

FISA CU DATE DE SECURITATE

conform Anexei la Regulamentul European nr. 830/2015 care modifica Reg (EC) nr. 1907/2006 si Reg. (UE) nr. 453/2010 privind inregistrarea, evaluarea, autorizarea si restrictionarea substantelor chimice (REACH)

”SOLVER”

SECȚIUNEA 1. IDENTIFICAREA SUBSTANTEI AMESTECULUI SI A SOCIETATII

1.1. Element de identificare al produsului

Denumire comerciala a produsului: **SOLVER**

Tip produs: polimer POLIMETILAMINA (PMTA)

Denumire chimica a componentului principal: 2-aminoethanol

Numar EC component principal: 205-483-3

Numar CAS component principal: 141-43-5

Numar INDEX: 603-030-00-8

Numar de inregistrare REACH POLIMETILAMINA (PMTA): Polimer exceptat de la inregistrare, conform Art. 6 (3) al Reg. REACH, cu conditia inregistrarii monomerului – component principal

Numar inregistrare REACH 2-aminoethanol, al importatorului: 01-2119486455-28-0048

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

Utilizările recomandate pentru acest produs sunt in conformitate cu cele descrise si evaluate în Raportul de Securitate Chimică (CSR), in cadrul procedurii de inregistrare REACH.

Utilizări industriale: Solvent, solvent pentru industria vopselurilor, industria tipografica, flexografie, fabricarea degresantilor, fabricarea agentilor de curatare, detergentilor.

Utilizări profesionale: Solvent, solvent pentru industria vopselurilor, industria tipografica, flexografie, degresant, agent de curatare.

1.3. Detalii privind furnizorul fișei cu date de securitate

Numele companiei importatoare: **ENKOMART INTERNATIONAL SRL.**

Adresa: Str. Aleea Vasile Goldis nr.2 A, Complex A39, Bl.1, sp 4, sector 3, Bucuresti.
Romania.

Email: enkomart@gmail.com

Numele companiei distribuitoare (procesator): **CHEM FACTORY SRL.**

Adresa: str. Principala nr.924A, Carpinis, loc. Tarlungeni, jud. Brasov

Telefon: +40 234 220 220; +40 757 743 790

Email: office@chemfactory.ro

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

Birou pentru Regulamentul International și Informare Toxicologică

Telefon: +40 21 318 3606 (Luni – Vineri; în intervalul orar 8.00 – 15.00).

Adresa: str. Dr. Leonte, nr.1-3, sector 5, București, România.

Telefon unic de urgenta: 112

SECȚIUNEA 2. IDENTIFICAREA PERICOLELOR

2.1 Clasificarea substanței sau al amestecului:

Denumirea produsului: **SOLVER**

FISA CU DATE DE SECURITATE

conform Anexei la Regulamentul European nr. 830/2015 care modifica Reg (EC) nr. 1907/2006 si Reg. (UE) nr. 453/2010 privind inregistrarea, evaluarea, autorizarea si restrictionarea substantelor chimice (REACH)

”SOLVER”

Clasificarea conform Regulamentului European (EC) nr. 1272/2008, precum si in urma evaluarii securitatii chimice:

Clase de pericol	Codul pentru clasa de pericol si categoria de pericol	Fraze de pericol
Lichid inflamabil	Flam. Liq 2	H 225 – Lichid si vapori foarte inflamabili.

Efecte adverse fizico-chimice, asupra sanatatii umane si asupra mediului

Produsul prezinta pericol de inflamabilitate. Prodsul nu este considerat ca avand efecte nocive asupra lucratorilor sau de ecotoxicitate asupra mediului inconjurator. Insa se recomanda respectarea tuturor masurilor de precautie aplicabile substantelor chimice, cand se lucreaza cu acest produs.

2.2 Elemente pentru etichetă

Etichetare conform criteriilor Regulamentului European (EC) nr. 1272/2008, cu modificari si completari ulterioare:

Denumirea etichetei: **SOLVER**

Cuvant de avertizare: **PERICOL**

Simbol de pericol:



GHS02- foarte inflamabil

Frază de pericol

H225: Lichid și vapori foarte inflamabili.

Fraze de precauție: Prevenire

P 210 A se păstra departe de surse de căldură, suprafețe fierbinți, scânteii, flăcări și alte surse de aprindere. Fumatul interzis.

P233 Păstrați recipientul închis etanș.

P240 Legătură la pământ și conexiune echipotențială cu recipientul și cu echipamentul de recepție.

P241 Utilizați echipamente electrice, de ventilare, de iluminat, antideflagrante.

P242 Nu utilizați unelte care produc scânteii.

P243 Luați măsuri de precauție împotriva descărcărilor 2omponent2tic.

P280 Purtați mănuși de protecție, îmbrăcăminte de protecție, echipament de protecție a ochilor și echipament de protecție a feței.

Fraze de precauție: Intervenție

P303 + P361 + P353 ÎN CAZ DE CONTACT CU PIELEA (sau părul): Scoateți imediat toată îmbrăcăminte contaminată. Clătiți pielea cu apă.

P370 + P378 În caz de incendiu: Utilizați spumă rezistentă la alcool pentru stingere.

FISA CU DATE DE SECURITATE

conform Anexei la Regulamentul European nr. 830/2015 care modifica Reg (EC) nr. 1907/2006 si Reg. (UE) nr. 453/2010 privind inregistrarea, evaluarea, autorizarea si restrictionarea substantelor chimice (REACH)

”SOLVER”**Fraze de precautie: Depozitare**

P403 + P235 A se depozita într-un spațiu bine ventilat. A se păstra la rece.

Fraze de precautie Eliminare

P501 Aruncați conținutul sau recipientul la un punct de colectare a deșeurilor în conformitate cu reglementările naționale.

2.3 Alte pericole

Acest produs nu îndeplinește criteriile de clasificare ca PBT–persistent, bioacumulabil si toxic sau vPvB–foarte persistent, foarte bioacumulabil.

SECȚIUNEA 3: Compoziție/informații privind componentii

Produsul este considerat	Polimer
Denumire comerciala	SOLVER
Denumire polimer	POLIMETILAMINA (PMTA)
Denumire component principal	2-aminoethanol (monomer)

3.1 Clasificare componentii:

Denumire produs	POLIMETILAMINA (PMTA)
Nr CAS	nedisponibil
Nr. EC	nedisponibil
Interval de concentratie, max (%)	99,0
Clasificare produs conform criteriilor Reg. CLP	Flam. Liq 2, H225
Denumire component principal	2-aminoethanol
Nr. EC component principal	205-483-3
Nr. CAS component principal	141-43-5
Nr. REACH component principal	01-2119486455-28-0048

SECȚIUNEA 4: Măsurile de prim ajutor**4.1 Descrierea măsurilor de prim ajutor****Observații generale**

Scoateți îmbrăcămintea contaminată.

În caz de inhalare

Scoateți persoana la aer curat sau într-un loc bine aerisit.

FISA CU DATE DE SECURITATE

conform Anexei la Regulamentul European nr. 830/2015 care modifica Reg (EC) nr. 1907/2006 si Reg. (UE) nr. 453/2010 privind inregistrarea, evaluarea, autorizarea si restrictionarea substantelor chimice (REACH)

”SOLVER”

În caz de contact cu pielea

Spălați cu multă apă și săpun.

