



Concimi speciali

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Iscr. Reg. Impr. CCIAA di BO e C.F. 01021590375  
Capitale Sociale € 10.000.000,00 interamente versato.  
Iscritta al registro dei fabbricanti di fertilizzanti al n. 0053/06



### **-Technical Data Sheet-**

## **EC FERTILISER**

# **Phosfik PK**

## **PK 30-20 FERTILISER SOLUTION**

### **ANALYSIS**

	<b>w/w</b>	<b>g/L</b>
Phosphorus pentoxide (P <sub>2</sub> O <sub>5</sub> ) water soluble .....	30%	426
Potassium oxide (K <sub>2</sub> O) water soluble .....	20%	284
"Low in chloride"		

### **CHARACTERISTICS**

Phosphorus and Potassium are rapidly absorbed.

### **METHODS OF APPLICATION AND DOSAGES**

#### **Foliar application:**

- **Fruit trees, wine and table grape, vegetable and industrial crops:** during the whole crop cycle, 4-6 applications every 7-10 days ..... 2-2.5 L/ha
- **Greenhouse crops:** during the whole crop cycle, 4-6 applications every 7-10 days ..... 200-250 mL/hL

Dosages are calculated for normal water distribution volumes.

#### **Fertigation:**

in the same growth stages and at the same interval of application

- **Fruit trees, wine and table grape, vegetable and industrial crops:** 10-15 L/ha
- **Greenhouse crops:** ..... 1-1.5 L/1000 m<sup>2</sup>

Please consult the Technical Service for application advice in specific crop and pedoclimatic conditions. The product can be mixed with all common formulations, except with products based on Copper, mineral oils and emulsions. A simple mixture test to check compatibility is advisable. Biolchim S.p.A. is only liable for the composition of the product and assumes no responsibility whatsoever for damages caused by wrong/improper use of this product.

### **WARNING**

Keep away from flames in a cool, well-ventilated place. Avoid prolonged exposure to low temperatures. Check container periodically. In case of accidental spill contain the leak, avoid water contamination and, whenever necessary, dispose according to the laws in force. **SHAKE BEFORE USE**

**NET CONTENT:** 1 L (1.42 kg)-5 L (7.1 kg)-20 L (28.4 kg)-200 L (284 kg)-1000 L (1420 kg)



Medicina, 06.04.2022

## CERTIFICATE of ANALYSIS

Product name: **PHOSFIK PK**  
EC FERTILISER. PK 30.20 FERTILISER SOLUTION

<b>ANALYSIS:</b>	<b>% w/w</b>	<b>Analytical method</b>
Phosphorus pentoxide (P <sub>2</sub> O <sub>5</sub> ) water soluble.....	30%	Extraction 3.1.6/gravimetric det. 3.2 CE 2003/2003
Potassium Oxide (K <sub>2</sub> O) water soluble.....	20%	Gravimetric (TPBS) 4.1 CE2003/2003

### **Physical properties:**

Physical aspect:.....	liquid	(Appearance)
Density at 20°C.....	1.42 ± 0.02 Kg/L	(Densimeter)
pH of 1% sol. (20°C).....	4.8 ± 0.5	(Glass electrode)
Conductivity of a 1% sol. (25°C).....	4.4 ± 0.4 mS/cm	(Conductivimeter)

Biolchim S.p.A.  
Product Support & Regulatory dept.

Dr. Gianluca Bini

*Gianluca Bini*



**Fișa cu date de securitate din data 28/8/2020, versiunea 2.2**

**SECȚIUNEA 1: Identificarea substanței/amestecului și a societății/întreprinderii**

1.1. Element de identificare a produsului

Nume comercial:

**PHOSFIK PK**

Caracterizare chimica: Fosfonat de monopotasiu

Numar CAS: 13977-65-6

Numar EC : 604-162-9

Numar REACH: 01-2119988836-13-0016

1.2. Utilizări relevante identificate ale substanței sau ale amestecului și utilizări contraindicate

Utilizarea recomandată:

Îngrășământ lichid pentru uz agricol

1.3. Detalii privind furnizorul fișei cu date de securitate

Compania:

Biolchim S.p.A. - Via San Carlo 2130 - 40059 Medicina (BO) - Italy

Biolchim spa - tel 051 6971811

Persoană competentă, responsabil de fișa tehnică de securitate:

biolchim@biolchim.it

1.4. Număr de telefon care poate fi apelat în caz de urgență

România: Institutul Național de Sănătate Publică, Telefon (+40) 213183606.

Alte țări: contactați centrul dvs. otrăvitor național.

**SECȚIUNEA 2: Identificarea pericolelor**

2.1. Clasificarea substanței sau a amestecului

Criterii ale Regulamentului CE 1272/2008 (CLP):



Atenție, Eye Irrit. 2, Provoacă o iritare gravă a ochilor.

Efecte fizico-chimice dăunătoare sănătății omului și mediului înconjurător:

Nici un alt risc

2.2. Elemente pentru etichetă

Pictograme de pericol:



Atenție

Fraze de pericol:

H319 Provoacă o iritare gravă a ochilor.

Fraze de precauție:

P101 Dacă este necesară consultarea medicului, țineți la îndemână recipientul sau eticheta produsului.

P102 A nu se lăsa la îndemâna copiilor.

P103 Citiți eticheta înainte de utilizare.

P264 Spălați-vă bine cu apă după utilizare.

P280 Purtați mănuși de protecție/îmbrăcăminte de protecție/echipament de protecție a ochilor/echipament de protecție a feței.

P305+P351+P338 ÎN CAZ DE CONTACT CU OCHII: Clătiți cu atenție cu apă timp de mai multe minute. Scoateți lentilele de contact, dacă este cazul și dacă acest lucru se poate face cu ușurință. Continuați să clătiți.

Prevederi speciale:

Nici una

Dispoziții speciale conform Anexei XVII (REACH) cu modificările și completările ulterioare:



## Fișa cu date de securitate PHOSFIK PK

Nici una

### 2.3. Alte pericole

Substanțe vPvB: Nici una - Substanțe PBT: Nici una

Alte riscuri:

Nici un alt risc

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### SECȚIUNEA 3: Compoziție/informații privind componenții

#### 3.1. Substanțe

Identificarea substanței:

Caracterizare chimică: Fosfonat de monopotasiu

Numar CAS: 13977-65-6

Numar EC : 604-162-9

Numar REACH: 01-2119988836-13-0016

#### 3.2. Amestecuri

N.A.

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### SECȚIUNEA 4: Măsuri de prim ajutor

#### 4.1. Descrierea măsurilor de prim ajutor

În caz de contact cu pielea:

Dezbrăcați imediat toate hainele contaminate

Zonele corpului care au venit, sau se presupune numai că au venit, în contact cu produsul trebuie spălate imediat și abundent cu apă curentă.

Spălați complet corpul (duș sau baie).

Îndepărtați imediat hainele contaminate și eliminați-le în mod sigur.

În caz de contact cu pielea spălați imediat cu apă abundentă și săpun.

În caz de contact cu ochii:

În caz de contact cu ochii, clătiți cu apă pentru un interval de timp corespunzător și țineți deschise pleoapele, după care consultați imediat un oftalmolog.

Protejați ochiul lezat.

În caz de ingerare:

Nu provocați în nici un caz vomă. OBTINETI ASISTENTA MEDICALA IMEDIAT

În caz de inhalare:

Conduceți accidentatul la aer liber și țineți-l la cald și în repaus.

#### 4.2. Cele mai importante simptome și efecte, atât acute, cât și întârziate

Contactul ocular produce roșeață.

#### 4.3. Indicații privind orice fel de asistență medicală imediată și tratamentele speciale necesare

În caz de accident sau stare proastă consultați imediat un medic (dacă este posibil arătați instrucțiunile de folosință sau fișa de siguranță).

Tratament:

Nici una

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### SECȚIUNEA 5: Măsuri de combatere a incendiilor

#### 5.1. Mijloace de stingere a incendiilor

Mijloace de stingere corespunzătoare:

Apă.

spumă

Mijloace de stingere care nu trebuie să fie utilizate din motive de siguranță:

Nici unul în mod deosebit

#### 5.2. Pericole speciale cauzate de substanța sau de amestecul în cauză

Nu inhalați gazele produse prin explozie și prin combustie.

Combustia produce fum greu.

#### 5.3. Recomandări destinate pompierilor

Folosiți dispozitive respiratorii corespunzătoare.



## Fișa cu date de securitate PHOSFIK PK

Strângeți separat apa contaminată folosită pentru stingerea incendiului. Nu o descărcați în rețeaua de canalizare.  
Dacă este posibil din punct de vedere al siguranței, îndepărtați din zona de pericol imediat recipientele neafectate.

