixing/loading), workwear (cont'd)

	Exposure values	µg exposure/day applied		Reference	Comment
		75th centile	95th centile		
Application	Hands	**742**	**7449**	AOEM	
	Body	**415**	**2138**	AOEM	
	Head	**20**	**59**	AOEM	
	Protected hands (gloves)	**102**	**4021**	AOEM	
	Protected body (workwear or protective garment and sturdy footwear)	**11**	**28**	AOEM	
	Inhalation	**2**	**7**	AOEM	
	Protective Equipment	Select for inclusion		Penetration factor	Inhalation Protection factor
	Gloves	**No**		Incl. in AOEM model	
	Clothing	work wear - arms, body and legs covered		Incl. in AOEM model	
	Head and respiratory PPE	None		1	1
	Closed cab	No		vehicle mounted upward spraying only	

Table A 12: Mefentrifluconazole: Estimation of operator exposure using the EFSA model
PPE level: gloves (mixing/loading), workwear

1. Total

	Without RPE/PPE	With RPE/PPE
Longer term		
Total systemic exposure from mixing, loading and application (mg a.s./day)	3.405	0.440
Total systemic exposure from mixing, loading and application per kg body weight (mg/kg bw/day)	0.0567	0.00734
% of RVNAS	162%	21%
Acute		
Total systemic exposure from mixing, loading and application (mg a.s./day)	22.73	4.12
Total systemic exposure from mixing, loading and application per kg body weight (mg/kg bw/day)	0.379	0.0687
% of RVAAS	253%	46%

Table A 12: Mefentrifluconazole: Estimation of operator exposure using the EFSA model PPE level: gloves (mixing/loading), workwear (cont'd)

2. DETAILS - Longer-term exposure
2.1 Mixing and loading

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	**1676.672**	**27.945**	*D15*i_AbsorpProduct*
Body	**1105.750**	**18.429**	*D16*i_AbsorpProduct*
Head	**25.942**	**0.432**	*D17*i_AbsorpProduct*
Inhalation	**5.976**	**0.100**	*D21*i_AbsorpInhalation*
Sum	**2814.340**	**46.906**	
With RPE/PPE (as selected above)			
Hands	**9.815**	**0.164**	*D18*i_AbsorpProduct*
Body	**9.898**	**0.165**	*D19*i_AbsorpProduct or D15*i_AbsorpProduct*F24*
Head	**25.942**	**0.432**	*D20*i_AbsorpProduct or D17*i_AbsorpProduct*F25*
Inhalation	**5.976**	**0.100**	*D21*i_AbsorpInhalation*G25*
Sum	**51.630**	**0.861**	
Water soluble bag	**51.630**	**0.861**	*C70*F26*

2.2 Application

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	**370.808**	**6.180**	*D30*i_AbsorpInuse*
Body	**207.332**	**3.456**	*D31*i_AbsorpInuse*
Head	**9.799**	**0.163**	*D32*i_AbsorpInuse*
Inhalation	**2.319**	**0.039**	*D35*i_AbsorpInhalation*
Sum	**590.259**	**9.838**	
With RPE/PPE (as selected above)			
Hands	**370.808**	**6.180**	*D33*i_AbsorpInuse*
Body	**5.687**	**0.095**	*D34*i_AbsorpInuse or D31*i_AbsorpInuse*F38*
Head	**9.799**	**0.163**	*D32*i_AbsorpInuse*F39*
Inhalation	**2.319**	**0.039**	*D35*i_AbsorpInuse*G39*
Sum	**388.615**	**6.477**	

Table A 12: Mefentrifluconazole: Estimation of operator exposure using the EFSA model PPE level: gloves (mixing/loading), workwear (cont'd)

3. DETAILS - Acute exposure

3.1 Mixing and loading

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	**6231.4034**	**103.8567**	*E15*i_AbsorpProduct*
Body	**11495.9980**	**191.6000**	*E16*i_AbsorpProduct*
Head	**142.2787**	**2.3713**	*E17*i_AbsorpProduct*
Inhalation	**29.8370**	**0.4973**	*E21*i_AbsorpInhalation*
Sum	**17899.5171**	**298.3253**	
With RPE/PPE (as selected above)			
Hands	**99.0338**	**1.6506**	*E18*i_AbsorpProduct*
Body	**73.1257**	**1.2188**	*E19*i_AbsorpProduct or E16*i_AbsorpProduct*F24*
Head	**142.2787**	**2.3713**	*E20*i_AbsorpProduct or E17*i_AbsorpProduct*F25*
Inhalation	**29.8370**	**0.4973**	*E21*i_AbsorpInhalation*G25*
Sum	**344.2753**	**5.7379**	
Water soluble bag	**344.2753**	**5.7379**	*C104*F26*

3.2 Application

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	**3724.4063**	**62.0734**	*E30*i_AbsorpInuse*
Body	**1068.7880**	**17.8131**	*E31*i_AbsorpInuse*
Head	**29.5507**	**0.4925**	*E32*i_AbsorpInuse*
Inhalation	**7.3427**	**0.1224**	*E35*i_AbsorpInhalation*
Sum	**4830.0877**	**80.5015**	
With RPE/PPE (as selected above)			
Hands	**3724.406**	**62.073**	*E33*i_AbsorpInuse*
Body	**13.949**	**0.232**	*E34*i_AbsorpInuse or E31*i_AbsorpInuse*F38*
Head	**29.551**	**0.493**	*E32*i_AbsorpInuse*F39*
Inhalation	**7.343**	**0.122**	*E35*i_AbsorpInuse*G39*
Sum	**3775.249**	**62.921**	

A 3.1.2 Calculations for Kresoxim-methyl (BAS 490 F)

Table A 13: Kresoxim-methyl: Input parameters for estimation of operator exposure (AOEM according to EFSA guidance) – no PPE: workwear

Application rate of active substance	**0.15**	kg a.s./ha	*i_AppRate*
Assumed area treated	**50**	ha/day	*d_AreaTreated*
Amount of active substance applied	**7.5**	kg a.s./day	*i_AmoutAS*
Dermal absorption of the product	**10%**		*i_AbsorpProduct*
Dermal absorption of in-use dilution	**50%**		*i_AbsorInuse*
Formulation type	**Soluble concentrates, emulsifiable concentrate, etc.**		
Indoor or Outdoor application	**Outdoor**		
Application method	**Downward spraying**		
Application equipment	**Vehicle-mounted**		
Season	**not relevant**		