În caz de contact cu ochii

Clătiți cu atenție cu apă, timp de mai multe minute. În caz de dubiu sau dacă simptomele persistă, consultați medicul.

După ingerare

Clătiți gura. Sunați la un medic dacă nu vă simțiți bine.

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

Până în prezent nu sunt cunoscute simptome și efecte.

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

Nu există alte informații relevante.

SECȚIUNEA 5: Măsuri de combatere a incendiilor

5.1. Mijloace de stingere a incendiilor



Mijloace de stingere corespunzătoare: spumă rezistentă la alcool, pulbere chimică, CO₂ sau apă pulverizată. Folosiți pulverizări de apă pentru a răci containerele, vasele expuse radiațiilor calorice.

Mijloace de stingere necorespunzătoare: a nu se utiliza jet de apă direct.

5.2 Pericole speciale cauzate de substanța sau de amestecul în cauză

În caz de incendiu poate produce vapori toxici de monoxid de carbon și dioxid de carbon.

5.3. Recomandări destinate pompierilor

Stingeți incendiul de la o distanță rezonabilă, luând măsuri normale de precauție. Purtați echipament de protecție special destinat pompierilor, precum cizmele, salopeta, mănușile, apărătoarele pentru ochi și față și aparatele de respirat autonom.

Alte informații: Dacă containerele sunt expuse la foc, trebuie menținute reci prin pulverizare cu apă. Dacă este posibil folosiți apă pulverizată pentru a coborî la sol fumul rezultat din incendiu.

SECȚIUNEA 6: Măsuri de luat în caz de dispersie accidentală

6.1. Precauții personale, echipament de protecție și proceduri de urgență

Pentru personalul care nu este implicat în situații de urgență;

- (a) Se va purta echipament de protecție adecvat (inclusiv a echipamentului de protecție personală menționat la secțiunea 8 a fișei cu date de securitate) pentru a preveni orice contaminare a pielii,

FISA CU DATE DE SECURITATE

conform Anexei la Regulamentul European nr. 830/2015 care modifica Reg (EC) nr. 1907/2006 si Reg. (UE) nr. 453/2010 privind inregistrarea, evaluarea, autorizarea si restrictionarea substantelor chimice (REACH)

”SOLVER”

ochilor și a hainelor personale . Evitați inhalarea.

(b) Se vor îndepărta sursele de foc, se vor aplica tăblițe cu “fumatul interzis”, se vor folosi unelte antiscânteie. Se va asigura un nivel suficient de ventilare.

(c) A se evacua zona de pericol.

Pentru personalul care intervine în situații de urgență

Sfaturi cu privire la materialul adecvat pentru îmbrăcămintea de protecție personală: a se vedea 8.2.

Precauții după intervenție (pompieri): spălați costumul contaminat și aparatul de respirat cu apă înainte de a îndepărta masca de față și costumul.

6.2 Precauții pentru mediul înconjurător

Nu se va elibera în mediul înconjurător. Cantitățile mici de produs scurs se izolează cu material absorbant neinflamabil și se colectează în containere închise care apoi se distrug.

6.3 Metode și material pentru izolarea incendiilor și pentru curățenie

6.3.1 Recomandări privind modul de izolare a unei cantități vărsate:

(a) indiguire (*bunding*) acoperirea canalelor de evacuare cu materiale absorbante;

(b) proceduri de acoperire (*capping procedures*);

(c) colectare în cuvele de retenție sau canalele colectoare din jurul spațiilor de depozitare.

6.3.2 Recomandări privind modul de curățare a unei cantități vărsate :

(a) tehnici de curățare: spălare cu jet apă, recuperare și transvanzare în ambalaje corespunzătoare sau rezervor intermediar, aspirare.

(b) materiale absorbante: nisip, rumeguș.

(c) scurgerile de substanță se pot izola prin acoperire cu spumă rezistentă la alcool.

(d) echipament necesar pentru izolare și curățare: aparat pentru aspirare, măști, lopeți.

Utilizați pompe antiex. Dacă sunt electrice este necesară minim clasa T3. Asigurați împământarea adecvată a echipamentului de pompare.

Apele uzate rezultate se direcționează spre o stație de epurare. Urmele de substanță rămase se pot curăța și cu materiale absorbante .

6.4 Trimiteri către alte secțiuni

Pentru protecția individuală a se vedea 8.2.

A se vedea scenariile de expunere anexate, corespunzătoare fiecărei utilizări identificate.

SECȚIUNEA 7: Manipularea și depozitarea

7.1. Precauții pentru manipularea în condiții de securitate

Se va evita deteriorarea fizică a ambalajului. Personalul ce manipulează produsul va purta echipament de protecție adecvat (se evită încărcările electrostatice). În timpul manipulării se va evita contactul produsului cu substanțe incompatibile, cu surse de foc, nu se fumează, nu se utilizează unelte (scule) provocatoare de scânteii, zona va fi bine ventilată.

Sfaturi privind igiena generală la locul de muncă

Data editiei: martie 2020

Data reviziei: iulie 2020

Numărul versiunii: 2

FISA CU DATE DE SECURITATE

conform Anexei la Regulamentul European nr. 830/2015 care modifica Reg (EC) nr. 1907/2006 si Reg. (UE) nr. 453/2010 privind inregistrarea, evaluarea, autorizarea si restrictionarea substantelor chimice (REACH)

”SOLVER”

Înainte de pauze și la terminarea lucrului se vor spăla mâinile. Nu se mănâncă, bea sau fumează în zonele de lucru. A se îndepărta îmbrăcămintea contaminată și echipamentul de protecție înainte de a pătrunde în zonele în care se ia masa.

7.2 Condiții de depozitare în condiții de securitate, inclusiv eventuale incompatibilități

Păstrați ambalajul închis ermetic, într-un loc răcoros, bine ventilat și aerisit, lipsit de umiditate, ferit de surse de lumină. La expunere îndelungată la lumină se schimbă culoarea (galbenă).

Tipuri de ambalaje; cisterne CF, autocisterne, eco-bulk.

Substanțele sau amestecurile incompatibile

Respectați recomandările pentru depozitarea combinată.

Luarea în considerare a altor sfaturi

- **Cerințe privind ventilația**

A se folosi ventilație locală și generală.

- **Proiectarea specială a spațiilor de depozitare sau a rezervoarelor**

Temperatura recomandată de depozitare: până în 45 °C.

7.3 Utilizare finală

Denumirea scenariilor de expunere (ES) corespunzătoare utilizărilor identificate :

ES 1: Utilizare ca agent de formulare pentru amestecuri (industrial) (ES 1)

ES 2: Utilizare ca agent de formulare pentru amestecuri (professional) (ES 2)

ES 3: Utilizare ca intermediar (sinteza produse chimice – ex. solvenți) (ES 3)

ES 4: Utilizare industrială ca agent de acoperire, inclusiv cerneluri de imprimare (ES 4)

ES 5: Utilizare profesională ca agent de acoperire, inclusiv cerneluri de imprimare (ES 5)

ES 6: Utilizare consumatori ca agent de acoperire, inclusiv cerneluri de imprimare (ES 6)

SECȚIUNEA 8: Controale ale expunerii/protecția personală

8.1 Parametri de control

Valorile limită naționale

Valori limită de expunere profesională (Limite de expunere la locul de muncă)

Legislatia nationala specifica din domeniul sanatatii si securitatii in munca respectiv HG 1218/2006, Anexa 1 cu modificari si completari (care transpune prevederile Directivei Europene 98/24/CE privind stabilirea listei privind valorile limita pentru expunerea ocupationala) nu prevede valori limita de expunere ocupationala (VLE) si nici valori limita biologice tolerabile (LBT) pentru acest produs.