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### SECȚIUNEA 6: Măsurile de luat în caz de dispersie accidentală

- 6.1. Precauții personale, echipament de protecție și proceduri de urgență  
Îmbrăcați dispozitivele de protecție individuală.  
Duceți persoanele în loc sigur.  
Citiți măsurile de protecție prezentate la punctele 7 și 8.
- 6.2. Precauții pentru mediul înconjurător  
Împiedicați penetrarea în sol/subsol. Împiedicați vărsarea în apele de suprafață sau în rețeaua de canalizare.  
Rețineți apa de spălat contaminată și eliminați-o.  
În caz de scurgere de gaz sau penetrare în cursuri de apă, sol sau sistemul de canalizare, informați autoritățile răspunzătoare.  
Material corespunzător pentru strângere: material absorbant, organic, nisip
- 6.3. Metode și material pentru izolarea incendiilor și pentru curățenie  
Pentru izolare:  
Pentru recuperare sau eliminare, se aspiră sau se curăță și se pune în recipiente etichetate corespunzător.  
Pentru curățenie:  
Spălați cu apă din abundență.  
Materialul poate fi colectat cu rumeguș sau alte materiale similare.  
Evitați formarea prafului.  
Următoarele urme pot fi îndepărtate.
- 6.4. Trimitere la alte secțiuni  
Vezi și paragrafele 8 și 13

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### SECȚIUNEA 7: Manipularea și depozitarea

- 7.1. Precauții pentru manipularea în condiții de securitate  
Evitați contactul cu pielea și ochii, inhalarea vaporilor și a ceții.  
Recomandări generale privind igiena ocupațională:  
A nu mânca, bea sau fuma în timpul utilizării produsului  
Hainele contaminate trebuie înlocuite înainte de accesul la zona de prânz.
- 7.2. Condiții de depozitare în condiții de securitate, inclusiv eventuale incompatibilități  
Depozitați recipientele într-un loc bine ventilat.  
A se păstra într-un loc răcoros.  
Evitați formarea prafului și dispersia produsului în aer.  
Păstrați materialul departe de căldură, scânteii, electricitate statică și flăcări.  
Păstrați departe de alimente, băuturi și furaje.  
Țineți departe de alimente, băuturi și hrană pentru animale.  
Materiale incompatibile  
Agenți reducători, acizi și baze puternice, pulberi metalice.  
Instrucțiuni privind spațiile de depozitare:  
Spatii ventilate adecvat
- 7.3. Utilizare (utilizări) finală (finale) specifică (specifice)  
Nici o utilizare particulară

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### SECȚIUNEA 8: Controale ale expunerii/protecția personală

- 8.1. Parametri de control  
Limită de expunere neprofesională disponibilă  
Valori limită de expunere DNEL  
Fosfonat de monopotasiu - CAS: 13977-65-6

## Fișa cu date de securitate PHOSFIK PK

Lucrător industrial: 41.2 mg/m<sup>3</sup> - Lucrător profesionist: 41.2 mg/m<sup>3</sup> - Consumator: 10.2 mg/m<sup>3</sup> - Expunere: Prin inhalare umană - Frecvența: Pe termen lung, efecte sistemice - Efect: Doza de toxicitate repetată (oral)

Lucrător industrial: 59 mg / kg greutate corporala / zi - Lucrător profesionist: 59 mg / kg greutate corporala / zi - Consumator: 29 mg / kg greutate corporala / zi - Expunere: Epidermic uman - Frecvența: Pe termen lung, efecte sistemice - Efect: Doza de toxicitate repetată (oral)  
mg/m<sup>3</sup> - Consumator: 2.9 mg / kg greutate corporala / zi - Expunere: Oral uman - Frecvența: Pe termen lung, efecte sistemice - Efect: Doza de toxicitate repetată (oral)

### Valori limită de expunere PNEC

Fosfonat de monopotasiu - CAS: 13977-65-6

Obiectiv: Apă dulce - Valoare: 0.137 mg/l

Obiectiv: Apă sărată - Valoare: 0.0137 mg/l

Obiectiv: Sedimente în apă dulce - Valoare: 0.117 mg / kg sediment dw

Obiectiv: Sedimente în apă sărată - Valoare: 0.0117 mg / kg sediment dw

Obiectiv: STP - Valoare: 100 mg/l

Obiectiv: Eliberarea intermitent - Valoare: 1.37 mg/l

Obiectiv: sol - Valoare: 1 mg / kg sol dw

### 8.2. Controale ale expunerii

#### Protectia ochilor

Ochelari cu protecție laterală.

(vezi standardul EN 166)

#### Protectia pielii

Îmbrăcăminte de unică folosință.

(a se vedea standardul EN 13034)

Încălțăminte de protecție.

(a se vedea standardul UNI EN ISO 20345)

#### Protectia mainilor

Tipul de mănuși adecvate:

Mănuși de unică folosință.

Material adecvat:

NBR (cauciuc nitrilic).

(a se vedea standardul EN 374)

Spălați-vă mâinile înainte de a mânca, bea sau fuma

#### Protectie respiratorie

Evitați inhalarea produsului.

Asigurați o ventilație adecvată. Trebuie asigurată o bună ventilație locală și un sistem de schimb general de aer eficient.

#### Riscuri termice:

La o temperatură ridicată se descompune cu eliberarea de gaze / vapori iritante.

#### Controale de expunere ambientală:

Utilizați în conformitate cu bunele practici de lucru, evitând dispersarea produsului în mediu.

Nu aruncați produsul în canalizare.

#### Controale tehnice adecvate:

Asigurați o ventilație adecvată, în special în zonele închise.

## SECȚIUNEA 9: Proprietățile fizice și chimice

### 9.1. Informații privind proprietățile fizice și chimice de bază

Caracteristică	Valoare	Metoda:	Note
Aspect și culoare (20°C-101,3kPa):	Lichid, incolor	--	--
Miros.	Nerelevant	--	Nu este relevant pentru clasificarea produselor.
Pragul de miros:	N.A.	--	--

## Fișa cu date de securitate PHOSFIK PK

pH:	4,7	--	--
Punct de fuziune/congelare:	197°C (range 189-194°C) ref. to the crystal	--	--
Punct de fierbere inițială și intervalul de fierbere:	Nerelevant	--	Punct de fierbere mai mare decât domeniul de temperatură de utilizare al produsului.
Temperatura de aprindere:	N.A.	--	NU INFLAMABIL
Viteza de evaporare:	N.A.	--	--
Infamabilitate în stare solidă/gazoasă:	N.A.	--	Lichid
Limita superioară/inferioară de inflamabilitate sau explozie:	N.A.	--	Nu este inflamabil
Presiunea vaporilor:	Nerelevant	--	Nu este relevant pentru clasificarea produselor.
Densitatea vaporilor:	Nerelevant	--	Nu este relevant pentru clasificarea produselor.
Densitate relativă (20°C):	1.42 Kg/L	--	--
Solubilitatea în apă:	Solubil	--	--
Solubilitate în ulei:	Nerelevant	--	Nu este relevant pentru clasificarea și utilizarea produsului.
Coeficientul de repartizare (n-octanol/apă):	N.A.	--	--
Temperatura de autoaprindere:	N.A.	--	Nu este inflamabil.
Temperatura de descompunere:	Nerelevant	--	Temperatura de descompunere este mai mare decât intervalul de temperatură de utilizare al produsului.
Vascozitatea:	Nerelevant	--	Nu este relevant pentru clasificarea produselor.
Proprietăți explozive:	Nu exploziv	--	--
Proprietăți oxidante:	Nu oxidant	--	--

### 9.2. Alte informații

Caracteristică	Valoare	Metoda:	Note
Amestecabilitate:	Amestecabil în apă	--	--
Liposolubilitate:	Nerelevant	--	Nu este relevant pentru clasificarea și utilizarea produsului.
Conductibilitate (25°C):	4,3 mS/cm (sol. 1% w/w)	--	--
Caracteristici ale grupurilor de substanțe	Nerelevant	--	--

## SECȚIUNEA 10: Stabilitate și reactivitate

### 10.1. Reactivitate

Stabilă în condiții normale

- 10.2. Stabilitate chimică  
Stabilă în condiții normale
- 10.3. Posibilitatea de reacții periculoase  
Nici una
- 10.4. Condiții de evitat  
Temperaturi mari
- 10.5. Materiale incompatibile  
Agenți reducători, acizi și baze puternice, pulberi metalice.
- 10.6. Produși de descompunere periculoși  
La temperaturi ridicate se descompune odată cu eliberarea de gaze / vapori iritanți.

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### **SECȚIUNEA 11: Informații toxicologice**

#### 11.1. Informații privind efectele toxicologice

Informații toxicologice referitoare la substanța:

Fosfonat de monopotasiu - CAS: 13977-65-6

a) toxicitate acută

Neclasificat

Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.

Test: LD50 - Parcurs: Oral - Specii: Șobolan > 2000 mg / kg greutate corporală - Note:

EU Method B.1 tris

Test: LD50 - Parcurs: Piele - Specii: Șobolan > 5000 mg / kg greutate corporală - Note:

OECD 402

b) corodarea/iritarea pielii

Neclasificat

Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.

Test: Iritant pentru piele - Parcurs: Piele - Specii: Iepure Negativ - Note: OECD 439

c) lezarea gravă/iritarea ochilor

Produsul este clasificat: Eye Irrit. 2 H319

Pozitiv - Note: HCE (in vitro) MTT test method

d) sensibilizarea căilor respiratorii sau a pielii

Neclasificat

Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.

e) mutagenitatea celulelor germinative

Neclasificat

Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.

Specii: Salmonella Typhimurium Negativ - Note: OECD 471

f) cancerogenitatea

Neclasificat

Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.

g) toxicitatea pentru reproducere

Neclasificat

Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.

Test: NOAEL - Parcurs: Oral - Specii: Șobolan > 1000 mg / kg greutate corporală / zi -

Note: (repr./dev.) OECD 422

h) STOT (toxicitate asupra organelor țintă specifice) - expunere unică

Neclasificat

Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.

i) STOT (toxicitate asupra organelor țintă specifice) - expunere repetată

Neclasificat

Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.