	Exposure values	µg exposure/day mixed and loaded		Reference	Comment
		75th centile	95th centile		
Mixing and loading	Hands	**22909**	**85448**	AOEM	
	Body	**14704**	**129332**	AOEM	
	Head	**389**	**2134**	AOEM	
	Protected hands (gloves)	**128**	**1486**	AOEM	
	Protected body (workwear or protective garment and sturdy footwear)	**142**	**1097**	AOEM	
	Protected head (hood and face shield)	**6**	**121**	AOEM	
	Inhalation	**7**	**30**	AOEM	
	Protective Equipment	Select for inclusion		Penetration factor	Inhalation Protection factor
	Gloves	**No**			
	Clothing	work wear - arms, body and legs covered		Incl. in AOEM model	
	Head and respiratory PPE	None		1	1
	Water soluble bag	No		1	

Table A 13: Kresoxim-methyl: Input parameters for estimation of operator exposure (AOEM according to EFSA guidance) – no PPE: workwear (cont'd)

	Exposure values	µg exposure/day applied		Reference	Comment
		75th centile	95th centile		
Application	Hands	**1112**	**10024**	AOEM	
	Body	**622**	**3206**	AOEM	
	Head	**29**	**89**	AOEM	
	Protected hands (gloves)	**127**	**4216**	AOEM	
	Protected body (workwear or protective garment and sturdy footwear)	**17**	**42**	AOEM	
	Inhalation	**3**	**9**	AOEM	
	Protective Equipment	Select for inclusion		Penetration factor	Inhalation Protection factor
	Gloves	**No**			
	Clothing	work wear - arms, body and legs covered		Incl. in AOEM model	
	Head and respiratory PPE	None		1	1
	Closed cab	No		vehicle mounted upward spraying only	

Table A 14: Kresoxim-methyl: Estimation of operator exposure using the EFSA model no PPE: workwear

1. Total

	Without RPE/PPE	With RPE/PPE
Longer term exposure		
Total systemic exposure from mixing, loading and application (mg a.s./day)	**4.692**	**2.933**
Total systemic exposure from mixing, loading and application per kg body weight (mg/kg bw/day)	**0.0782**	**0.0489**
% of RVNAS	**8.7%**	**5.4%**

Table A 14: Kresoxim-methyl: Estimation of operator exposure using the EFSA model no PPE: workwear (cont'd)

2. DETAILS - Longer-term exposure

2.1 Mixing and loading

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	**2290.912**	**38.182**	*D15*i_AbsorpProduct*
Body	**1470.404**	**24.507**	*D16*i_AbsorpProduct*
Head	**38.913**	**0.649**	*D17*i_AbsorpProduct*
Inhalation	**6.742**	**0.112**	*D21*i_AbsorpInhalation*
Sum	**3806.972**	**63.450**	
With RPE/PPE (as selected above)			
Hands	**2290.912**	**38.182**	*D18*i_AbsorpProduct*
Body	**14.178**	**0.236**	*D19*i_AbsorpProduct or D15*i_AbsorpProduct*F24*
Head	**38.913**	**0.649**	*D20*i_AbsorpProduct or D17*i_AbsorpProduct*F25*
Inhalation	**6.742**	**0.112**	*D21*i_AbsorpInhalation*G25*
Sum	**2350.745**	**39.179**	
Water soluble bag	**2350.745**	**39.179**	*C70*F26*

2.2 Application

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	**556.213**	**9.270**	*D30*i_AbsorpInuse*
Body	**310.998**	**5.183**	*D31*i_AbsorpInuse*
Head	**14.699**	**0.245**	*D32*i_AbsorpInuse*
Inhalation	**2.842**	**0.047**	*D35*i_AbsorpInhalation*
Sum	**884.751**	**14.746**	
With RPE/PPE (as selected above)			
Hands	**556.213**	**9.270**	*D33*i_AbsorpInuse*
Body	**8.531**	**0.142**	*D34*i_AbsorpInuse or D31*i_AbsorpInuse*F38*
Head	**14.699**	**0.245**	*D32*i_AbsorpInuse*F39*
Inhalation	**2.842**	**0.047**	*D35*i_AbsorpInuse*G39*
Sum	**582.284**	**9.705**	

Table A 15: Kresoxim-methyl: Input parameters for estimation of operator exposure (AOEM according to EFSA guidance) – PPE level: gloves (mixing/loading), workwear

Application rate of active substance	**0.15**	kg a.s./ha	*i_AppRate*
Assumed area treated	**50**	ha/day	*d_AreaTreated*
Amount of active substance applied	**7.5**	kg a.s./day	*i_AmoutAS*
Dermal absorption of the product	**10%**		*i_AbsorpProduct*
Dermal absorption of in-use dilution	**50%**		*i_AbsorInuse*
Formulation type	**Soluble concentrates, emulsifiable concentrate, etc.**		
Indoor or Outdoor application	**Outdoor**		
Application method	**Downward spraying**		
Application equipment	**Vehicle-mounted**		
Season	**not relevant**		

	Exposure values	µg exposure/day mixed and loaded		Reference	Comment
		75th centile	95th centile		
Mixing and loading	Hands	**22909**	**85448**	AOEM	
	Body	**14704**	**129332**	AOEM	
	Head	**389**	**2134**	AOEM	
	Protected hands (gloves)	**128**	**1486**	AOEM	
	Protected body (workwear or protective garment and sturdy footwear)	**142**	**1097**	AOEM	
	Protected head (hood and face shield)	**6**	**121**	AOEM	
	Inhalation	**7**	**30**	AOEM	
	Protective Equipment	Select for inclusion		Penetration factor	Inhalation Protection factor
	Gloves	**Yes**		Incl. in AOEM model	
	Clothing	work wear - arms, body and legs covered		Incl. in AOEM model	
	Head and respiratory PPE	None		1	1
	Water soluble bag	No		1	