8.2 Controale ale expunerii

Măsuri de protecție individuală (echipamentul de protecție personală)

Protecția ochilor/feței



FISA CU DATE DE SECURITATE

conform Anexei la Regulamentul European nr. 830/2015 care modifica Reg (EC) nr. 1907/2006 si Reg. (UE) nr. 453/2010 privind inregistrarea, evaluarea, autorizarea si restrictionarea substantelor chimice (REACH)

”SOLVER”

Folosii echipament de protecție a ochilor, pentru a vă proteja împotriva stropirilor cu lichid.

Protecția pielii



Protecția mâinilor

A se purta mănuși corespunzătoare. Mănușile de protecție chimică adecvate sunt testate conform EN 374.

tipul de material NBR (Nitril cauciuc)

grosimea materialului > 0,11 mm

timpul de perforare a materialului din care sunt fabricate mănușile > 480 minute (permeație: nivel 6)

alte măsuri de protecție

Se recomandă protecția preventivă a pielii (creme protectoare/unguente).

Protecția respirației



În mod normal nu e necesară protecție respiratorie personală.

8.3 Controlul expunerii mediului

Măsurile de gestionare a riscurilor: nu a fost necesară o estimare a expunerii, deoarece la evaluarea PBT/vPvB nu a fost identificat nici un risc. Prin urmare, toate utilizările identificate ale substanței sunt evaluate ca fiind inofensive pentru mediu.

SECȚIUNEA 9: Proprietățile fizice și chimice

9.1. Informații privind proprietățile fizice și chimice de bază

Aspect	Lichid
Culoare	Incolor / omogen, transparent
Miros	Specific alcoolilor monoatomici
Prag de acceptare a mirosului	Nu există date disponibile
pH la 20°C	10,35 ± 0.02
Fractie masica a polimetilaminei, max.	99.0
Temp. de inflamabilitate (recipient închis) °C	11± 1.0
Punct de fierbere, °C	64,0 ± 1.0
Punct de congelare °C, nu mai puțin de	-73
Densitatea la 20°C, kg/m ³	796.2 ± 0.5
Densitatea vaporilor	Nu exista date disponibile
Continut de apa, mg/kg	936 ± 10
Solubilitatea (în apă)	Se amestecă complet
Stabilitate la oxidare, min.	390

FISA CU DATE DE SECURITATE

conform Anexei la Regulamentul European nr. 830/2015 care modifica Reg (EC) nr. 1907/2006 si Reg. (UE) nr. 453/2010 privind inregistrarea, evaluarea, autorizarea si restrictionarea substantelor chimice (REACH)

”SOLVER”

Volatilitate in raport cu o-xilen	0.42
Temperatura de descompunere, °C	Nu există date disponibile
Vâscozitate cinematica la 20°C Mm ² /s	0,75 ± 0.02
Vâscozitate dinamica la 20°C MPa/s	0,59 ± 0.05
Conductivitate la 20°C uScm ⁻¹	314± 2,0
Proprietăți explozive	Nu există date disponibile
Proprietăți oxidante	Nu există date disponibile
Masa moleculara (1 unitate polimer)	1395

SECȚIUNEA 10: Stabilitate și reactivitate**10.1. Reactivitate**

Nu exista riscuri speciale de reacție cu alte substanțe în condiții normale de utilizare.

10.2. Stabilitate chimică

Stabil în condiții normale de temperatură și presiune în care se anticipează că va avea loc depozitarea și manipularea.

10.3 Posibilitatea de reacții periculoase

Nu se cunosc reacții periculoase.

10.4 Condiții de evitat

Se va evita supraîncălzirea, sarcinile electrostatice, toate sursele de aprindere. Se va evita expunerea produsului la sursele de căldură și flăcări.

10.5 Materiale incompatibile

Nu există informații suplimentare.

10.6 Produși de descompunere periculoși

Produși de combustie periculoși: a se vedea secțiunea 5.

SECȚIUNEA 11: Informații toxicologice**11.1. Informații privind efectele toxicologice****Toxicitate acută**

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

Valori LD50 relevante pentru clasificare:

Calea de expunere	Doza testare	Valoare obtinuta	Metoda de analiză
Acuta orala	LD 50	>5000 mg/kg corp (netoxic)	Ghid OECD 420
Dermică (test iritatie tegumentara)	LD 50	0.04 indice cumulat de iritabilitate	Ghid OECD 404

FISA CU DATE DE SECURITATE

conform Anexei la Regulamentul European nr. 830/2015 care modifica Reg (EC) nr. 1907/2006 si Reg. (UE) nr. 453/2010 privind inregistrarea, evaluarea, autorizarea si restrictionarea substantelor chimice (REACH)

”SOLVER”

		(neglijabil)	
Sensibilizare	LD 50	<1 scor evaluare (fara potential sensibilizant)	Ghid OECD 406

Produs fara toxicitate, LD > 5000 mg/kg, conform criteriilor GHS.

Test toxicitate doza unica efectuat in laborator pe produsul Solver, conform metodei OECD 420 - testare toxicitate acuta orala (raport testare ICCF Bucuresti, nr. 19/15.06.2020).

Corodarea/iritarea pielii:

Iritatie tegumentara neglijabila.

Test Buehler efectuat in laborator pe produsul Solver, conform metodei OECD 404-testare iritabilitate/corozivitate acuta (raport testare ICCF Bucuresti, nr. 20/15.06.2020).

Lezarea gravă a ochilor/iritarea ochilor

Nu se clasifica ca fiind iritanta pentru ochi sau cu pericol de lezare gravă a ochilor.

Sensibilizarea căilor respiratorii sau a pielii

Nu prezinta potential sensibilizant.

Test Buehler efectuat in laborator pe produsul Solver, conform metodei OECD 406 - testarea sensibilizarii (raport testare ICCF Bucuresti, nr. 21/15.06.2020).

Rezumatul evaluării proprietăților CSR

Nu se clasifica ca fiind mutagenă asupra celulelor embrionare, cancerigenă sau toxică pentru reproducere

Toxicitate asupra unui organ țintă specific - o singură expunere

Nu se clasifica ca fiind toxică asupra unui organ țintă specific o singură expunere.

Toxicitate asupra unui organ țintă specific - expunere repetată

Nu se clasifica ca fiind toxică asupra unui organ țintă specific expunere repetată.

Pericol prin aspirare

Nu se clasifica ca prezentând pericol prin aspirare.

Simptomele legate de caracteristicile fizico-chimice și toxicologice

În caz de contact cu ochii

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

În caz de inhalare

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

În caz de contact cu pielea

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

SECȚIUNEA 12: Informații ecologice

12.1. Toxicitatea

- Toxicitate acuta la crustacee planctonice (inhibitia mobilitatii)

Concentratie letata/imobilizatoare medie $CE_{50-48h} > 100$ mg/l;

Specia testata: Daphnia magna

- Test inhibitie a cresterii algelor de apa dulce

Concentratie medie inhibitoare asupra ratei de crestere ($CE_{(r)50-72h} > 100$ mg/l.

Specie testata: pseudokirchneriella subcapitata.

Concentratie medie inhibitoare asupra biomasei ($CE_{(r)50-72h} > 100$ mg/l.