Test: NOAEL - Parcurs: Oral - Specii: Șobolan > 100 mg / kg greutate corporală / zi -

Note: OECD 422

j) pericol prin aspirare

Neclasificat

Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.

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## **SECȚIUNEA 12: Informații ecologice**

### 12.1. Toxicitatea

A se adopta bune practici de productie astfel incat produsul sa nu fie eliberat in mediu  
Fosfonat de monopotasiu - CAS: 13977-65-6

Nu este clasificat pentru pericole pentru mediu

Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.

#### a) Toxicitate acvatică acută:

Efect: LC50 - Specii: Pește > 200 mg/l - Durata h: 96 h - Note: OECD 203  
(Brachydanio rerio)

Efect: LC50 - Specii: Daphnia > 200 mg/l - Durata h: 48 h - Note: OECD 202 (Daphnia magna)

#### c) Toxicitate bacteriană:

Efect: EC50 - Specii: Micro-organism > 1000 mg/l - Durata h: 3 h - Note: EU Method C.11

#### d) Toxicitate terestră:

Efect: LC50 - Specii: Râme > 1000 mg/kg - Durata h: 14 d - Note: OECD 207 (Eisenia fetida)

### 12.2. Persistența și degradabilitatea

Nici una

Fosfonat de monopotasiu - CAS: 13977-65-6

Biodegradabil: Nu este necesară efectuarea studiului dacă substanța este anorganică.

Biodegradabil: persistentă - Test: 2 - Note: > 120

### 12.3. Potențialul de bioacumulare

Fosfonat de monopotasiu - CAS: 13977-65-6

Bioacumulare: Nu este relevant pentru substanțele anorganice

### 12.4. Mobilitatea în sol

N.A.

### 12.5. Rezultatele evaluărilor PBT și vPvB

Substanțe vPvB: Nici una - Substanțe PBT: Nici una

### 12.6. Alte efecte adverse

Nici una

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## **SECȚIUNEA 13: Considerații privind eliminarea**

### 13.1. Metode de tratare a deșeurilor

A se recupera, dacă este posibil. A se respecta regulamentele locale în vigoare

Informații suplimentare referitoare la eliminare:

Containerele trebuie curățate în mod corespunzător înainte de a fi refolosite sau eliminate ca deșeuri în conformitate cu reglementările locale și naționale în vigoare.

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## **SECȚIUNEA 14: Informații referitoare la transport**

### 14.1. Numărul ONU

Nu sunt clasificate ca periculoase din punct de vedere al regulamentelor de transport

### 14.2. Denumirea corectă ONU pentru expediție

N.A.

### 14.3. Clasa (clasele) de pericol pentru transport

N.A.

### 14.4. Grupul de ambalare

N.A.

### 14.5. Pericole pentru mediul înconjurător

N.A.

### 14.6. Precauții speciale pentru utilizatori

N.A.

### 14.7. Transport în vrac, în conformitate cu anexa II la Convenția MARPOL și cu Codul IBC



## Fișa cu date de securitate PHOSFIK PK

N.A.

### SECȚIUNEA 15: Informații de reglementare

15.1. Regulamente/legislație în domeniul securității, al sănătății și al mediului specifice (specifică) pentru substanța sau amestecul în cauză

Directiva 98/24/CE (Riscuri în legătură cu agenții chimici la locul de muncă)

Directiva 2000/39/CE (Valori limită a expunerii profesionale)

Regulamentul (CE) nr. 1907/2006 (REACH)

Regulamentul (CE) nr. 1272/2008 (CLP)

Regulamentul (CE) nr. 790/2009 (ATP 1 CLP) și (EU) nr. 758/2013

Regulamentul (UE) 2015/830

Regulamentul (EU) nr. 286/2011 (ATP 2 CLP)

Regulamentul (EU) nr. 618/2012 (ATP 3 CLP)

Regulamentul (EU) nr. 487/2013 (ATP 4 CLP)

Regulamentul (EU) nr. 944/2013 (ATP 5 CLP)

Regulamentul (EU) nr. 605/2014 (ATP 6 CLP)

Reglementările internaționale ale transportului de mărfuri periculoase (ADR, RID, IMDG, ICAO / IATA).

Regulamentul (EU) nr. 2015/1221 (ATP 7 CLP)

Regulamentul (EU) nr. 2016/918 (ATP 8 CLP)

Regulamentul (EU) nr. 2016/1179 (ATP 9 CLP)

Regulamentul (EU) nr. 2017/776 (ATP 10 CLP)

Regulamentul (EU) nr. 2018/669 (ATP 11 CLP)

Regulamentul (EU) nr. 2018/1480 (ATP 13 CLP)

Restricții referitoare la produsele sau substanțele conținute de acestea conform Anexei XVII

Regulamentul (CE) 1907/2006 (REACH) cu modificările ulterioare:

Restricții referitoare la produs:

Nu există restricții.

Restricții referitoare la substanțele conținute:

Nu există restricții.

Unde se aplica, orientați-vă după următoarele prevederi reglementare:

Directiva 2012/18/UE (Seveso III)

Regulamentul (CE) nr. 648/2004 (detergenții).

Directiva 2004/42/CE (COV)

Dispoziții în legătură cu directiva EU 2012/18 (Seveso III):

Categoria Seveso III conform Anexei 1, partea 1

NA

15.2. Evaluarea securității chimice

A fost efectuată o Evaluare de Securitate Chimică pentru substanța

### SECȚIUNEA 16: Alte informații

Clasa de pericol și categoria de pericol	Cod	Descriere
Eye Irrit. 2	3.3/2	Iritarea ochilor, Categoria 2

Acest document a fost întocmit de un tehnician competent în domeniul SDS și care este pregătit în mod corespunzător.

Principalele surse bibliografice:

ECDIN - Rețeaua de date și informații de mediu privind produsele chimice - Centrul comun de cercetare, Comisia Comunităților Europene



## Fișa cu date de securitate PHOSFIK PK

SAX PROPRIETĂȚI PERICULOASE ALE MATERIALELOR INDUSTRIALE - Ediția a opta -  
Van Nostrand Reinold

Aceste informații se bazează pe cunoștințele deținute la data menționată mai sus. Se referă numai la produsul menționat și nu constituie o garanție a calității pentru cazurile particulare. Este de datoria utilizatorului să se asigure că aceste informații sunt adecvate și corespund domeniului specific de utilizare.

Această FTS anulează și înlocuiește pe cele emise anterior.

ADR:	Acordul European referitor la Încărcătura Internațională de Bunuri Periculoase pe Drumuri
ATE:	Toxicitate Acută Estimată
ATEmix:	Estimarea toxicității acute (Amestecuri)
CAS:	Chemical Abstracts Service (departament al Societății Americane de Chimie)
CLP:	Clasificare, Etichetare, Ambalare
DNEL:	Nivel Derivat Fără Efect
EINECS:	Inventarul European al Substanțelor Chimice Existente pe piață
GefStoffVO:	Ordonanță în legătură cu Substanțele Periculoase, Germania
GHS:	Sistemul Mondial Armonizat de Clasificare și Etichetare a Produselor Chimice
IATA:	Asociația Internațională de Transport Aerian
IATA-DGR:	Regulamentul Bunurilor Periculoase conform "Asociației Internaționale de Transport Aerian" (IATA).
ICAO:	Organizația Internațională a Aviației Civile
ICAO-TI:	Instrucțiuni Tehnice conform "Organizației Internaționale a Aviației Civile" (ICAO).
IMDG:	Coduri Maritime Internaționale pentru Bunurile Periculoase
INCI:	Nomenclatura Internațională a Ingredientelor Cosmetice
KSt:	Coeficient de explozie
LC50:	Concentrația letală pentru un procent de 50% din populația test
LD50:	Doza letală pentru un procent de 50% din populația test
PNEC:	Concentrația Fără Efect Prevăzută
RID:	Regulamentul Referitor la Transportul Internațional de Bunuri Periculoase pe Calea Ferată
STEL:	Limita de Expunere pe Termen Scurt
STOT:	Toxicitatea pentru Organul Țintă Specific
TLV:	Valoarea Limită a Pragului
TWA:	O medie ponderată de timp
WGK:	Clasa Germană a Periculozității Apei

## All I – 1. Exposure scenario 1: Manufacture - Manufacture

<b>Environment contributing scenario(s):</b>	
Manufacture	ERC 1
<b>Worker contributing scenario(s):</b>	
Manufacturing in closed batch process	PROC 3
Manufacturing in batch process with opportunity for exposure	PROC 4
Charging/discharging in dedicated facilities	PROC 8b
Charging/discharging in non dedicated facilities	PROC 8a
Charging/discharging in small containers	PROC 9
Sampling	PROC 15

### 1.1. Environmental contributing scenario 1: Manufacture

#### 1.1.1. Conditions of use

<b>Amount used, frequency and duration of use (or from service life)</b>
• Daily use at site: <= 45 tonnes/day
• Annual use at a site: <= 900 tonnes/year
• Percentage of tonnage used at regional scale: = 100 %
<b>Conditions and measures related to sewage treatment plant</b>
• Municipal STP: Yes [Effectiveness Water: 0.013%]
• Discharge rate of STP: >= 2E3 m <sup>3</sup> /d
• Application of the STP sludge on agricultural soil: Yes
<b>Conditions and measures related to treatment of waste (including article waste)</b>
• Particular considerations on the waste treatment operations: No (low risk) (ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient.)
<b>Other conditions affecting environmental exposure</b>
• Receiving surface water flow rate: >= 1.8E4 m <sup>3</sup> /d

#### 1.1.2. Releases

The local releases to the environment are reported in the following table.