Table A 15: Kresoxim-methyl: Input parameters for estimation of operator exposure (AOEM according to EFSA guidance) – PPE level: gloves (mixing/loading), workwear (cont'd)

	Exposure values	µg exposure/day applied		Reference	Comment
		75th centile	95th centile		
Application	Hands	**1112**	**10024**	AOEM	
	Body	**622**	**3206**	AOEM	
	Head	**29**	**89**	AOEM	
	Protected hands (gloves)	**127**	**4216**	AOEM	
	Protected body (workwear or protective garment and sturdy footwear)	**17**	**42**	AOEM	
	Inhalation	**3**	**9**	AOEM	
	Protective Equipment	Select for inclusion		Penetration factor	Inhalation Protection factor
	Gloves	**No**		Incl. in AOEM model	
	Clothing	work wear - arms, body and legs covered		Incl. in AOEM model	
	Head and respiratory PPE	None		1	1
	Closed cab	No		vehicle mounted upward spraying only	

Table A 16: Kresoxim-methyl: Estimation of operator exposure using the EFSA model PPE level: gloves (all operations), workwear

1. Total

	Without RPE/PPE	With RPE/PPE
Longer term exposure		
Total systemic exposure from mixing, loading and application (mg a.s./day)	**4.692**	**2.933**
Total systemic exposure from mixing, loading and application per kg body weight (mg/kg bw/day)	**0.0782**	**0.0489**
% of RVNAS	**8.7%**	**5.4%**

Table A 16: Kresoxim-methyl: Estimation of operator exposure using the EFSA model
PPE level: gloves (all operations), workwear (cont'd)

2. DETAILS - Longer-term exposure

2.1 Mixing and loading

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	**2290.912**	**38.182**	*D15*i_AbsorpProduct*
Body	**1470.404**	**24.507**	*D16*i_AbsorpProduct*
Head	**38.913**	**0.649**	*D17*i_AbsorpProduct*
Inhalation	**6.742**	**0.112**	*D21*i_AbsorpInhalation*
Sum	**3806.972**	**63.450**	
With RPE/PPE (as selected above)			
Hands	**12.779**	**0.213**	*D18*i_AbsorpProduct*
Body	**14.178**	**0.236**	*D19*i_AbsorpProduct or D15*i_AbsorpProduct*F24*
Head	**38.913**	**0.649**	*D20*i_AbsorpProduct or D17*i_AbsorpProduct*F25*
Inhalation	**6.742**	**0.112**	*D21*i_AbsorpInhalation*G25*
Sum	**72.612**	**1.210**	
Water soluble bag	**72.612**	**1.210**	*C70*F26*

2.2 Application

	Systemic exposure [µg a.s. /day]	Systemic exposure [µg a.s./kg bw/day]	Formula
Without RPE/PPE			
Hands	**556.213**	**9.270**	*D30*i_AbsorpInuse*
Body	**310.998**	**5.183**	*D31*i_AbsorpInuse*
Head	**14.699**	**0.245**	*D32*i_AbsorpInuse*
Inhalation	**2.842**	**0.047**	*D35*i_AbsorpInhalation*
Sum	**884.751**	**14.746**	
With RPE/PPE (as selected above)			
Hands	**556.213**	**9.270**	*D33*i_AbsorpInuse*
Body	**8.531**	**0.142**	*D34*i_AbsorpInuse or D31*i_AbsorpInuse*F38*
Head	**14.699**	**0.245**	*D32*i_AbsorpInuse*F39*
Inhalation	**2.842**	**0.047**	*D35*i_AbsorpInuse*G39*
Sum	**582.284**	**9.705**	

A 3.2 Worker exposure calculations (KCP 7.2.3.1)

A 3.2.1 Calculations for Mefentrifluconazole

Table A 17: Input parameters considered for the estimation of worker exposure

Crop type	**Cereals**		
Indoor or outdoor	**Outdoor**		
Application method	**Downward spraying**		
Application equipment	**Vehicle-mounted**		
Worker's task	**Inspection, irrigation**		
Main body parts in contact with foliage	**Hand and body**		
Application rate of active substance	**0.1**	kg a.s./ha	*i_AppRate*
Number of applications	**2**		*i_AppNo*
Interval between multiple applications	**14**	days	*i_AppInt*
Half-life of active substance	**30**	days	*d_HalflifeAS*
Multiple application factor	**1.7**		*d_MAF*
Dermal absorption of the product	**10%**		*i_AbsorpProduct*
Dermal absorption of the in-use dilution	**50%**		*i_AbsorpInuse*
Dislodgeable foliar residue (i_AppRate*i_DFR)	**0.3**	µg a.s./cm^2	*d_DFR*
Working hours	**2**	hr	*d_WorkHr*
Dermal transfer coefficient - Total potential exposure	**12500**	cm^2/hr	*d_DermTcUCV*
Dermal transfer coefficient - arms, body and legs covered	**1400**	cm^2/hr	*d_DermTcCV1*
Dermal transfer coefficient - hands, arms, body and legs covered	**no TC available for this assessment**	cm^2/hr	*d_DermTcCV2*
Inhalation transfer coefficient for automated applications	**NA**	ha/hr*10^(-3)	*d_InhalTcAut*
Inhalation transfer coefficient for cutting ornamentals	**NA**	ha/hr*10^(-3)	*d_InhalTcCut*
Inhalation transfer coefficient for sorting / bundling ornamentals	**NA**	ha/hr*10^(-3)	*d_InhalTcSort*

Table A 18: Mefentrifluconazole: Estimation of worker exposure using the EFSA guidance model

1. Total

	Potential exposure	Work wear - arms, body and legs covered	Working wear and gloves
Total systemic exposure (mg a.s./day)	6.464	0.724	no TC available for this assessment
Total systemic exposure per kg body weight (mg/kg bw/day)	0.108	0.0121	
% of RVNAS	308%	34.5%	

2. Details

	Systemic exposure [mg a.s./day]	[mg a.s./kg bw/day]	Formula
Dermal - Potential	**6.464**	**0.108**	*d_DermTcUCV*d_WorkHr*i_DFR*i_MAF/1000*i_AbsorpInuse*
Dermal - Work wear - arms, body and legs covered	**0.724**	**0.0121**	*d_DermTcCV1*d_WorkHr*d_DFR*d_MAF/1000*i_AbsorpInuse*
Dermal - Working wear and gloves	**no TC available for this assessment**		*d_DermTcCV2*d_WorkHr*d_DFR*d_MAF/1000*i_AbsorpInuse*
Inhalation	NA for outdoor activities		