FISA CU DATE DE SECURITATE

conform Anexei la Regulamentul European nr. 830/2015 care modifica Reg (EC) nr. 1907/2006 si Reg. (UE) nr. 453/2010 privind inregistrarea, evaluarea, autorizarea si restrictionarea substantelor chimice (REACH)

”SOLVER”

Produs netoxic pentru organismele acvatice si biodegradabil in conditii aerobe.

12.2. Persistența și biodegradabilitatea

- Potential total de biodegradare ($D_{28 \text{ zile}}$) = 76.7%

Timp de degradare: 23 zile.

12.3. Potențialul de bioacumulare

Nu sunt disponibile date.

12.4. Mobilitatea în sol

Nu sunt disponibile date.

12.5. Rezultatele evaluărilor PBT și vPvB

Acest produs nu conține nicio substanță evaluată a fi PBT sau vPvB.

12.6. Alte efecte adverse

Nu sunt disponibile date.

SECȚIUNEA 13: Considerații privind eliminarea

Deșeurile de produs și de ambalaj vor fi tratate conform legii 211/2011 privind regimul deșeurilor, în vigoare.

13.1 Metode de tratare a deșeurilor

a) recipiente și metode de tratare a deșeurilor

Produsul/ambalajul nu se vor colecta împreună cu resturile menajere. Se evită pătrunderea produsului în sisteme de canalizare.

Ambalajele: se curăță prin spălare cu apă.

Cod deșeu produs: se recomanda sa fie unul dintre coduri 07 01 03*, 08 01 21*, 14 06 02*, in functie de activitatea care genereaza deseul.

Cod deșeu ambalaj necurățat: 150110* ambalaje care conțin reziduuri sau sunt contaminate cu substanțe periculoase.

b) proprietățile fizico-chimice care ar putea afecta opțiunile de tratare a deșeurilor

Nu sunt informații disponibile.

c) eliminarea

Conținutul ambalajului se elimina la punctele de colectare a deșeurilor periculoase, în cazul în care utilizatorul nu deține stație de epurare.

d) Se identifică orice precauții speciale pentru orice opțiune de tratare a deșeurilor

A se purta echipament de protecție conf. 8.2.

SECȚIUNEA 14: Informații referitoare la transport

Transport terestru: ADR / RID (Rutier / Feroviar)

14.1 Numărul ONU

UN 1993

14.2 Denumirea corectă ONU pentru

POLIMETILAMINA (PMTA)

FISA CU DATE DE SECURITATE

conform Anexei la Regulamentul European nr. 830/2015 care modifica Reg (EC) nr. 1907/2006 si Reg. (UE) nr. 453/2010 privind inregistrarea, evaluarea, autorizarea si restrictionarea substantelor chimice (REACH)

”SOLVER”

14.3	expediție Clasa de pericol pentru transport	3 - LICHID INFLAMABIL N.S.A
14.4	Grupul de ambalare	III – substanțe puțin periculoase
14.5	Pericole pentru mediul înconjurător Marine pollutant	Nu
14.6	Precauții speciale pentru utilizatori	Trimitere la Secțiunile 4 -8
14.7	Transport în vrac, în conformitate cu anexa II la MARPOL și Codul IBC	Nu este disponibil

Informații suplimentare

Număr de identificare a pericolului	30 (cod Kemler)
Cod de clasificare	F1
Etichete de pericol	3


Transport rutier ADR

Dispoziții speciale 274, 601

Ambalare

Instrucțiuni de ambalare P001, IBC03, LP01, R001
Dispoziții de ambalare în comun MP19

Cisterne mobile și containere pentru vrac

Instrucțiuni T2
Dispoziții speciale TP1, TP29

Cisterne ADR

Cod cisternă LGBF
Vehicul pentru transportul în cisterne FL
Categorie de transport 3
Cod restricție tunel (D/E)

Dispoziții speciale de transport pentru

Colete V12
Exploatare S2

Transport feroviar –RID

Dispoziții speciale 274, 601

Ambalare

Instrucțiuni de ambalare P001, IBC03, LP01, R001
Dispoziții de ambalare în comun MP19

Cisterne mobile și containere pentru vrac

Instrucțiuni T4
Dispoziții speciale TP1, TP29

Cisterne RID

Cod cisternă LGBF

FISA CU DATE DE SECURITATE

conform Anexei la Regulamentul European nr. 830/2015 care modifica Reg (EC) nr. 1907/2006 si Reg. (UE) nr. 453/2010 privind inregistrarea, evaluarea, autorizarea si restrictionarea substantelor chimice (REACH)

”SOLVER”

Categorie de transport	3
Dispoziții speciale de transport pentru	
Colete	W12

UN "Model Regulation"

UN 1993 LICHID INFLAMABIL N.S.A
(POLIMETILAMINA PMTA),3,III

SECȚIUNEA 15: Informații de reglementare

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

- Regulamentul (CE) nr.1907/2006 privind inregistrarea, evaluarea, autorizarea și restricționarea substanțelor chimice (REACH), cu modificări și completări ulterioare
- Regulamentul European nr. 830/2015 de modificare a Reg. (UE) nr. 453/2010 și a Regulamentului (CE) nr.1907/2006 și privind inregistrarea, evaluarea, autorizarea și restricționarea substanțelor chimice (REACH);
- Regulamentul (CE) nr.1272/2008 CLP privind clasificarea, etichetarea și ambalarea substanțelor și amestecurilor, de modificare și de abrogare a Directivelor 67/548/CEE și 1999/45/CE precum și de modificarea Regulamentului (CE) nr. 1907/2006 –REACH
- Directiva 2012/18/UE (Seveso) privind controlul pericolelor de accidente majore ce implică substanțe periculoase:
- Denumirea substanțelor periculoase – ANEXA I: P5c LICHIDE INFLAMABILE
- Cantități relevante ale substanțelor pentru încadrarea amplasamentelor de nivel inferior: 5000 tone
- Cantități relevante ale substanțelor pentru încadrarea amplasamentelor de nivel superior: 50 000 tone
- Directiva 2010/ 75/ UE privind emisiile industriale

15.2. Evaluarea securității chimice

A fost efectuată evaluarea securității chimice pentru Polimetilamină, în cadrul procedurii REACH derulată de către importator.

SECȚIUNEA 16: Alte informații

16.1. Actualizări ale fișei cu date de securitate

Actualizat informații în capitolele 11, 12 , 16

16.2. Textul complet al frazelor de pericol și precauție prezentate în capitolul 2:

Frază de pericol

H225: Lichid și vapori foarte inflamabili.

Fraze de precauție: Prevenire

FISA CU DATE DE SECURITATE

conform Anexei la Regulamentul European nr. 830/2015 care modifica Reg (EC) nr. 1907/2006 si Reg. (UE) nr. 453/2010 privind inregistrarea, evaluarea, autorizarea si restrictionarea substantelor chimice (REACH)

”SOLVER”

P 210 A se păstra departe de surse de căldură, suprafețe fierbinți, scânteii, flăcări și alte surse de aprindere. Fumatul interzis.

P233 Păstrați recipientul închis etanș.

P240 Legătură la pământ și conexiune echipotențială cu recipientul și cu echipamentul de recepție.

P241 Utilizați echipamente electrice, de ventilare, de iluminat, antideflagrante.

P242 Nu utilizați unelte care produc scânteii.

P243 Luați măsuri de precauție împotriva descărcărilor electrostatice.