#### Local releases to the environment

Release	Release factor estimation method	Explanation / Justification
Water	Release factor	Initial release factor: 0.001% Final release factor: 0.001% Local release rate: 0.45 kg/day
Air	Release factor	Initial release factor: 0% Final release factor: 0% Local release rate: 0 kg/day
Soil	ERC based	Final release factor: 0.01%

#### 1.1.3. Exposure and risks for the environment and man via the environment

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The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

### Exposure concentrations and risks for the environment

Protection target	Exposure concentration	Risk characterisation
Freshwater	<b>Local PEC:</b> 0.027 mg/L	RCR = 0.198
Sediment (freshwater)	<b>Local PEC:</b> 0.1 mg/kg dw	RCR = 0.859
Marine water	<b>Local PEC:</b> 0.003 mg/L	RCR = 0.198
Sediment (marine water)	<b>Local PEC:</b> 0.01 mg/kg dw	RCR = 0.857
Sewage treatment plant	<b>Local PEC:</b> 0.225 mg/L	RCR < 0.01
Agricultural soil	<b>Local PEC:</b> 8.742E-4 mg/kg dw	RCR < 0.01
Man via Environment - Inhalation	<b>Local PEC:</b> 1.084E-13 mg/m <sup>3</sup>	RCR < 0.01
Man via Environment - Oral	<b>Exposure via food consumption:</b> 2.626E-4 mg/kg bw/day	RCR < 0.01
Man via environment - combined routes		RCR < 0.01

### Contribution to oral intake for man via the environment from local contribution

Type of food	Estimated daily dose	Concentration in food
Drinking water	1.682E-4 mg/kg bw/day	0.006 mg/L
Fish	4.836E-6 mg/kg bw/day	0.003 mg/kg ww
Leaf crops	6.213E-5 mg/kg bw/day	0.004 mg/kg ww
Root crops	2.745E-5 mg/kg bw/day	0.005 mg/kg ww
Meat	1.901E-9 mg/kg bw/day	4.42E-7 mg/kg ww
Milk	3.543E-8 mg/kg bw/day	4.42E-6 mg/kg ww

### Conclusion on risk characterisation

Production is made in dedicated facilities, where the substance is discharged directly in the final container and no cleaning/washing of the reaction tank/vessel is made between different batches. Water coming from the plant is not directly discharged in the municipal net.

In those conditions environmental risk is controlled

### 1.2. Worker contributing scenario 1: Manufacturing in closed batch process (PROC 3)

#### 1.2.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: Closed batch process with occasional controlled exposure	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3

## Fișa cu date de securitate PHOSFIK PK

	Method
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: No [Effectiveness Dermal: 0%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: One hand face only (240 cm <sup>2</sup> )	TRA Worker v3

### 1.2.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>0.69 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.012
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.024

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The risk is controlled in the common conditions of use

### 1.3. Worker contributing scenario 2: Manufacturing in batch process with opportunity for exposure (PROC 4)

#### 1.3.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: Semi-closed process with occasional controlled exposure	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3

## Fișa cu date de securitate PHOSFIK PK

	Method
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): <= 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands face (480 cm <sup>2</sup> )	TRA Worker v3

### 1.3.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>1.372 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.023
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.035

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

### 1.4. Worker contributing scenario 3: Charging/discharging in dedicated facilities (PROC 8b)

#### 1.4.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: Semi-closed process with occasional controlled exposure	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): <= 40 °C	TRA Worker v3

## Fișa cu date de securitate PHOSFIK PK

	Method
• Skin surface potentially exposed: Two hands (960 cm <sup>2</sup> )	TRA Worker v3

### 1.4.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	0.5 mg/m <sup>3</sup> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	2.742 mg/kg bw/day (TRA Worker v3)	RCR = 0.046
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.059

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

### 1.5. Worker contributing scenario 4: Charging/discharging in non dedicated facilities (PROC 8a)

#### 1.5.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: No	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands (960 cm <sup>2</sup> )	TRA Worker v3

### 1.5.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

## Fișa cu date de securitate PHOSFIK PK

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>2.742 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.046
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.059

### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

### 1.6. Worker contributing scenario 5: Charging/discharging in small containers (PROC 9)

#### 1.6.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: Semi-closed process with occasional controlled exposure	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands face (480 cm <sup>2</sup> )	TRA Worker v3

#### 1.6.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>1.372 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.023

## Fișa cu date de securitate PHOSFIK PK

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.035

### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

### **1.7. Worker contributing scenario 6: Sampling (PROC 15)**

#### **1.7.1. Conditions of use**

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: No	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: No [Effectiveness Dermal: 0%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: One hand face only (240 cm <sup>2</sup> )	TRA Worker v3

#### **1.7.2. Exposure and risks for workers**

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### **Exposure concentrations and risks for workers**

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>0.34 mg/kg bw/day</b> (TRA Worker v3)	RCR < 0.01
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.018

### Conclusion on risk characterisation



## Fișa cu date de securitate PHOSFIK PK

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The risk is controlled in common condition of use

## 2. Exposure scenario 2: Formulation - Formulation of the fertilizer

<b>Environment contributing scenario(s):</b>	
Formulation of the fertilizer	ERC 2
<b>Worker contributing scenario(s):</b>	
Formulation in closed batch process	PROC 3
Formulation in batch process with opportunity for exposure	PROC 4
Formulation with open contact	PROC 5
Charging/discharging in non dedicated facilities	PROC 8a
Charging/discharging in dedicated facilities	PROC 8b
Charging/discharging in small containers	PROC 9
Sampling	PROC 15

### 2.1. Environmental contributing scenario 1: Formulation of the fertilizer

#### 2.1.1. Conditions of use

<b>Amount used, frequency and duration of use (or from service life)</b>
• Daily use at site: $\leq 9.5$ tonnes/day
• Annual use at a site: $\leq 950$ tonnes/year
• Percentage of tonnage used at regional scale: = 100 %
<b>Conditions and measures related to sewage treatment plant</b>
• Municipal STP: Yes [Effectiveness Water: 0.013%]
• Discharge rate of STP: $\geq 2E3$ m <sup>3</sup> /d
• Application of the STP sludge on agricultural soil: Yes
<b>Conditions and measures related to treatment of waste (including article waste)</b>
• Particular considerations on the waste treatment operations: No (low risk) (ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient.)
<b>Other conditions affecting environmental exposure</b>
• Receiving surface water flow rate: $\geq 1.8E4$ m <sup>3</sup> /d

#### 2.1.2. Releases

The local releases to the environment are reported in the following table.

#### Local releases to the environment

Release	Release factor estimation method	Explanation / Justification
Water	Release factor	Initial release factor: 0.001% Final release factor: 0.001% Local release rate: 0.095 kg/day
Air	Release factor	Initial release factor: 0% Final release factor: 0% Local release rate: 0 kg/day
Soil	ERC based	Final release factor: 0.01%

### 2.1.3. Exposure and risks for the environment and man via the environment

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for the environment

Protection target	Exposure concentration	Risk characterisation
Freshwater	<b>Local PEC:</b> 0.009 mg/L	RCR = 0.069
Sediment (freshwater)	<b>Local PEC:</b> 0.035 mg/kg dw	RCR = 0.297
Marine water	<b>Local PEC:</b> 9.361E-4 mg/L	RCR = 0.068
Sediment (marine water)	<b>Local PEC:</b> 0.003 mg/kg dw	RCR = 0.296
Sewage treatment plant	<b>Local PEC:</b> 0.047 mg/L	RCR < 0.01
Agricultural soil	<b>Local PEC:</b> 7.919E-4 mg/kg dw	RCR < 0.01
Man via Environment - Inhalation	<b>Local PEC:</b> 1.084E-13 mg/m <sup>3</sup>	RCR < 0.01
Man via Environment - Oral	<b>Exposure via food consumption:</b> 2.6E-4 mg/kg bw/day	RCR < 0.01
Man via environment - combined routes		RCR < 0.01

#### Contribution to oral intake for man via the environment from local contribution

Type of food	Estimated daily dose	Concentration in food
Drinking water	1.701E-4 mg/kg bw/day	0.006 mg/L
Fish	4.892E-6 mg/kg bw/day	0.003 mg/kg ww
Leaf crops	5.887E-5 mg/kg bw/day	0.003 mg/kg ww
Root crops	2.601E-5 mg/kg bw/day	0.005 mg/kg ww
Meat	1.904E-9 mg/kg bw/day	4.427E-7 mg/kg ww
Milk	3.548E-8 mg/kg bw/day	4.427E-6 mg/kg ww

#### Conclusion on risk characterisation

Formulation is made in dedicated facilities, where the substance is discharged directly in the final container and no cleaning/washing of the reaction tank/vessel is made between different batches. Water coming from the plant are not directly discharged in the municipal net. In those conditions environmental risk is controlled.