A 3.2.2 Calculations for Kresoxim-methyl

Table A 19: Input parameters considered for the estimation of worker exposure

Crop type	**Cereals**		
Indoor or outdoor	**Outdoor**		
Application method	**Downward spraying**		
Application equipment	**Vehicle-mounted**		
Worker's task	**Inspection, irrigation**		
Main body parts in contact with foliage	**Hand and body**		
Application rate of active substance	**0.15**	kg a.s./ha	*i_AppRate*
Number of applications	**2**		*i_AppNo*
Interval between multiple applications	**14**	days	*i_AppInt*
Half-life of active substance	**30**	days	*d_HalflifeAS*
Multiple application factor	**1.7**		*d_MAF*
Dermal absorption of the product	**10%**		*i_AbsorpProduct*
Dermal absorption of the in-use dilution	**50%**		*i_AbsorpInuse*
Dislodgeable foliar residue (i_AppRate*i_DFR)	**0.45**	µg a.s./cm^2	*d_DFR*
Working hours	**2**	hr	*d_WorkHr*
Dermal transfer coefficient - Total potential exposure	**12500**	cm^2/hr	*d_DermTcUCV*
Dermal transfer coefficient - arms, body and legs covered	**1400**	cm^2/hr	*d_DermTcCV1*
Dermal transfer coefficient - hands, arms, body and legs covered	**no TC available for this assessment**	cm^2/hr	*d_DermTcCV2*
Inhalation transfer coefficient for automated applications	**NA**	ha/hr*10^(-3)	*d_InhalTcAut*
Inhalation transfer coefficient for cutting ornamentals	**NA**	ha/hr*10^(-3)	*d_InhalTcCut*
Inhalation transfer coefficient for sorting / bundling ornamentals	**NA**	ha/hr*10^(-3)	*d_InhalTcSort*

Table A 20: Kresoxim-methyl: Estimation of worker exposure using the EFSA guidance model

1. Total

	Potential exposure	Work wear - arms, body and legs covered	Working wear and gloves
Total systemic exposure (mg a.s./day)	9.695	1.086	no TC available for this assessment
Total systemic exposure per kg body weight (mg/kg bw/day)	0.162	0.018	
% of RVNAS	18%	2.0%	

2. Details

	Systemic exposure [mg a.s./day]	[mg a.s./kg bw/day]	Formula
Dermal - Potential	**9.695**	**0.162**	*d_DermTcUCV*d_WorkHr*i_DFR*i_MAF/1000*i_AbsorpInuse*
Dermal - Work wear - arms, body and legs covered	**1.086**	**0.018**	*d_DermTcCV1*d_WorkHr*d_DFR*d_MAF/1000*i_AbsorpInuse*
Dermal - Working wear and gloves	**no TC available for this assessment**		*d_DermTcCV2*d_WorkHr*d_DFR*d_MAF/1000*i_AbsorpInuse*
Inhalation	NA for outdoor activities		

A 3.3 Bystander and resident exposure calculations (KCP 7.2.2.1)

A 3.3.1 Calculations for Mefentrifluconazole

Table A 21: Bystander exposure: Input parameters considered for the estimation

Crop type	**Cereals**		
Application method	**Downward spraying**		
Application equipment	**Vehicle-mounted**		*i_AppEquip*
Formulation type	**Emulsifiable concentrate**		
Application rate of the product	**0.1**	kg a.s./ha	*i_AppRate*
Buffer strip	**2-3**	m	*i_Buffer*
Concentration of active substance (in-use dilution for liquid applications)	**1**	g a.s./l	*d_ConcAS*
Dermal absorption of product	**10%**		*i_AbsorpProduct*
Dermal absorption of in-use dilution	**50%**		*i_AbsorpInuse*
Oral absorption	**100.00%**		*i_AbsorpOralInuse*
Dislodgeable foliar residue (i_AppRate*i_DFR)	**0.3**	µg a.s./cm^2	*d_DFR*
Vapour pressure of in-use dilution	**low volatile substanceshaving a vapour pressure of <5*10-3Pa**	Pa	*i_Volat*
Concentration in air	**0.001**	mg/m^3	*d_AirCon*
Bystander dermal spray drift exposure - adult	**1.21**	ml spray dilut./person	
Bystander dermal spray drift exposure - child	**0.74**	ml spray dilut./person	
Bystander inhal. spray drift exposure - adult	**0.00050**	ml spray dilut./person	
Bystander inhal. spray drift exposure - child	**0.00112**	ml spray dilution/person	
Exposure duration	**2**	hours	*d_ByExpDur*
Exposure duration entry into treated crops	**0.25**	hours	*d_ExpDurTreatCrop*
Light clothing adjustment factor	**18.0%**		*d_ClothAF*
Breathing rate adult	**0.23**	m^3/kg bw/day	*d_BreathRAd*
Breathing rate child (1-3 year old)	**1.07**	m^3/kg bw/day	*d_BreathRCh*
Drift percentage on surface (90th percentile)	**8.50%**		
Turf transferable residues percentage	**5.00%**		*d_Turf*
Transfer coeff. of surface deposits-adult	**14500**	cm^2/hour	*d_ByTCAd*
Transfer coeff. of surface deposits -child (1-3 year old)	**5200**	cm^2/hour	*d_ByTCCh*
Saliva extraction percentage	**50.00%**		*d_SalExt*
Surface area of hands mouthed	**20**	cm^2	*d_AreaHM*
Frequency of hand to mouth activity	**20**	events/hour	*d_ByFreqHM*
Ingestion rate for mouthing of grass per day	**25**	cm^2	*d_MouthGrass*
Dislodgeable residues % transferability for object to mouth	**20.00%**		*d_DRP*
Transfer coefficient for entry into treated crops - adult	**7500**	cm^2/hour	*d_TcEntryAd*
Transfer coefficient for entry into treated crops - child	**2250**	cm^2/hour	*d_TcEntryCh*