P280 Purtați mănuși de protective, îmbrăcăminte de protecție, echipament de protecție a ochilor și echipament de protecție a feței.

Fraze de precauție: Intervenție

P303 + P361 + P353 ÎN CAZ DE CONTACT CU PIELEA (sau părul): Scoateți imediat toată îmbrăcăminte contaminată. Clătiți pielea cu apă.

P370 + P378 În caz de incendiu: Utilizați spumă rezistentă la alcool pentru stingere.

Fraze de precauție: Depozitare

P403 + P235 A se depozita într-un spațiu bine ventilat. A se păstra la rece.

Fraze de precauție Eliminare

P501 Aruncați conținutul sau recipientul la un punct de colectare a deșeurilor în conformitate cu reglementările naționale.

16.3 Legenda acronimelor/abrevierilor:

CAS: Serviciul Abstract de Chimicale

CLP: Clasificare, Etichetare, Ambalare

CSR: Raport de Securitate Chimică

HG: Hotarare de Guvern (Romania)

DL50: Doza letala 50% (doza la care 50% din subiectii testati sunt afectati letal)

UN: Numar de identificare pericol pentru transport

ADR: Acord european referitor la transportul rutier internațional al mărfurilor periculoase

RID: Regulamentul privind transportul internațional feroviar al mărfurilor periculoase (RID)

IMDG : Codul maritim internațional pentru mărfuri periculoase (IMDG)

IATA: Asociatia Internationala de Transport Aerian (IATA)

GHS: Sistem Global Armonizat de Clasificare si Etichetare a Chimicalelor

PBT: Persistent, Bioacumulativ si Toxic

vPvB: foarte Persistent, foarte Bioacumulativ

16.4 Surse bibliografice

1) Hazardous Chemicals - Desk Reference (Richard J, Lewis, SR.) , ed. 4

2) Cooper's TOXIC EXPOSURES, Desk Reference, 1997

3) ERICard Metanol (ERIC 3-15)

4) <http://echa.europa.eu/en/candidate-list-table>

5) <https://echa.europa.eu/en/information-on-chemicals>

6) Confidential Technical Report –Polymer Molecular Weight characterization of 2 -Amino Polimer by Gel Permeation Chromatography, SMITHERS REPORT.

Informațiile din această Fișă cu Date de Securitate se bazează pe legislația națională și pe cunoștințele actuale privind produsul la momentul elaborării.

FISA CU DATE DE SECURITATE

conform Anexei la Regulamentul European nr. 830/2015 care modifica Reg (EC) nr. 1907/2006 si Reg. (UE) nr. 453/2010 privind inregistrarea, evaluarea, autorizarea si restrictionarea substantelor chimice (REACH)

”SOLVER”

Informațiile sunt valabile numai pentru acest produs și descriu produsul din punct de vedere al siguranței în utilizare, manipulare și transport. Datele fizice și chimice descriu produsul din punct de vedere a cerințelor privind siguranța numai pentru scopul propus.

Importatorul nu este responsabil pentru utilizarea produsului de către utilizatori în alte domenii decât cele recomandate.

Anexa la actuala fisa cu date de securitate a fost elaborata in baza Raportului de Securitate (CSR) REACH al monomerului, 2 aminoethanol.

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Scenario 1: Industrial formulation of mixtures (ES 1)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure. The following scenarios contribute to the scenario *Industrial formulation of mixtures*.

Table 1. Description of ES 1

Free short title	Industrial formulation of mixtures (ES 1)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 4, 5, 8A, 8B, 9
Name of contributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line)

1.1 Contributing Scenario (1) controlling environmental exposure for ERC 2

Operational conditions	
Annual site tonnage	1 to/year
Daily amount used at site	0.285714 kg/day
Release times per year	350 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0.060 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	100 % (<i>justification: Largest customer</i>)
STP	yes
River flow rate	18000 m ³ /day
Municipal sewage treatment plant discharge	2000000 L/day

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Risk management measures	
Reduction of sludge to soil	100 % (<i>justification: Activated sludge from industrial sources is collected and incinerated. Hence, sludge to soil as an environmental emission scenario is of no relevance.</i>)
SpERC	<p>141-43-5: Formulation of mixtures - RMM (22.07.2015) - consortium (This SpERC describes the formulation of mixtures in an industrial setting.</p> <p>Based on a representative content of 10% MEA in the formulation, a tonnage of more than 150000 t/a is used for the derivation of the release days per year.</p> <ul style="list-style-type: none"> - Release days: 350 d (continuous process) - Release to air: 0%. Release to air is not relevant as MEA is removed from exhaust air by either incineration or gas-scrubbing. - Release to wastewater: 0.06%. Regarding the ready biodegradability of MEA and the high measured removal efficiency of industrial STPs, a release of 0.06% is assumed as a conservative approach. - Release to soil: 0% - Sludge to soil: no. Direct emission to soil is not relevant as the substance is assumed to be handled in a closed process (e.g. closed tray). Indirect release of MEA into the environment via the application of activated sludge to soil is not likely as STP sludge from industrial sources is generally assumed to be incinerated. - Fraction of tonnage to region: 10% (Based on the large tonnage of the formulated product (> 150000 t/a) a wide distribution over all Europe is assumed.) - Fraction main source: 100% (default)
Incineration	yes
Off-gases are either incinerated or scrubbed. Sewage sludge is incinerated.	yes
Risk management measures (air)	Waste gas treatment by thermal oxidation, Exhaust air scrubber
Risk management measures (water)	Aerobic biological treatment
Risk management measures (soil)	Sealing of all relevant soil surfaces, Sewage Sludge incineration, No application of sludge to soil
Other modified EUSES values	
Fraction of emission directed to water by local STP (Fstp.water)	0.040 - (<i>justification: Based on measured data of MEA concentrations in sewage and effluent from local STP at BASF Ludwigshafen/Germany, the elimination was determined to be >99% (99.1% to 99.6%). The MEA concentration in all effluent samples was below the detection limit of 20 µg/L. Therefore, the average elimination might be even higher. The fraction of emission directed to water by local STP was set at 0.04 as a worst-case scenario based on previous measurements for the local STP at BASF with a higher detection limit (200 µg/L; elimination: 96.4% to 98.9%).</i>)

1.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1

Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
--------------------------------------	--

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

1.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2

Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

1.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3

Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm ²
Other given operational conditions affecting workers exposure	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

"SOLVER"

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

1.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4

Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Respiratory protection	no
------------------------	----

1.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5

Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Ventilation	enhanced (70%)
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

1.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8A

Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Qualitative Risk Assessment	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	1 - 4 hours
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Ventilation	enhanced (70%)
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

1.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 8B

Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Ventilation	enhanced (70%)
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

1.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 9

Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

Scenario 2: Professional formulation of mixtures (ES 2)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure. The following scenarios contribute to the scenario *Professional formulation of mixtures*.

Table 2. Description of ES 2

Free short title	Professional formulation of mixtures (ES 2)
Systematic title based on use descriptor	ERC 8A; PROC 3, 4, 5, 8A, 8B, 9
Name of contributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line)

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

2.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A

This scenario has not been calculated. Justification:	Formulation of mixtures by professionals is considered to be covered by other professional settings.
--	--

2.2 Contributing Scenario (2) controlling professional worker exposure for PROC 3

Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	no

2.3 Contributing Scenario (3) controlling professional worker exposure for PROC 4

Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Qualitative Risk Assessment	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	90 %

2.4 Contributing Scenario (4) controlling professional worker exposure for PROC 5

Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin.
	Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Use suitable eye protection.