### 2.2. Worker contributing scenario 1: Formulation in closed batch process (PROC 3)

#### 2.2.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: Closed batch process with occasional controlled exposure	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3

## Fișa cu date de securitate PHOSFIK PK

	Method
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: No [Effectiveness Dermal: 0%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: One hand face only (240 cm <sup>2</sup> )	TRA Worker v3

### 2.2.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>0.69 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.012
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.024

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The risk is controlled in the common conditions of use

### 2.3. Worker contributing scenario 2: Formulation in batch process with opportunity for exposure (PROC 4)

#### 2.3.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: Semi-closed process with occasional controlled exposure	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3

## Fișa cu date de securitate PHOSFIK PK

	Method
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): <= 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands face (480 cm <sup>2</sup> )	TRA Worker v3

### 2.3.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>1.372 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.023
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.035

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

### 2.4. Worker contributing scenario 3: Charging/discharging in non dedicated facilities (PROC 8a)

#### 2.4.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: No	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3

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	Method
• Process temperature (for liquid): $\leq 40\text{ }^{\circ}\text{C}$	TRA Worker v3
• Skin surface potentially exposed: Two hands (960 cm <sup>2</sup> )	TRA Worker v3

### 2.4.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>2.742 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.046
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.059

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

### 2.5. Worker contributing scenario 4: Charging/discharging in dedicated facilities (PROC 8b)

#### 2.5.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: Semi-closed process with occasional controlled exposure	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): $\leq 40\text{ }^{\circ}\text{C}$	TRA Worker v3
• Skin surface potentially exposed: Two hands (960 cm <sup>2</sup> )	TRA Worker v3

#### 2.5.2. Exposure and risks for workers

## Fișa cu date de securitate PHOSFIK PK

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>2.742 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.046
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.059

### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

## 2.6. Worker contributing scenario 5: Charging/discharging in small containers (PROC 9)

### 2.6.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: Semi-closed process with occasional controlled exposure	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands face (480 cm <sup>2</sup> )	TRA Worker v3

### 2.6.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012

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Route of exposure and type of effects	Exposure concentration	Risk characterisation
Dermal, systemic, long-term	<b>1.372 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.023
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.035

### **Conclusion on risk characterisation**

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

### **2.7. Worker contributing scenario 6: Sampling (PROC 15)**

#### **2.7.1. Conditions of use**

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: No	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: No [Effectiveness Dermal: 0%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: One hand face only (240 cm <sup>2</sup> )	TRA Worker v3

#### **2.7.2. Exposure and risks for workers**

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### **Exposure concentrations and risks for workers**

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>0.34 mg/kg bw/day</b> (TRA Worker v3)	RCR < 0.01
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.018

**Conclusion on risk characterisation**

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The risk is controlled in common condition of use

**2.8. Worker contributing scenario 7: Formulation with open contact (PROC 5)**

**2.8.1. Conditions of use**

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: >25%	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 4 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: No	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Basic	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands face (480 cm <sup>2</sup> )	TRA Worker v3

**2.8.2. Exposure and risks for workers**

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

**Exposure concentrations and risks for workers**

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.3 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR < 0.01
Dermal, systemic, long-term	<b>2.742 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.046
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.054

**Conclusion on risk characterisation**

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

### 3. Exposure scenario 3: Use by professional worker - Professional use as fertilizer-indoor

**Sector of use:**

SU 1, Agriculture, forestry, fishery

<b>Environment contributing scenario(s):</b>	
Professional use as fertilizer	ERC 8a
<b>Worker contributing scenario(s):</b>	
Professional mixing and blending of the fertilizer	PROC 5
Professional spraying	PROC 11
Charging/discharging in non dedicated facilities	PROC 8a
Charging/discharging in dedicated facilities	PROC 8b
Charging/discharging in small containers	PROC 9

#### 3.1. Environmental contributing scenario 1: Professional use as fertilizer

##### 3.1.1. Conditions of use

<b>Amount used, frequency and duration of use (or from service life)</b>
• Daily wide dispersive use: $\leq 1.1E-4$ tonnes/day
• Percentage of tonnage used at regional scale: = 10 %
<b>Conditions and measures related to sewage treatment plant</b>
• Municipal STP: Yes [Effectiveness Water: 0.013%]
• Discharge rate of STP: $\geq 2E3$ m <sup>3</sup> /d
• Application of the STP sludge on agricultural soil: Yes
<b>Conditions and measures related to treatment of waste (including article waste)</b>
• Particular considerations on the waste treatment operations: No (low risk) (ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient.)
<b>Other conditions affecting environmental exposure</b>
• Receiving surface water flow rate: $\geq 1.8E4$ m <sup>3</sup> /d

##### 3.1.2. Releases

The local releases to the environment are reported in the following table.

##### Local releases to the environment

Release	Release factor estimation method	Explanation / Justification
Water	ERC based	Initial release factor: 100% Final release factor: 100% Local release rate: 0.11 kg/day
Air	ERC based	Initial release factor: 100% Final release factor: 100%
Soil	ERC based	Final release factor: 0%

##### 3.1.3. Exposure and risks for the environment and man via the environment

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

##### Exposure concentrations and risks for the environment

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Protection target	Exposure concentration	Risk characterisation
Freshwater	<b>Local PEC:</b> 0.01 mg/L	RCR = 0.074
Sediment (freshwater)	<b>Local PEC:</b> 0.038 mg/kg dw	RCR = 0.321
Marine water	<b>Local PEC:</b> 0.001 mg/L	RCR = 0.074
Sediment (marine water)	<b>Local PEC:</b> 0.004 mg/kg dw	RCR = 0.32
Sewage treatment plant	<b>Local PEC:</b> 0.055 mg/L	RCR < 0.01
Agricultural soil	<b>Local PEC:</b> 7.954E-4 mg/kg dw	RCR < 0.01
Man via Environment - Inhalation	<b>Local PEC:</b> 1.084E-13 mg/m <sup>3</sup>	RCR < 0.01
Man via Environment - Oral	<b>Exposure via food consumption:</b> 3.836E-4 mg/kg bw/day	RCR < 0.01
Man via environment - combined routes		RCR < 0.01

### Contribution to oral intake for man via the environment from local contribution

Type of food	Estimated daily dose	Concentration in food
Drinking water	2.901E-4 mg/kg bw/day	0.01 mg/L
Fish	8.34E-6 mg/kg bw/day	0.005 mg/kg ww
Leaf crops	5.901E-5 mg/kg bw/day	0.003 mg/kg ww
Root crops	2.607E-5 mg/kg bw/day	0.005 mg/kg ww
Meat	2.693E-9 mg/kg bw/day	6.262E-7 mg/kg ww
Milk	5.019E-8 mg/kg bw/day	6.262E-6 mg/kg ww

### Conclusion on risk characterisation

The risk is controlled

## 3.2. Worker contributing scenario 1: Professional mixing and blending of the fertilizer (PROC 5)

### 3.2.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: >25%	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 4 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: No	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Basic	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3

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	Method
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): <= 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands face (480 cm <sup>2</sup> )	TRA Worker v3

### 3.2.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.3 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR < 0.01
Dermal, systemic, long-term	<b>2.742 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.046
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.054

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

### 3.3. Worker contributing scenario 2: Professional spraying (PROC 11)

#### 3.3.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: >25%	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 4 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: No	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Basic	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374 with basic employee training) [Effectiveness Dermal: 90%]	TRA Worker v3
• Respiratory Protection: Yes (Respirator with APF of 10) [Effectiveness Inhal: 90%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3

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	Method
• Process temperature (for liquid): $\leq 40$ °C	TRA Worker v3
• Skin surface potentially exposed: Two hands and upper wrists (1500 cm <sup>2</sup> )	TRA Worker v3

### 3.3.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>30.02 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.729
Dermal, systemic, long-term	<b>10.71 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.182
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.91

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves and respiratory protection is recommended

### 3.4. Worker contributing scenario 3: Charging/discharging in non dedicated facilities (PROC 8a)

#### 3.4.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: >25%	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 4 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: No	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Basic	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): $\leq 40$ °C	TRA Worker v3
• Skin surface potentially exposed: Two hands (960 cm <sup>2</sup> )	TRA Worker v3

### 3.4.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.3 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR < 0.01
Dermal, systemic, long-term	<b>2.742 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.046
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.054

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

### 3.5. Worker contributing scenario 4: Charging/discharging in dedicated facilities (PROC 8b)

#### 3.5.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: >25%	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 4 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: Semi-closed process with occasional controlled exposure	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Basic	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands (960 cm <sup>2</sup> )	TRA Worker v3

#### 3.5.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

## Fișa cu date de securitate PHOSFIK PK

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.3 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR < 0.01
Dermal, systemic, long-term	<b>2.742 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.046
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.054

### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

### 3.6. Worker contributing scenario 5: Charging/discharging in small containers (PROC 9)

#### 3.6.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: >25%	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 4 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: Semi-closed process with occasional controlled exposure	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Basic	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands face (480 cm <sup>2</sup> )	TRA Worker v3

#### 3.6.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.3 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR < 0.01
Dermal, systemic, long-term	<b>1.372 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.023



## Fișa cu date de securitate PHOSFIK PK

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.031

### **Conclusion on risk characterisation**

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

#### 4. Exposure scenario 4: Use by professional worker - Professional use as fertilizer-outdoor

**Sector of use:**

SU 1, Agriculture, forestry, fishery

<b>Environment contributing scenario(s):</b>	
Professional use as fertilizer	ERC 8d
<b>Worker contributing scenario(s):</b>	
Professional mixing and blending of the fertilizer	PROC 5
Professional spraying	PROC 11
Charging/discharging in non dedicated facilities	PROC 8a
Charging/discharging in dedicated facilities	PROC 8b
Charging/discharging in small containers	PROC 9

#### 4.1. Environmental contributing scenario 1: Professional use as fertilizer

##### 4.1.1. Conditions of use

<b>Amount used, frequency and duration of use (or from service life)</b>
• Daily wide dispersive use: $\leq 2.75E-4$ tonnes/day
• Percentage of tonnage used at regional scale: = 10 %
<b>Conditions and measures related to sewage treatment plant</b>
• Municipal STP: Yes [Effectiveness Water: 0.013%]
• Discharge rate of STP: $\geq 2E3$ m <sup>3</sup> /d
• Application of the STP sludge on agricultural soil: Yes
<b>Conditions and measures related to treatment of waste (including article waste)</b>
• Particular considerations on the waste treatment operations: No (low risk) (ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient.)
<b>Other conditions affecting environmental exposure</b>
• Receiving surface water flow rate: $\geq 1.8E4$ m <sup>3</sup> /d

##### 4.1.2. Releases

The local releases to the environment are reported in the following table.