Table A 22: Mefentrifluconazole: Estimation of bystander exposure

1. Total

1-3 year old child	Spray drift	Vapour	Surface deposits	Entry into treated crops
Total systemic exposure (mg a.s./day)	0.305	0.011	0.0418	0.145
Total systemic exposure (mg/kg bw/day)	0.0305	0.0011	0.0042	0.0145
% of RVAAS	20%	0.71%	2.8%	9.7%
Adult	**Spray drift**	**Vapour**	**Surface deposits**	**Entry into treated crops**
Total systemic exposure (mg a.s./day)	0.4966	0.0138	0.1062	0.4848
Total systemic exposure (mg/kg bw/day)	0.0083	0.0002	0.0018	0.0081
% of RVAAS	5.5%	0.15%	1.2%	5.4%

Table A 22: Mefentrifluconazole: Estimation of bystander exposure (cont'd)

2. Details

1-3 year old child	**Systemic exposure [mg a.s. /day]**	**Systemic exposure [mg a.s./kg bw/day]**	**Formula**
Spray drift	**0.3045**	**0.0305**	*((C16*i_AbsorpInuse*(1-d_ClothAF))+C18)*d_ConcAS")*
Vapour	**0.0107**	**0.0011**	*d_AirCon*d_BreathRCh*d_BwChild*
Surface deposits			
Dermal	**0.0381**	**0.0038**	*(i_AppRate/100)*C24*d_Turf*d_ByTCCh*d_ByExpDur*MAX(i_AbsorpProduct,i_AbsorpInuse)*d_MAF*IF(i_AppEquip="Vehicle-mounted-Drift Reduction",0.5,1)*
Hand to mouth	**0.0029**	**0.00029**	*(i_AppRate/100)*C25*d_Turf*d_SalExt*d_AreaHM*d_ByFreqHM*d_ByExpDur*i_AbsorpOralInuse*d_MAF*
Object to mouth	**0.0007**	**0.00007**	*(i_AppRate/100)*C25*d_DRP*d_MouthGrass*i_AbsorpOralInuse*d_MAF*
Entry into treated crops			
Dermal	**0.1454**	**0.0145**	*(d_TcEntryCh*0.25*d_DFR*d_MAF)/1000*MAX(i_AbsorpProduct,i_AbsorpInuse)*
Hand to mouth*	–	–	*(i_AppRate/100)*d_MAF*d_Turf*d_SalExt*d_AreaHM*d_ByFreqHM*d_ByExpDur*i_AbsorpOralInuse*
Object to mouth*	–	–	**(i_AppRate/100)*d_DRP*d_MouthGrass*i_AbsorpOralInuse*d_MAF**
Adult	**Systemic exposure [mg a.s. /day]**	**Systemic exposure [mg a.s./kg bw/day]**	**Formula**
Spray drift	**0.4966**	**0.0083**	*((C15*i_AbsorpInuse*(1-d_ClothAF)t)+C17)*d_ConcAS*
Vapour	**0.0138**	**0.00023**	*d_AirCon*d_BreathRAd*d_BwAdult*
Surface deposits (dermal)	**0.1062**	**0.0018**	*(i_AppRate/100)*C24*d_Turf*d_ByTCAd*d_ByExpDur*MAX(i_AbsorpProduct,i_AbsorpInuse)*d_MAF*IF(i_AppEquip="Vehicle-mounted-Drift Reduction",0.5,1)*
Entry into treated crops (dermal)	**0.4848**	**0.0081**	*(d_TcEntryAd*0.25*d_DFR*d_MAF)/1000*MAX(i_AbsorpProduct,i_AbsorpInuse)*

*Considered only for application on grassland and lawns and for application on golf course, turf or other sports lawns.

Table A 23: Mefentrifluconazole: Resident exposure: Input parameters for the estimation (EFSA guidance model)

Crop type	**Cereals**		
Application method	**Downward spraying**		
Application equipment	**Vehicle-mounted**		*i_AppEquip*
Formulation type	**Soluble concentrates, emulsifiable concentrate, etc.**		*i_FormVal*
Buffer strip	**2-3**	m	*i_Buffer*
Application rate of the product	**0.1**	kg a.s./ha	*i_AppRate*
Conc.a.s. (in-use dilution for liquid applications)	**1.0**	g a.s./l	*d_ConcAS*
Dermal absorption of product	**10%**		*i_AbsorpProduct*
Dermal absorption of in-use dilution	**50%**		*i_AbsorpInuse*
Oral absorption	**100.00%**		*i_AbsorpOralInuse*
Dislodgeable foliar residue (i_AppRate*i_DFR)	**0.3**	µg a.s./cm2	*d_DFR*
Vapour pressure of in-use dilution	**low volatile substances having a vapour pressure of <5*10-3Pa**	Pa	*i_Volat*
Concentration in air	**0.001**	mg/m3	*d_AirCon*
Resident dermal spray drift exposure 75th percentile – adult	**0.47**	ml spray dilution/person	
Resident dermal spray drift exposure 75th percentile – child	**0.327**	ml spray dilution/person	
Resident inhal. spray drift exposure 75th percentile – adult	**0.00010**	ml spray dilution/person	
Resident inhal. spray drift exposure 75th percentile – child	**0.00022**	ml spray dilution/person	
Resident dermal spray drift exposure mean – adult	**0.22318**	ml spray dilution/person	
Resident dermal spray drift exposure mean – child	**0.18**	ml spray dilution/person	
Resident inhal. spray drift exposure mean – adult	**0.00009**	ml spray dilution/person	
Resident inhal. spray drift exposure mean – child	**0.00017**	ml spray dilution/person	
Exposure duration dermal	**2**	hours	*d_ReExpDur*
Exposure duration inhalation	**24**	hours	*d_ReExpDurInhal*
Exposure duration entry into treated crops	**0.25**	hours	*d_ExpDurTreatCrop*
Light clothing adjustment factor	**18.0%**		*d_ClothAF*
Breathing rate adult	**0.23**	m3/day/kg	*d_BreathRAd*
Breathing rate child (1-3 year old)	**1.07**	m3/day/kg	*d_BreathRCh*
Drift percentage on surface (75th percentile)	**5.60%**		
Drift percentage on surface (mean)	**4.10%**		
Turf transferable residues percentage	**5.00%**		*d_Turf*
Transfer coeff. of surface deposits-adult	**7300**	cm2/hour	*d_ReTCAd*
Transfer coeff. of surface deposits-child (1-3 yr old)	**2600**	cm2/hour	*d_ReTCCh*
Saliva extraction percentage	**50.00%**		*d_SalExt*
Surface area of hands mouthed	**20**	cm2	*d_AreaHM*
Frequency of hand to mouth activity	**9.5**	events/hour	*d_ReFreqHM*
Ingestion rate for mouthing of grass per day	**25**	cm2	*d_MouthGrass*
Dislodgeable residues percentage transferability for object to mouth	**20.00%**		*d_DRP*
Transfer coefficient for entry into treated crops (75th percentile) - adult	**7500**	cm2/h	*d_TcEntryAd*
Transfer coefficient for entry into treated crops (75th percentile) - child	**2250**	cm2/h	*d_TcEntryCh*
Transfer coefficient for entry into treated crops (mean) - adult	**5980**	cm2/h	*d_TcEntryAd*
Transfer coefficient for entry into treated crops (mean) - child	**1794**	cm2/h	*d_TcEntryCh*