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	1 - 4 hours
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	90 %

2.5 Contributing Scenario (5) controlling professional worker exposure for PROC 8A

Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	1 - 4 hours

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Ventilation	good (30%)
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	90 %

2.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8B

Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	no

2.7 Contributing Scenario (7) controlling professional worker exposure for PROC 9

Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	no

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Scenario 3: Use as an intermediate (ES 3)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.

The following scenarios contribute to the scenario *Use as an intermediate*.

Table 3. Description of ES 3

Free short title	Use as an intermediate (ES 3)
Systematic title based on use descriptor	ERC 6A; PROC 1, 2, 3, 8A, 8B, 9
Name of contributing environmental scenario and corresponding ERC	ERC 6a Industrial use of intermediates
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line)

3.1 Contributing Scenario (1) controlling environmental exposure for ERC 6A

Operational conditions	
Annual site tonnage	1 t/year
Daily amount used at site	5 kg/day
Release times per year	200 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0.005 %
Release fraction to soil from process	0.010 %
Fraction tonnage to region	100 %
Fraction used at main source	100 % (<i>justification: Largest customer</i>)
STP	yes
River flow rate	18000 m ³ /day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Reduction of sludge to soil	100 % (<i>justification: Activated sludge from industrial sites is collected and incinerated. Hence, sludge to soil as an environmental emission scenario is of no relevance.</i>)
SpERC	141-43-5: MEA as intermediate (industrial): A3.3 & B3.2 (MC = Ib) - RMM (22.07.2015) - consortium (MEA is used as an intermediate in the manufacture of other substances under not strictly closed and rigorously controlled conditions (ERC 6a). The use of MEA as intermediate is characterized using selected A and B tables from the EU TGD (2003). Industrial use of chemicals used in synthesis is best described by Table A 3.3 under Industrial Category (IC) 3. The substance is handled with dedicated equipment causing (very) little cleaning operations (MC = 1b).
	<p>Table A3.3:</p> <ul style="list-style-type: none"> - Release to air: 0%. The substance is handled under controlled conditions. Its vapour pressure is low 10 to 100 Pa. Exhaust air is either incinerated or scrubbed to remove MEA. - Release to wastewater (>= 1000 t/a, wet process): 0.005%. No direct release to water is anticipated. Releases are expected from cleaning processes of the equipment. Wastewater is treated in wwtps. - Release to soil: 0.01%. Direct exposure to soil is low. Indirect exposure via application of sewage sludge to soil is prevented as activated sludge from industrial sources is generally assumed to be incinerated. The number of release days and the fraction used at the main local source are derived using the respective B Table of the EU TGD (2003). For this scenario Table B3.2 was selected. - Fraction of main local source: XXX (based on tonnage of largest customer; table B3.2 (XXX to XXX t/a): XXX) - Release days: XXX = 200 d)
Incineration	yes
Off-gases are either incinerated or scrubbed. Sewage sludge is incinerated.	yes
Risk management measures (air)	Exhaust air scrubber, Waste gas treatment by thermal oxidation
Risk management measures (water)	Aerobic biological treatment
Risk management measures (soil)	Sewage Sludge incineration, No application of sludge to soil, Sealing of all relevant soil surfaces
Other modified EUSES values	
Fraction of emission directed to water by local STP (Fstp.water)	0.040 - (<i>justification: Based on measured data of MEA concentrations in sewage and effluent from local STP at BASF Ludwigshafen/Germany, the elimination was determined to be >99% (99.1% to 99.6%). The MEA concentration in all effluent samples was below the detection limit of 20 µg/L. Therefore, the average elimination might be even higher. The fraction of emission directed to water by local STP was set at 0.04 as a worst-case scenario based on previous measurements for the local STP at BASF with a higher detection limit (200 µg/L; elimination: 96.4% to 98.9%).</i>)

3.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

3.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2

Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

3.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3

Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm ²

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

3.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 8A

Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	1 - 4 hours
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Ventilation	enhanced (70%)
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

3.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8B

Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Ventilation	enhanced (70%)
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

3.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 9

Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Qualitative Risk Assessment	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

General	Ensure good work practices are implemented Provide basic employee training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

Scenario 4: Industrial use in coatings including printing inks (ES 4)

Free short title	Industrial use in coatings including printing inks (ES 23)
Systematic title based on use descriptor	ERC 4; PROC 1, 2, 3, 4, 5, 7, 8A, 8B, 10, 13, 15
Name of contributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 7 - Industrial spraying PROC 7 - Industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 10 - Roller application or brushing PROC 13 - Treatment of articles by dipping and pouring PROC 15 - Use of laboratory reagents in small scale laboratories
---	---

4.1 Contributing Scenario (1) controlling environmental exposure for ERC 4

Operational conditions	
Annual site tonnage	1 to/year
Daily amount used at site	5 kg/day
Release times per year	225 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.800 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 % (<i>justification: Largest customer</i>)
STP	yes
River flow rate	18000 m ³ /day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
Reduction of sludge to soil	100 % (<i>justification: Activated sludge from industrial sources is generally assumed to be incinerated.</i>)

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

"SOLVER"

SpERC	<p>141-43-5: Coatings, printing inks: CEPE SpERC 4.1a.v1 (03.06.2014) - RMM (22.07.2015) - consortium (MEA is used in coatings including printing inks. CEPE SpERC 4.1a.v1 was selected to describe this type of use. This SpERC covers the whole process of application of organic solvent borne, water borne liquid and powder coatings and inks by industrial users by spraying. Although MEA is not volatile, the substance is released via air through the spraying process.</p> <ul style="list-style-type: none"> - Release days: 225 d (based on industry knowledge; typical amount of working days) - Release to air: 0.8%; For a coating film to form, the volatile phase of organic solvent borne and water borne coatings must evaporate into the atmosphere. 80% solvent inputs emitted through Incinerator with efficiency 99%. - Release to water: 2%; A proportion of the liquid phase will be present in spray booth scrubber water. - Release to soil: 0% There is no deposition to soil from these application processes. Indirect exposure is not relevant as sewage sludge from industrial STPs is generally considered to be incinerated. - Fraction of tonnage to region: 1 (default) - Fraction used at main source: XXX (based on tonnage of largest customer)
Incineration	yes
Risk management measures (air)	Waste gas treatment by thermal oxidation, Exhaust air scrubber
Risk management measures (water)	Aerobic biological treatment
Risk management measures (soil)	not applicable - no direct release to soil, Sewage Sludge incineration, Sealing of all relevant soil surfaces
Other modified EUSES values	
Fraction of emission directed to water by local STP (Fstp.water)	0.040 - <i>(justification: Based on measured data of MEA concentrations in sewage and effluent from local STP at BASF Ludwigshafen/Germany, the elimination was determined to be >99% (99.1% to 99.6%). The MEA concentration in all effluent samples was below the detection limit of 20 µg/L. Therefore, the average elimination might be even higher. The fraction of emission directed to water by local STP was set at 0.04 as a worst-case scenario based on previous measurements for the local STP at BASF with a higher detection limit (200 µg/L; elimination: 96.4% to 98.9%).)</i>

4.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1

Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Qualitative Risk Assessment	
General	<p>Ensure good work practices are implemented</p> <p>Provide basic employee training to prevent/minimize exposures</p> <p>In case of potential exposure:</p> <p>Wear chemically resistant gloves in combination with specific activity training</p>