##### Local releases to the environment

Release	Release factor estimation method	Explanation / Justification
Water	ERC based	Initial release factor: 100% Final release factor: 100% Local release rate: 0.275 kg/day
Air	ERC based	Initial release factor: 100% Final release factor: 100%
Soil	ERC based	Final release factor: 20%

##### 4.1.3. Exposure and risks for the environment and man via the environment

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

##### Exposure concentrations and risks for the environment

## Fișa cu date de securitate PHOSFIK PK

Protection target	Exposure concentration	Risk characterisation
Freshwater	Local PEC: 0.018 mg/L	RCR = 0.134
Sediment (freshwater)	Local PEC: 0.068 mg/kg dw	RCR = 0.582
Marine water	Local PEC: 0.002 mg/L	RCR = 0.134
Sediment (marine water)	Local PEC: 0.007 mg/kg dw	RCR = 0.581
Sewage treatment plant	Local PEC: 0.138 mg/L	RCR < 0.01
Agricultural soil	Local PEC: 8.337E-4 mg/kg dw	RCR < 0.01
Man via Environment - Inhalation	Local PEC: 1.084E-13 mg/m <sup>3</sup>	RCR < 0.01
Man via Environment - Oral	Exposure via food consumption: 6.282E-4 mg/kg bw/day	RCR < 0.01
Man via environment - combined routes		RCR < 0.01

### Contribution to oral intake for man via the environment from local contribution

Type of food	Estimated daily dose	Concentration in food
Drinking water	5.258E-4 mg/kg bw/day	0.018 mg/L
Fish	1.512E-5 mg/kg bw/day	0.009 mg/kg ww
Leaf crops	6.052E-5 mg/kg bw/day	0.004 mg/kg ww
Root crops	2.674E-5 mg/kg bw/day	0.005 mg/kg ww
Meat	4.247E-9 mg/kg bw/day	9.877E-7 mg/kg ww
Milk	7.915E-8 mg/kg bw/day	9.877E-6 mg/kg ww

### Conclusion on risk characterisation

The risk is controlled

## 4.2. Worker contributing scenario 1: Professional mixing and blending of the fertilizer (PROC 5)

### 4.2.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: >25%	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 4 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• Containment: No	TRA Worker v3
• Occupational Health and Safety Management System: Basic	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3

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	Method
<b>Other conditions affecting workers exposure</b>	
• Place of use: Outdoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands face (480 cm <sup>2</sup> )	TRA Worker v3

### 4.2.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.21 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR < 0.01
Dermal, systemic, long-term	<b>2.742 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.046
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.052

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

### 4.3. Worker contributing scenario 2: Professional spraying (PROC 11)

#### 4.3.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: >25%	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 4 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• Containment: No	TRA Worker v3
• Occupational Health and Safety Management System: Basic	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: Yes (Respirator with APF of 10) [Effectiveness Inhal: 90%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Outdoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands and upper wrists (1500 cm <sup>2</sup> )	TRA Worker v3

### 4.3.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>21.01 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.51
Dermal, systemic, long-term	<b>21.43 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.363
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.873

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves and respiratory protection is recommended for prolonged exposure times

### 4.4. Worker contributing scenario 3: Charging/discharging in non dedicated facilities (PROC 8a)

#### 4.4.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: >25%	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 4 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• Containment: No	TRA Worker v3
• Occupational Health and Safety Management System: Basic	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhl: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Outdoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands (960 cm <sup>2</sup> )	TRA Worker v3

### 4.4.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.21 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR < 0.01

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Route of exposure and type of effects	Exposure concentration	Risk characterisation
Dermal, systemic, long-term	<b>2.742 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.046
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.052

### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

### **4.5. Worker contributing scenario 4: Charging/discharging in dedicated facilities (PROC 8b)**

#### **4.5.1. Conditions of use**

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: >25%	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 4 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• Containment: Semi-closed process with occasional controlled exposure	TRA Worker v3
• Occupational Health and Safety Management System: Basic	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Outdoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands (960 cm <sup>2</sup> )	TRA Worker v3

#### **4.5.2. Exposure and risks for workers**

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### **Exposure concentrations and risks for workers**

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.21 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR < 0.01
Dermal, systemic, long-term	<b>2.742 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.046
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.052

### Conclusion on risk characterisation

## Fișa cu date de securitate PHOSFIK PK

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

### 4.6. Worker contributing scenario 5: Charging/discharging in small containers (PROC 9)

#### 4.6.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: >25%	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 4 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• Containment: Semi-closed process with occasional controlled exposure	TRA Worker v3
• Occupational Health and Safety Management System: Basic	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: Yes (chemically resistant gloves conforming to EN374) [Effectiveness Dermal: 80%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Outdoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands face (480 cm <sup>2</sup> )	TRA Worker v3

#### 4.6.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.21 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR < 0.01
Dermal, systemic, long-term	<b>1.372 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.023
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.028

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The use of gloves is recommended for prolonged exposure times

## 5. Exposure scenario 5: Consumer Use - Consumer Use as fertilizer-indoor

<b>Environment contributing scenario(s):</b>	
Consumer Use as fertilizer	ERC 8a
<b>Consumer contributing scenario(s):</b>	
Consumer use as fertilizer	PC 12

### 5.1. Environmental contributing scenario 1: Consumer Use as fertilizer

#### 5.1.1. Conditions of use

<b>Amount used, frequency and duration of use (or from service life)</b>
• Daily wide dispersive use: $\leq 2.75E-6$ tonnes/day
• Percentage of tonnage used at regional scale: = 10 %
<b>Conditions and measures related to treatment of waste (including article waste)</b>
• Particular considerations on the waste treatment operations: No (low risk) (ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient.)
<b>Other conditions affecting environmental exposure</b>
• Municipal STP: Yes [Effectiveness Water: 0.013%]
• Discharge rate of STP: $\geq 2E3$ m <sup>3</sup> /d
• Application of the STP sludge on agricultural soil: Yes
• Receiving surface water flow rate: $\geq 1.8E4$ m <sup>3</sup> /d

#### 5.1.2. Releases

The local releases to the environment are reported in the following table.

#### Local releases to the environment

Release	Release factor estimation method	Explanation / Justification
Water	ERC based	Initial release factor: 100% Final release factor: 100% Local release rate: 0.003 kg/day
Air	ERC based	Initial release factor: 100% Final release factor: 100%
Soil	ERC based	Final release factor: 0%

#### 5.1.3. Exposure and risks for the environment and man via the environment

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for the environment

Protection target	Exposure concentration	Risk characterisation
Freshwater	Local PEC: 0.005 mg/L	RCR = 0.035
Sediment (freshwater)	Local PEC: 0.018 mg/kg dw	RCR = 0.152
Marine water	Local PEC: 4.749E-4 mg/L	RCR = 0.035
Sediment (marine water)	Local PEC: 0.002 mg/kg dw	RCR = 0.15
Sewage treatment plant	Local PEC: 0.001 mg/L	RCR < 0.01

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Protection target	Exposure concentration	Risk characterisation
Agricultural soil	<b>Local PEC:</b> 7.705E-4 mg/kg dw	RCR < 0.01
Man via Environment - Inhalation	<b>Local PEC:</b> 1.084E-13 mg/m <sup>3</sup>	RCR < 0.01
Man via Environment - Oral	<b>Exposure via food consumption:</b> 2.311E-4 mg/kg bw/day	RCR < 0.01
Man via environment - combined routes		RCR < 0.01

### Contribution to oral intake for man via the environment from local contribution

Type of food	Estimated daily dose	Concentration in food
Drinking water	1.435E-4 mg/kg bw/day	0.005 mg/L
Fish	3.936E-6 mg/kg bw/day	0.002 mg/kg ww
Leaf crops	5.802E-5 mg/kg bw/day	0.003 mg/kg ww
Root crops	2.563E-5 mg/kg bw/day	0.005 mg/kg ww
Meat	1.726E-9 mg/kg bw/day	4.014E-7 mg/kg ww
Milk	3.217E-8 mg/kg bw/day	4.014E-6 mg/kg ww

### Conclusion on risk characterisation

The risk is controlled

## 5.2. Consumer contributing scenario 1: Consumer use as fertilizer (PC 12)

### 5.2.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Product/Article subcategory: Lawn and garden preparations	TRA Consumer v3
• Concentration of substance in mixture: = 0.5 g/g	TRA Consumer v3
• Negligible release to air expected: Yes	TRA Consumer v3
<b>Other conditions affecting consumers exposure</b>	
• Body parts potentially exposed: Hands	TRA Consumer v3
• Dermal transfer factor: = 0.1	TRA Consumer v3
• Oral transfer factor: = 0.01 <i>No oral exposure is expected during use of the product. If for some reason an indirect exposure is present, it can be considered an occasional exposure, since fertilizer application for a consumer is generally performed twice a year.</i>	TRA Consumer v3

### 5.2.2. Exposure and risks for consumers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for consumers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0 mg/m<sup>3</sup></b> (TRA Consumer v3)	RCR < 0.01



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Route of exposure and type of effects	Exposure concentration	Risk characterisation
Dermal, systemic, long-term	<b>7.146 mg/kg bw/day</b> (TRA Consumer v3)	RCR = 0.246
Eye, local		Qualitative (see below)
Oral, systemic, long-term	<b>0.15 mg/kg bw/day</b> (TRA Consumer v3)	RCR = 0.052
Combined routes, systemic, long-term		RCR = 0.298

### **Conclusion on risk characterisation**

Since the substance is classified as slight irritant to the eyes, the use of glasses is recommended. In case of exposure, rinse with abundant water.