Table A 24: Mefentrifluconazole: Estimation of resident exposure

1. Total

1-3 year old child	Spray drift	Vapour	Surface deposits – 75th percentile –	Entry into treated crops	All pathways – mean –
Total systemic exposure (mg a.s./day)	0.134	0.011	0.0139	0.145	0.211
Total systemic exposure (mg/kg bw/day)	0.0134	0.0011	0.0014	0.0145	0.0211
% of RVNAS	38%	3.1%	4.0%	42%	60%
Adult	**Spray drift**	**Vapour**	**Surface deposits – 75th percentile –**	**Entry into treated crops**	**All pathways – mean –**
Total systemic exposure (mg a.s./day)	0.1928	0.0138	0.0352	0.485	0.518
Total systemic exposure (mg/kg bw/day)	0.0032	0.0002	0.0006	0.0081	0.0086
% of RVNAS	9.2%	0.66%	1.7%	23%	25%

2. Details – Resident exposure 75th percentile data

1-3 year old child	Systemic exposure [mg a.s./day]	Systemic exposure [mg a.s./kg bw/day]	Formula
Spray drift	**0.1343**	**0.01343**	*((C16*i_AbsorpInuse*(1-d_ClothAF))+C18)*d_ConcAS*
Vapour	**0.0107**	**0.00107**	*d_AirCon*d_BreathRCh*d_BwChild*
Surface deposits			
Dermal	**0.0125**	**0.00125**	*(i_AppRate/100)*C29*d_Turf*d_ReTCCh*d_ReExpDur*MAX(i_AbsorpProduct,i_AbsorpInuse)*d_MAF*IF(i_AppEquip = "Vehicle-mounted-Drift Reduction",0.5,1))*
Hand to mouth	**0.0009**	**0.00009**	*(i_AppRate/100)*C29*d_Turf*d_SalExt*d_AreaHM*d_ReFreqHM*d_ReExpDur*i_AbsorpOralInuse*d_MAF*
Object to mouth	**0.0005**	**0.00005**	*(i_AppRate/100)*C29*d_DRP*d_MouthGrass*i_AbsorpOralInuse*d_MAF*
Entry into treated crops			
Dermal	**0.1454**	**0.01454**	*(d_TcEntryCh*0.25*d_DFR*d_MAF)/1000*MAX(i_AbsorpProduct,i_AbsorpInuse)*
Hand to mouth*	–	–	*(i_AppRate/100)*d_Turf*d_MAF*d_SalExt*d_AreaHM*d_ReFreqHM*d_ReExpDur*i_AbsorpOralInuse*
Object to mouth*	–	–	*(i_AppRate/100)*d_DRP*d_MouthGrass*i_AbsorpOralInuse*d_MAF*

Table A 24: Mefentrifluconazole: Estimation of resident exposure (cont'd)

Adult	Systemic exposure [mg a.s./day]	Systemic exposure [mg a.s./kg bw/day]	Formula
Spray drift	**0.1928**	**0.00321**	*(C15*i_AbsorpInuse*(1-d_ClothAF))+C17)*d_ConcAS*
Vapour	**0.0138**	**0.00023**	*d_AirCon*d_BreathRAd*d_BwAdult*
Surface deposits (dermal)	**0.0352**	**0.00059**	*(i_AppRate/100)*C30*d_Turf*d_ReTCAd*d_ReExpDur *i_AbsorpInuse*
Entry into treated crops (dermal)	**0.4848**	**0.00808**	*(d_TcEntryAd*0.25*d_DFR*d_MAF)/1000 *MAX(i_AbsorpProduct,i_AbsorpInuse)*

*Considered only for application on grassland and lawns and for application on golf course, turf or other sports lawns.