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

4.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2

Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

4.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3

Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

4.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4

Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

4.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

4.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 7

Name of contributing scenario	7 - Industrial spraying
Scenario subtitle	Option A
Qualitative Risk Assessment	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Wear suitable face shield
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no
Fixed capturing hood	inhalation: 90 % (<i>justification: Localised controls: Fixed capturing hood (90.00 % reduction)</i>)

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Use of external/measured value inhalation	<p>Exposure assessment using ART Version 1.5: Mechanistic model results The predicted 75th percentile full-shift exposure is 1.1 mg/m³. The inter-quartile confidence interval is 0.54 mg/m³ to 2.1 mg/m³. PROC 7 Emission sources: Far-field exposure (automatic spraying) Vapour pressure: 50 Pa Liquid mole fraction: 0.05 (5% substance) Process temperature: Room temperature Duration (mins): 480 min Substance product type: Liquids Activity class: Surface spraying of liquids Spray technique: Spraying with high compressed air use Spray direction: Only horizontal or downward Situation: Moderate application rate (0.3 - 3 l/minute) Localised controls: Fixed capturing hood (90.00 % reduction) General housekeeping practices in place? Yes Process fully enclosed? No Work area: Indoors Room size: 300 m³ Ventilation: 3 ACH</p>
---	---

4.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 7

Name of contributing scenario	7 - Industrial spraying
Scenario subtitle	Option B
Qualitative Risk Assessment	
General	<p>Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.</p>
Eyes	Wear suitable face shield
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	360 min/day, duration of activity has been considered linearly (<i>justification: Reduce duration of activity to less than 360 min</i>)
Frequency of use	5 days / week
Human factors not influenced by risk management	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Exposed skin surface	1,500 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	95 %
Use of external/measured value inhalation	<p>Exposure assessment using ART Version 1.5: Mechanistic model results The predicted 75th percentile full-shift exposure is 21 mg/m³. The inter-quartile confidence interval is 11 mg/m³ to 42 mg/m³. Use of respiratory protection with effectiveness 95%. PROC 7 Emission sources: Near-field exposure (manual spraying) Vapour pressure: 50 Pa Liquid mole fraction: 0.05 (6% substance) Process temperature: Room temperature Duration (mins): 360 min Non-exposure period: 120 min Substance product type: Liquids Activity class: Surface spraying of liquids Spray technique: Spraying with high compressed air use Spray direction: Only horizontal or downward Situation: Moderate application rate (0.3 - 3 l/minute) Localised controls: None General housekeeping practices in place? Yes Process fully enclosed? No Work area: Indoors Room size: 300 m³ Ventilation: 3 ACH Use of respiratory protection with effectiveness 95%</p>

4.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 8A

Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Qualitative Risk Assessment	
General	<p>Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.</p>

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Eyes	Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

4.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 8B

Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

4.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 10

Name of contributing scenario	10 - Roller application or brushing
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Wear suitable face shield
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

4.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 13

Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Wear suitable face shield
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

4.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 15

Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
--------------------------------------	---

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 20 95 %
Respiratory protection	no

Scenario 5: Professional use in coatings including printing inks (ES 5)

Free short title	Professional use in coatings including printing inks (ES 24)
Systematic title based on use descriptor	ERC 8D; PROC 1, 2, 3, 4, 5, 8A, 8B, 9, 10, 11, 13, 15, 19
Name of contributing environmental scenario and corresponding ERC	ERC 8d Wide dispersive outdoor use of processing aids in open systems

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring PROC 15 - Use of laboratory reagents in small scale laboratories PROC 19 - Hand-mixing with intimate contact (only PPE available)
---	---

5.1 Contributing Scenario (1) controlling environmental exposure for ERC 8D

Operational conditions	
Annual site tonnage	1 t/year
Daily amount used at site	0.444444 kg/day
Release times per year	225 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	98 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m ³ /day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

SpERC	<p>141-43-5: CEPE SpERC 8d.3a.v1 (22.07.2015) - consortium (MEA is used by professionals in coatings including printing inks. CEPE has developed a SpERC covering the use of substances in professional outdoor application of coatings and inks by spraying application: CEPE 8d.3a.v1.</p> <ul style="list-style-type: none"> - Fraction of tonnage to region: 0.1 (default for wide-dispersive use) - Fraction used at main source: XXX (based on maximum site daily usage of 100 kg product/d at one site) - Release days: 225 d - water: 2%; During application of coatings outdoors, a proportion of the applied coating can be deposited into water - air: 98%; For a coating film to form, the volatile phase of organic solvent borne and water borne coatings must evaporate into the atmosphere. This is a worst case scenario as MEA has a low vapour pressure (50 Pa). - soil: 0%; There is no deposition to soil from these application processes according to OECD ESD.)
-------	---

5.2 Contributing Scenario (2) controlling professional worker exposure for PROC 1

Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Qualitative Risk Assessment	
General	<p>Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training</p>
Eyes	<p>In case of potential exposure: Use suitable eye protection.</p>
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	no

5.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2

Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	no

5.4 Contributing Scenario (4) controlling professional worker exposure for PROC 3

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	no

5.5 Contributing Scenario (5) controlling professional worker exposure for PROC 4

Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Qualitative Risk Assessment	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	no

5.6 Contributing Scenario (6) controlling professional worker exposure for PROC 5

Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Use suitable eye protection.

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	no

5.7 Contributing Scenario (7) controlling professional worker exposure for PROC 8A

Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin.
Eyes	Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Ventilation	good (30%)
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	no

5.8 Contributing Scenario (8) controlling professional worker exposure for PROC 8B

Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	no

5.9 Contributing Scenario (9) controlling professional worker exposure for PROC 9

Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide basic employe training to prevent/minimize exposures In case of potential exposure: Wear chemically resistant gloves in combination with specific activity training
Eyes	In case of potential exposure: Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	no

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

5.10 Contributing Scenario (10) controlling professional worker exposure for PROC 10

Name of contributing scenario	10 - Roller application or brushing
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Wear suitable face shield
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Ventilation	good (30%)
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	no

5.11 Contributing Scenario (11) controlling professional worker exposure for PROC 11

Name of contributing scenario	11 - Non industrial spraying
Qualitative Risk Assessment	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Wear suitable face shield
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 20%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	90 min/day, duration of activity has been considered linearly (<i>justification: Reduce duration of activity to less than 90 min</i>)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	95 %

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Use of external/measured value inhalation	<p>Exposure assessment using ART Version 1.5: Mechanistic model results The predicted 75th percentile full-shift exposure is 20 mg/m³. The inter-quartile confidence interval is 10 mg/m³ to 40 mg/m³. Use of respiratory protection with effectiveness 95%</p> <p>PROC 11 Emission sources: Near-field exposure (manual spraying) Vapour pressure: 50 Pa Liquid mole fraction: 0.05 (5% substance) Process temperature: Room temperature Duration (mins): 90 min Non-exposure period: 390 min Substance product type: Liquids Activity class: Surface spraying of liquids Spray technique: Spraying with high compressed air use Spray direction: Only horizontal or downward Situation: Moderate application rate (0.3 - 3 l/minute) Localised controls: None General housekeeping practices in place? Yes Process fully enclosed? No Work area: Indoors Room size: 100 m³ Ventilation: 1 ACH Use of respiratory protection with effectiveness 95%</p>
---	--