No risk is expected in common conditions of use

## 6. Exposure scenario 6: Consumer Use - Consumer Use as fertilizer-outdoor

<b>Environment contributing scenario(s):</b>	
Consumer Use as fertilizer	ERC 8d, ERC 8a
<b>Consumer contributing scenario(s):</b>	
Consumer use as fertilizer	PC 12

### 6.1. Environmental contributing scenario 1: Consumer Use as fertilizer

#### 6.1.1. Conditions of use

<b>Amount used, frequency and duration of use (or from service life)</b>
• Daily wide dispersive use: $\leq 2.75E-6$ tonnes/day
• Percentage of tonnage used at regional scale: = 10 %
<b>Conditions and measures related to treatment of waste (including article waste)</b>
• Particular considerations on the waste treatment operations: No (low risk) (ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient.)
<b>Other conditions affecting environmental exposure</b>
• Municipal STP: Yes [Effectiveness Water: 0.013%]
• Discharge rate of STP: $\geq 2E3$ m <sup>3</sup> /d
• Application of the STP sludge on agricultural soil: Yes
• Receiving surface water flow rate: $\geq 1.8E4$ m <sup>3</sup> /d

#### 6.1.2. Releases

The local releases to the environment are reported in the following table.

#### Local releases to the environment

Release	Release factor estimation method	Explanation / Justification
Water	ERC based	Initial release factor: 100% Final release factor: 100% Local release rate: 0.003 kg/day
Air	ERC based	Initial release factor: 100% Final release factor: 100%
Soil	ERC based	Final release factor: 20%

#### 6.1.3. Exposure and risks for the environment and man via the environment

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for the environment

Protection target	Exposure concentration	Risk characterisation
Freshwater	Local PEC: 0.005 mg/L	RCR = 0.035
Sediment (freshwater)	Local PEC: 0.018 mg/kg dw	RCR = 0.152
Marine water	Local PEC: 4.749E-4 mg/L	RCR = 0.035
Sediment (marine water)	Local PEC: 0.002 mg/kg dw	RCR = 0.15
Sewage treatment plant	Local PEC: 0.001 mg/L	RCR < 0.01

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Protection target	Exposure concentration	Risk characterisation
Agricultural soil	<b>Local PEC:</b> 7.705E-4 mg/kg dw	RCR < 0.01
Man via Environment - Inhalation	<b>Local PEC:</b> 1.084E-13 mg/m <sup>3</sup>	RCR < 0.01
Man via Environment - Oral	<b>Exposure via food consumption:</b> 2.311E-4 mg/kg bw/day	RCR < 0.01
Man via environment - combined routes		RCR < 0.01

### Contribution to oral intake for man via the environment from local contribution

Type of food	Estimated daily dose	Concentration in food
Drinking water	1.435E-4 mg/kg bw/day	0.005 mg/L
Fish	3.936E-6 mg/kg bw/day	0.002 mg/kg ww
Leaf crops	5.802E-5 mg/kg bw/day	0.003 mg/kg ww
Root crops	2.563E-5 mg/kg bw/day	0.005 mg/kg ww
Meat	1.726E-9 mg/kg bw/day	4.014E-7 mg/kg ww
Milk	3.217E-8 mg/kg bw/day	4.014E-6 mg/kg ww

### Conclusion on risk characterisation

The risk is controlled

## 6.2. Consumer contributing scenario 1: Consumer use as fertilizer (PC 12)

### 6.2.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Product/Article subcategory: Lawn and garden preparations	TRA Consumer v3
• Concentration of substance in mixture: = 0.5 g/g	TRA Consumer v3
• Negligible release to air expected: Yes	TRA Consumer v3
<b>Other conditions affecting consumers exposure</b>	
• Body parts potentially exposed: Hands	TRA Consumer v3
• Dermal transfer factor: = 0.1	TRA Consumer v3
• Oral transfer factor: = 0.01 <i>No oral exposure is expected during use of the product. If for some reason an indirect exposure is present, it can be considered an occasional exposure, since fertilizer application for a consumer is generally performed twice a year.</i>	TRA Consumer v3

### 6.2.2. Exposure and risks for consumers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for consumers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0 mg/m<sup>3</sup></b> (TRA Consumer v3)	RCR < 0.01



## Fișa cu date de securitate PHOSFIK PK

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Dermal, systemic, long-term	<b>7.146 mg/kg bw/day</b> (TRA Consumer v3)	RCR = 0.246
Eye, local		Qualitative (see below)
Oral, systemic, long-term	<b>0.15 mg/kg bw/day</b> (TRA Consumer v3)	RCR = 0.052
Combined routes, systemic, long-term		RCR = 0.298

### **Conclusion on risk characterisation**

Since the substance is classified as slight irritant to the eyes, the use of glasses is recommended. In case of exposure, rinse with abundant water.

No risk is expected in common conditions of use

## 7. Exposure scenario 7: Use at industrial site - Industrial use as intermediate

### Sector of use:

SU 9, Manufacture of fine chemicals

<b>Environment contributing scenario(s):</b>	
Industrial use as intermediate	ERC 6a
<b>Worker contributing scenario(s):</b>	
Industrial use in closed process, no exposure	PROC 1
Industrial use in closed continuous process with occasional exposure	PROC 2
Industrial use in closed batch process	PROC 3
Industrial use in batch process with opportunity for exposure	PROC 4
Charging/discharging in non dedicated facilities	PROC 8a
Charging/discharging in dedicated facilities	PROC 8b
Charging/discharging in small containers	PROC 9
Sampling	PROC 15

### 7.1. Environmental contributing scenario 1: Industrial use as intermediate

#### 7.1.1. Conditions of use

<b>Amount used, frequency and duration of use (or from service life)</b>
• Daily use at site: $\leq 10$ tonnes/day
• Annual use at a site: $\leq 200$ tonnes/year
• Percentage of tonnage used at regional scale: = 100 %
<b>Conditions and measures related to sewage treatment plant</b>
• Municipal STP: Yes [Effectiveness Water: 0.013%]
• Discharge rate of STP: $\geq 2E3$ m <sup>3</sup> /d
• Application of the STP sludge on agricultural soil: Yes
<b>Conditions and measures related to treatment of waste (including article waste)</b>
• Particular considerations on the waste treatment operations: No (low risk) (ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient.)
<b>Other conditions affecting environmental exposure</b>
• Receiving surface water flow rate: $\geq 1.8E4$ m <sup>3</sup> /d

#### 7.1.2. Releases

The local releases to the environment are reported in the following table.

#### Local releases to the environment

Release	Release factor estimation method	Explanation / Justification
Water	Release factor	<b>Initial release factor:</b> 0.001% <b>Final release factor:</b> 0.001% <b>Local release rate:</b> 0.1 kg/day
Air	Release factor	<b>Initial release factor:</b> 0%

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Release	Release factor estimation method	Explanation / Justification
		<b>Final release factor: 0%</b> <b>Local release rate: 0 kg/day</b>
<b>Soil</b>	ERC based	<b>Final release factor: 0.1%</b>

### 7.1.3. Exposure and risks for the environment and man via the environment

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for the environment

Protection target	Exposure concentration	Risk characterisation
Freshwater	<b>Local PEC: 0.01 mg/L</b>	RCR = 0.07
Sediment (freshwater)	<b>Local PEC: 0.036 mg/kg dw</b>	RCR = 0.305
Marine water	<b>Local PEC: 9.611E-4 mg/L</b>	RCR = 0.07
Sediment (marine water)	<b>Local PEC: 0.004 mg/kg dw</b>	RCR = 0.304
Sewage treatment plant	<b>Local PEC: 0.05 mg/L</b>	RCR < 0.01
Agricultural soil	<b>Local PEC: 7.931E-4 mg/kg dw</b>	RCR < 0.01
Man via Environment - Inhalation	<b>Local PEC: 1.084E-13 mg/m<sup>3</sup></b>	RCR < 0.01
Man via Environment - Oral	<b>Exposure via food consumption:</b> 2.348E-4 mg/kg bw/day	RCR < 0.01
Man via environment - combined routes		RCR < 0.01

#### Contribution to oral intake for man via the environment from local contribution

Type of food	Estimated daily dose	Concentration in food
Drinking water	1.457E-4 mg/kg bw/day	0.005 mg/L
Fish	4.048E-6 mg/kg bw/day	0.002 mg/kg ww
Leaf crops	5.892E-5 mg/kg bw/day	0.003 mg/kg ww
Root crops	2.603E-5 mg/kg bw/day	0.005 mg/kg ww
Meat	1.743E-9 mg/kg bw/day	4.054E-7 mg/kg ww
Milk	3.249E-8 mg/kg bw/day	4.054E-6 mg/kg ww

#### Conclusion on risk characterisation

Production is made in dedicated facilities, where the substance is discharged directly in the final container and no cleaning/washing of the reaction tank/vessel is made between different batches.