3. Details – Resident exposure– Summing up all resident exposure pathways – mean data

1-3 year old child	Systemic exposure [mg a.s./day]	Systemic exposure [mg a.s./kg bw/day]	Formula
Spray drift	**0.0740**	**0.007397**	*((C20*i_AbsorpInuse*(1-d_ClothAF))+C22)*d_ConcAS*
Vapour	**0.0107**	**0.001070**	*d_AirCon*d_BreathRCh*d_BwChild*
Surface deposits			
Dermal	**0.0092**	**0.000919**	*(i_AppRate/100)*C30*d_Turf*d_ReTCCh*d_ReExpDur *MAX(i_AbsorpProduct,i_AbsorpInuse)*d_MAF*IF(i_ AppEquip = "Vehicle-mounted-Drift Reduction",0.5,1))*
Hand to mouth	**0.0007**	**0.000067**	*(i_AppRate/100)*C30*d_Turf*d_SalExt*d_AreaHM*d_ ReFreqHM*d_ReExpDur*i_AbsorpOralInuse*d_MAF*
Object to mouth	**0.0004**	**0.000035**	*(i_AppRate/100)*C30*d_DRP*d_MouthGrass*i_Absor pOralInuse*d_MAF*
Entry into treated crops			
Dermal	**0.1160**	**0.011596**	*(d_TcEntryMeanCh*0.25*d_DFR*d_MAF)/1000*MAX(i_AbsorpProduct,i_AbsorpInuse))*
Hand to mouth*	–	–	*(i_AppRate/100)*1*d_Turf*d_MAF*d_SalExt*d_AreaH M*d_ReFreqHM*d_ReExpDur*i_AbsorpOralInuse*
Object to mouth*	–	–	*(i_AppRate/100)*1*d_DRP*d_MouthGrass *i_AbsorpOralInuse*d_MAF*
Adult	**Systemic exposure [mg a.s./day]**	**Systemic exposure [mg a.s./kg bw/day]**	**Formula**
Spray drift	**0.0916**	**0.00153**	*"(C19*i_AbsorpInuse*(1-d_ClothAF))+C21)*d_ConcAS"*
Vapour	**0.0138**	**0.00023**	*d_AirCon*d_BreathRAd*d_BwAdult*
Surface deposits (dermal)	**0.0258**	**0.00043**	*(i_AppRate/100)*C30*d_Turf*d_ReTCAd*d_ReExpDur *MAX(i_AbsorpProduct,i_AbsorpInuse)*d_MAF*IF(i_ AppEquip = "Vehicle-mounted-Drift Reduction",0.5,1)*
Entry into treated crops (dermal)	**0.3865**	**0.00644**	*(d_TcEntryMeanAd*0.25*d_DFR*d_MAF)/1000 *MAX(i_AbsorpProduct,i_AbsorpInuse)*

A 3.3.2 Calculations for Kresoxim-methyl

Table A 25: Kresoxim-methyl: Resident exposure: Input parameters for the estimation (EFSA guidance model)

Crop type	**Cereals**		
Application method	**Downward spraying**		
Application equipment	**Vehicle-mounted**		*i_AppEquip*
Formulation type	**Soluble concentrates, emulsifiable concentrate, etc.**		*i_FormVal*
Buffer strip	**2-3**	m	*i_Buffer*
Application rate of the product	**0.15**	kg a.s./ha	*i_AppRate*
Conc.a.s. (in-use dilution for liquid applications)	**1.5**	g a.s./l	*d_ConcAS*
Dermal absorption of product	**10%**		*i_AbsorpProduct*
Dermal absorption of in-use dilution	**50%**		*i_AbsorpInuse*
Oral absorption	**63%**		*i_AbsorpOralInuse*
Dislodgeable foliar residue (i_AppRate*i_DFR)	**0.45**	µg a.s./cm2	*d_DFR*
Vapour pressure of in-use dilution	**low volatile substances having a vapour pressure of <5*10-3Pa**	Pa	*i_Volat*
Concentration in air	**0.001**	mg/m3	*d_AirCon*
Resident dermal spray drift exposure 75th percentile – adult	**0.47**	ml spray dilution/person	
Resident dermal spray drift exposure 75th percentile – child	**0.327**	ml spray dilution/person	
Resident inhal. spray drift exposure 75th percentile – adult	**0.00010**	ml spray dilution/person	
Resident inhal. spray drift exposure 75th percentile – child	**0.00022**	ml spray dilution/person	
Resident dermal spray drift exposure mean – adult	**0.22318**	ml spray dilution/person	
Resident dermal spray drift exposure mean – child	**0.18**	ml spray dilution/person	
Resident inhal. spray drift exposure mean – adult	**0.00009**	ml spray dilution/person	
Resident inhal. spray drift exposure mean – child	**0.00017**	ml spray dilution/person	
Exposure duration dermal	**2**	hours	*d_ReExpDur*
Exposure duration inhalation	**24**	hours	*d_ReExpDurInhal*
Exposure duration entry into treated crops	**0.25**	hours	*d_ExpDurTreatCrop*
Light clothing adjustment factor	**18.0%**		*d_ClothAF*
Breathing rate adult	**0.23**	m3/day/kg	*d_BreathRAd*
Breathing rate child (1-3 year old)	**1.07**	m3/day/kg	*d_BreathRCh*
Drift percentage on surface (75th percentile)	**5.60%**		
Drift percentage on surface (mean)	**4.10%**		
Turf transferable residues percentage	**5.00%**		*d_Turf*
Transfer coeff. of surface deposits-adult	**7300**	cm2/hour	*d_ReTCAd*
Transfer coeff. of surface deposits-child (1-3 yr old)	**2600**	cm2/hour	*d_ReTCCh*
Saliva extraction percentage	**50.00%**		*d_SalExt*
Surface area of hands mouthed	**20**	cm2	*d_AreaHM*
Frequency of hand to mouth activity	**9.5**	events/hour	*d_ReFreqHM*
Ingestion rate for mouthing of grass per day	**25**	cm2	*d_MouthGrass*
Dislodgeable residues percentage transferability for object to mouth	**20.00%**		*d_DRP*
Transfer coefficient for entry into treated crops (75th percentile) - adult	**7500**	cm2/h	*d_TcEntryAd*
Transfer coefficient for entry into treated crops (75th percentile) - child	**2250**	cm2/h	*d_TcEntryCh*
Transfer coefficient for entry into treated crops (mean) - adult	**5980**	cm2/h	*d_TcEntryAd*
Transfer coefficient for entry into treated crops (mean) - child	**1794**	cm2/h	*d_TcEntryCh*

Table A 26: Kresoxim-methyl: Estimation of resident exposure

1. Total

1-3 year old child	Spray drift	Vapour	Surface deposits – 75th percentile –	Entry into treated crops	All pathways – mean –
Total systemic exposure (mg a.s./day)	0.2014	0.0107	0.0201	0.2181	0.3103
Total systemic exposure (mg/kg bw/day)	0.0201	0.0011	0.0020	0.0218	0.0310
% of RVNAS	2.2%	0.12%	0.22%	2.4%	3.4%
Adult	**Spray drift**	**Vapour**	**Surface deposits – 75th percentile –**	**Entry into treated crops**	**All pathways – mean –**
Total systemic exposure (mg a.s./day)	0.2892	0.0138	0.0528	0.7272	0.7697
Total systemic exposure (mg/kg bw/day)	0.0048	0.0002	0.0009	0.0121	0.0128
% of RVNAS	0.5%	0.03%	0.10%	1.3%	1.4%