Water coming from the plant are not directly discharged in the municipal net.

In those conditions environmental risk is controlled

### 7.2. Worker contributing scenario 1: Industrial use in closed process, no exposure (PROC 1)

#### 7.2.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	

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	Method
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: Closed system (minimal contact during routine operations)	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: No [Effectiveness Dermal: 0%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): <= 40 °C	TRA Worker v3
• Skin surface potentially exposed: One hand face only (240 cm <sup>2</sup> )	TRA Worker v3

### 7.2.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.05 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR < 0.01
Dermal, systemic, long-term	<b>0.034 mg/kg bw/day</b> (TRA Worker v3)	RCR < 0.01
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR < 0.01

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The risk is controlled in the common conditions of use

### 7.3. Worker contributing scenario 2: Industrial use in closed continuous process with occasional exposure (PROC 2)

#### 7.3.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3

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	Method
• Containment: Closed continuous process with occasional controlled exposure	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: No [Effectiveness Dermal: 0%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands face (480 cm <sup>2</sup> )	TRA Worker v3

### 7.3.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>1.37 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.023
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.035

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The risk is controlled in the common conditions of use

### 7.4. Worker contributing scenario 3: Industrial use in closed batch process (PROC 3)

#### 7.4.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: Closed batch process with occasional controlled exposure	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	

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	Method
• Dermal Protection: No [Effectiveness Dermal: 0%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): <= 40 °C	TRA Worker v3
• Skin surface potentially exposed: One hand face only (240 cm <sup>2</sup> )	TRA Worker v3

### 7.4.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>0.69 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.012
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.024

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The risk is controlled in the common conditions of use

### 7.5. Worker contributing scenario 4: Industrial use in batch process with opportunity for exposure (PROC 4)

#### 7.5.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: Semi-closed process with occasional controlled exposure	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: No [Effectiveness Dermal: 0%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3

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	Method
• Process temperature (for liquid): $\leq 40$ °C	TRA Worker v3
• Skin surface potentially exposed: Two hands face (480 cm <sup>2</sup> )	TRA Worker v3

### 7.5.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>6.86 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.116
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.128

#### Conclusion on risk characterisation

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The risk is controlled in the common conditions of use

### 7.6. Worker contributing scenario 5: Charging/discharging in non dedicated facilities (PROC 8a)

#### 7.6.1. Conditions of use

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: No	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: No [Effectiveness Dermal: 0%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): $\leq 40$ °C	TRA Worker v3
• Skin surface potentially exposed: Two hands (960 cm <sup>2</sup> )	TRA Worker v3

### 7.6.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

**Exposure concentrations and risks for workers**

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>13.71 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.232
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.245

**Conclusion on risk characterisation**

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The risk is controlled in the common conditions of use

**7.7. Worker contributing scenario 6: Charging/discharging in dedicated facilities (PROC 8b)**

**7.7.1. Conditions of use**

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: Semi-closed process with occasional controlled exposure	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: No [Effectiveness Dermal: 0%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands (960 cm <sup>2</sup> )	TRA Worker v3

**7.7.2. Exposure and risks for workers**

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

**Exposure concentrations and risks for workers**

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012

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Route of exposure and type of effects	Exposure concentration	Risk characterisation
Dermal, systemic, long-term	<b>13.71 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.232
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.245

### **Conclusion on risk characterisation**

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The risk is controlled in the common conditions of use

### **7.8. Worker contributing scenario 7: Charging/discharging in small containers (PROC 9)**

#### **7.8.1. Conditions of use**

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: Semi-closed process with occasional controlled exposure	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: No [Effectiveness Dermal: 0%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: Two hands face (480 cm <sup>2</sup> )	TRA Worker v3

#### **7.8.2. Exposure and risks for workers**

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

#### **Exposure concentrations and risks for workers**

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>6.86 mg/kg bw/day</b> (TRA Worker v3)	RCR = 0.116
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.128

**Conclusion on risk characterisation**

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The risk is controlled in the common conditions of use

**7.9. Worker contributing scenario 8: Sampling (PROC 15)**

**7.9.1. Conditions of use**

	Method
<b>Product (article) characteristics</b>	
• Concentration of substance in mixture: Substance as such	TRA Worker v3
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Duration of activity: < 8 hours	TRA Worker v3
<b>Technical and organisational conditions and measures</b>	
• General ventilation: Basic general ventilation (1-3 air changes per hour)	TRA Worker v3
• Containment: No	TRA Worker v3
• Local exhaust ventilation: no [Effectiveness Inhal: 0%]	TRA Worker v3
• Occupational Health and Safety Management System: Advanced	TRA Worker v3
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
• Dermal Protection: No [Effectiveness Dermal: 0%]	TRA Worker v3
• Respiratory Protection: No [Effectiveness Inhal: 0%]	TRA Worker v3
<b>Other conditions affecting workers exposure</b>	
• Place of use: Indoor	TRA Worker v3
• Process temperature (for liquid): ≤ 40 °C	TRA Worker v3
• Skin surface potentially exposed: One hand face only (240 cm <sup>2</sup> )	TRA Worker v3

**7.9.2. Exposure and risks for workers**

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

**Exposure concentrations and risks for workers**

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	<b>0.5 mg/m<sup>3</sup></b> (TRA Worker v3)	RCR = 0.012
Dermal, systemic, long-term	<b>0.34 mg/kg bw/day</b> (TRA Worker v3)	RCR < 0.01
Eye, local		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.018

**Conclusion on risk characterisation**

The substance is classified as slight irritant for the eyes. Use of glasses is recommended during manual operations

The risk is controlled in the common conditions of use

## **AII. II - RISK CHARACTERISATION RELATED TO COMBINED EXPOSURE**

### **1. Human health**

#### **1.1. Workers**

Not relevant

#### **1.2. Consumer**

Not relevant

### **2. Environment (combined for all emission sources)**

#### **2.1. All uses (regional scale)**

##### **2.1.1. Total releases**

The total releases to the environment from all the exposure scenarios covered are presented in the table below. This is the sum of the releases to the environments from all exposure scenarios addressed.

**Total releases to the environment per year from all life cycle stages:**

<b>Release route</b>	<b>Total releases per year</b>
Water	7.1E5 kg/year
Air	7.1E5 kg/year
Soil	1.014E5 kg/year

##### **2.1.2. Regional exposure**

###### **Environment**

The regional predicted environmental concentration (PEC regional) and the related risk characterisation ratios when a PNEC is available are presented in the table below.

The PEC regional have been estimated with EUSES.

**Predicted regional exposure concentrations (Regional PEC)**

<b>Protection target</b>	<b>Regional PEC</b>	<b>RCR</b>
Freshwater	0.005 mg/L	0.034
Sediment (freshwater)	0.015 mg/kg dw	0.128
Marine water	4.612E-4 mg/L	0.034
Sediment (marine water)	0.002 mg/kg dw	0.129
Air	1.084E-13 mg/m <sup>3</sup>	
Agricultural soil	7.699E-4 mg/kg dw	< 0.01

###### **Man via environment**

The exposure to man via the environment from regional exposure and the related risk characterisation ratios are presented in the table below. The exposure concentration via inhalation is equal to the PEC air.

**Regional exposure to man via the environment**

<b>Route</b>	<b>Regional exposure</b>	<b>RCR</b>
Inhalation	1.084E-13 mg/m <sup>3</sup>	< 0.01
Oral	2.31E-4 mg/kg bw/day	< 0.01
Combined routes		< 0.01

#### **2.2. Local exposure due to all wide dispersive uses**

###### **Environment**

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The predicted local environmental concentrations (PEC local) based on the releases from all widespread uses are reported in the table below together with the risk characterisation ratio when a PNEC is available. Those exposure estimates have been obtained with EUSES.

### **Predicted environmental concentration and risk characterisation ratio for the environment due to all wide dispersive uses**

Protection target	PEC local due to all wide dispersive uses	RCR
Freshwater	0.024 mg/L	0.177
Sediment (freshwater)	0.089 mg/kg dw	0.765
Marine water	0.002 mg/L	0.176
Sediment (marine water)	0.009 mg/kg dw	0.763
Sewage treatment plant	0.195 mg/L	< 0.01
Agricultural soil	8.604E-4 mg/kg dw	< 0.01

### **Man via environment**

The exposure to man via the environment based on the releases from all widespread uses are reported in the table below together with the risk characterisation ratio when a DNEL is available. Those exposure estimates have been obtained with EUSES.

### **Exposure and risk characterisation ratio for man via the environment due to all wide dispersive uses**

Protection target	Exposure concentration due to all wide dispersive uses	RCR
Inhalation	1.084E-13 mg/m <sup>3</sup>	< 0.01
Oral	7.995E-4 mg/kg bw/day	< 0.01
Combined routes		< 0.01

### **2.3. Local exposure due to combined uses at a site**

Not relevant