2. Details – Resident exposure 75th percentile data

1-3 year old child	Systemic exposure [mg a.s./day]	Systemic exposure [mg a.s./kg bw/day]	Formula
Spray drift	**0.2014**	**0.02014**	*((C16*i_AbsorpInuse*(1-d_ClothAF))+C18)*d_ConcAS*
Vapour	**0.0107**	**0.00107**	*d_AirCon*d_BreathRCh*d_BwChild*
Surface deposits			
Dermal	**0.0188**	**0.00188**	*(i_AppRate/100)*C29*d_Turf*d_ReTCCh*d_ReExpDur*MAX(i_AbsorpProduct,i_AbsorpInuse)*d_MAF*IF(i_AppEquip = "Vehicle-mounted-Drift Reduction",0.5,1))*
Hand to mouth	**0.0009**	**0.00009**	*(i_AppRate/100)*C29*d_Turf*d_SalExt*d_AreaHM*d_ReFreqHM*d_ReExpDur*i_AbsorpOralInuse*d_MAF*
Object to mouth	**0.0005**	**0.00005**	*(i_AppRate/100)*C29*d_DRP*d_MouthGrass*i_AbsorpOralInuse*d_MAF*
Entry into treated crops			
Dermal	**0.2181**	**0.02181**	*(d_TcEntryCh*0.25*d_DFR*d_MAF)/1000*MAX(i_AbsorpProduct,i_AbsorpInuse)*
Hand to mouth*	–	–	*(i_AppRate/100)*d_Turf*d_MAF*d_SalExt*d_AreaHM*d_ReFreqHM*d_ReExpDur*i_AbsorpOralInuse*
Object to mouth*	–	–	*(i_AppRate/100)*d_DRP*d_MouthGrass*i_AbsorpOralInuse*d_MAF*

Table A 26: Kresoxim-methyl: Estimation of resident exposure (cont'd)

Adult	Systemic exposure [mg a.s./day]	Systemic exposure [mg a.s./kg bw/day]	Formula
Spray drift	**0.28920**	**0.00482**	*(C15*i_AbsorpInuse*(1-d_ClothAF))+C17)*d_ConcAS*
Vapour	**0.01380**	**0.00023**	*d_AirCon*d_BreathRAd*d_BwAdult*
Surface deposits (dermal)	**0.05285**	**0.00088**	*(i_AppRate/100)*C30*d_Turf*d_ReTCAd*d_ReExpDur *i_AbsorpInuse*
Entry into treated crops (dermal)	**0.72716**	**0.01212**	*(d_TcEntryAd*0.25*d_DFR*d_MAF)/1000 *MAX(i_AbsorpProduct,i_AbsorpInuse)*

*Considered only for application on grassland and lawns and for application on golf course, turf or other sports lawns.

3. Details – Resident exposure– Summing up all resident exposure pathways – mean data

1-3 year old child	Systemic exposure [mg a.s./day]	Systemic exposure [mg a.s./kg bw/day]	Formula
Spray drift	**0.1110**	**0.011096**	*((C20*i_AbsorpInuse*(1-d_ClothAF))+C22)*d_ConcAS*
Vapour	**0.0107**	**0.001070**	*d_AirCon*d_BreathRCh*d_BwChild*
Surface deposits			
Dermal	**0.0138**	**0.001378**	*(i_AppRate/100)*C30*d_Turf*d_ReTCCh*d_ReExpDur *MAX(i_AbsorpProduct,i_AbsorpInuse)*d_MAF*IF(i_ AppEquip = "Vehicle-mounted-Drift Reduction",0.5,1))*
Hand to mouth	**0.0006**	**0.000063**	*(i_AppRate/100)*C30*d_Turf*d_SalExt*d_AreaHM*d_ ReFreqHM*d_ReExpDur*i_AbsorpOralInuse*d_MAF*
Object to mouth	**0.0003**	**0.000033**	*(i_AppRate/100)*C30*d_DRP*d_MouthGrass*i_Absor pOralInuse*d_MAF*
Entry into treated crops			
Dermal	**0.1739**	**0.017394**	*(d_TcEntryMeanCh*0.25*d_DFR*d_MAF)/1000*MAX(i_AbsorpProduct,i_AbsorpInuse))*
Hand to mouth*	–	–	*(i_AppRate/100)*1*d_Turf*d_MAF*d_SalExt*d_AreaH M*d_ReFreqHM*d_ReExpDur*i_AbsorpOralInuse*
Object to mouth*	–	–	*(i_AppRate/100)*1*d_DRP*d_MouthGrass *i_AbsorpOralInuse*d_MAF*
Adult	**Systemic exposure [mg a.s./day]**	**Systemic exposure [mg a.s./kg bw/day]**	**Formula**
Spray drift	**0.1374**	**0.00229**	*"(C19*i_AbsorpInuse*(1-d_ClothAF))+C21)*d_ConcAS"*
Vapour	**0.0138**	**0.00023**	*d_AirCon*d_BreathRAd*d_BwAdult*
Surface deposits (dermal)	**0.0387**	**0.00064**	*(i_AppRate/100)*C30*d_Turf*d_ReTCAd*d_ReExpDur *MAX(i_AbsorpProduct,i_AbsorpInuse)*d_MAF*IF(i_ AppEquip = "Vehicle-mounted-Drift Reduction",0.5,1)*
Entry into treated crops (dermal)	**0.5798**	**0.00966**	*(d_TcEntryMeanAd*0.25*d_DFR*d_MAF)/1000 *MAX(i_AbsorpProduct,i_AbsorpInuse)*

A 3.4 Combined exposure calculations for Mefentrifluconazole and Kresoxim-methyl

The estimates are presented in section 6.6.5 above based on the calculation for the individual compounds as presented under A 3.1 to A 3.3.

Appendix 4 Detailed evaluation of exposure and/or DFR studies relied upon (KCP 7.2, KCP 7.2.1.1, KCP 7.2.2.1, KCP 7.2.3.1)

No exposure and /or DFR studies were conducted