5.12 Contributing Scenario (12) controlling professional worker exposure for PROC 13

Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Qualitative Risk Assessment	
General	<p>Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.</p>
Eyes	Wear suitable face shield
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Human factors not influenced by risk management	
Exposed skin surface	480 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	no

5.13 Contributing Scenario (13) controlling professional worker exposure for PROC 15

Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Use suitable eye protection.
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	no

5.14 Contributing Scenario (14) controlling professional worker exposure for PROC 19

Name of contributing scenario	19 - Hand-mixing with intimate contact (only PPE available)
Qualitative Risk Assessment	
General	Ensure good work practices are implemented Provide specific employee training to prevent/minimize exposures. Wear chemically resistant gloves in combination with specific activity training Wear suitable coveralls to prevent exposure to the skin. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Eyes	Wear suitable face shield
Product characteristics	
Physical state	liquid
Concentration in substance	5 %, concentration has been considered linearly (<i>justification: Limit the substance content in the product to 5%</i>)
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,980 cm ²
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	95 %, burst-time: >4 hours (default) (<i>justification: Wear chemically resistant gloves in combination with specific activity training</i>)
Respiratory protection	no

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Scenario 6 Consumer use in coatings including printing inks (ES 6)

Free short title	Consumer use in coatings including printing inks (ES25)
Systematic title based on use descriptor	ERC 8D; PC 9a, 18
Name of contributing environmental scenario and corresponding ERC	ERC 8d Wide dispersive outdoor use of processing aids in open systems
Name(s) of contributing consumer scenarios and corresponding PCs/ACs	PC 9a Coatings and Paints, thinners, paint removers PC 9a Coatings and Paints, thinners, paint removers PC 18 Ink and Toners PC 9a Coatings and Paints, thinners, paint removers

6.1 Contributing Scenario (1) controlling environmental exposure for ERC 8D

Operational conditions	
Annual site tonnage	1 t/year
Daily amount used at site	0.273973 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	98.5 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	0.500 %
Fraction tonnage to region	10 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m ³ /day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

SpERC	<p>141-43-5: CEPE SpERC 8d.1a.v1 (22.07.2015) - consortium (MEA is used by consumers in the application of coatings including printing inks. CEPE has developed a SpERC covering the use of substances in consumer outdoor application: CEPE 8d.1a.v1.</p> <ul style="list-style-type: none"> - Fraction of tonnage to region: 0.1 (default for wide-dispersive use) - Fraction used at main source: XXX (based on maximum site daily usage of 5 kg product/d at one site) - Release days: 365 d (default value for wide-dispersive use) - water: 1%; Application equipment (brushes/rollers/containers/roller trays) can be washed in domestic sinks and washings discharged into public sewers. - air: 98.5%; For a coating film to form, the volatile phase of organic solvent borne and water borne coatings must evaporate into the atmosphere. This is a worst-case scenario as MEA has a low vapour pressure (50 Pa). - soil: 0.5%; During application of coatings outdoors, a proportion of the applied coating can be deposited on the soil below the area being painted.)
-------	---

6.2 Contributing Scenario (2) controlling consumer exposure for PC 9a

Name of contributing scenario	PC 9a Coatings and Paints, thinners, paint removers
Scenario subtitle	Consumer use of coatings - application of paint remover
Calculation model	ConsExpo
Frequency and duration of use	
Inhalation	
Exposure calculation result type	Mean concentration yearly
Frequency of use	1 per day
Exposure time	60 min
Application duration	60 min
Dermal	
Exposure calculation result type	Internal dose chronic
Frequency of use	1 per day
Product characteristics	
Spray application	no
Product ingredient fraction by weight	0.400 %
Mol weight matrix	3,000 g/mol
Mass transfer rate	- m/min
Amounts used	
Inhalation	1,000 g
Dermal	0.500 g

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Human factors not influenced by risk management	
Exposed skin surface (dermal)	430 cm ²
Other given operational conditions affecting consumers exposure	
Inhalation	
Room volume	20 m ³
Ventilation rate	2.5 l/h
Release area increases over time	
Release area	2.00E4 cm ²
Release temperature	20 °C
Dermal	
Uptake fraction	100 %

6.3 Contributing Scenario (3) controlling consumer exposure for PC 9a

Name of contributing scenario	PC 9a Coatings and Paints, thinners, paint removers
Scenario subtitle	Consumer use of coatings - application of floor stripper 0.9% - diluted 1:3
Calculation model	ConsExpo
Frequency and duration of use	
Inhalation	
Exposure calculation result type	Mean concentration yearly
Frequency of use	1 per day
Exposure time	90 min
Application duration	90 min
Dermal	
Exposure calculation result type	Internal dose chronic
Frequency of use	1 per day
Release duration	5,400 sec
Product characteristics	
Spray application	no
Product ingredient fraction by weight	0.300 %
Mol weight matrix	22 g/mol
Mass transfer rate	- m/min
Amounts used	
Inhalation	550 g
Human factors not influenced by risk management	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Exposed skin surface (dermal)	430 cm ²
Contact rate	30 mg/min
Other given operational conditions affecting consumers exposure	
Inhalation	
Room volume	58 m ³
Ventilation rate	0.500 1/h
Release area increases over time	
Release area	2.20E5 cm ²
Release temperature	20 °C
Dermal	
Uptake fraction	100 %

6.4 Contributing Scenario (4) controlling consumer exposure for PC 18

Name of contributing scenario	PC 18 Ink and Toners
Scenario subtitle	Consumer use of printing inks - use of newspaper printed with ink - service life
Calculation model	ConsExpo
Frequency and duration of use	
Inhalation	
Exposure calculation result type	Mean concentration on day of exposure
Frequency of use	1 per day
Emission duration	720 min
Dermal	
Exposure calculation result type	Internal dose chronic
Frequency of use	1 per day
Product characteristics	
Spray application	no
Product ingredient fraction by weight	3 %
Amounts used	
Inhalation	8.85 g
Dermal	200 g
Human factors not influenced by risk management	
Exposed skin surface (dermal)	430 cm ²
Other given operational conditions affecting consumers exposure	
Inhalation	

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Room volume	58 m ³
Ventilation rate	0.500 1/h
Dermal	
Uptake fraction	100 %
Skin contact factor	15 %
Leachable fraction	0.0013 %

6.5 Contributing Scenario (5) controlling consumer exposure for PC 9a

Name of contributing scenario	PC 9a Coatings and Paints, thinners, paint removers
Scenario subtitle	Consumer use of coatings - application of waterborne paint
Calculation model	ConsExpo
Frequency and duration of use	
Inhalation	
Exposure calculation result type	Mean concentration on day of exposure
Frequency of use	1 per day
Exposure time	132 min
Application duration	120 min
Dermal	
Exposure calculation result type	Internal dose chronic
Frequency of use	1 per day
Release duration	7,200 sec
Product characteristics	
Spray application	no
Product ingredient fraction by weight	0.300 %
Mol weight matrix	45 g/mol
Mass transfer rate	0.333 m/min
Amounts used	
Inhalation	1,250 g
Human factors not influenced by risk management	
Exposed skin surface (dermal)	860 cm ²
Contact rate	30 mg/min
Other given operational conditions affecting consumers exposure	
Inhalation	
Room volume	20 m ³
Ventilation rate	0.600 1/h

ANNEX TO THE SAFETY DATA SHEET

According to Annex to the European Regulation no. 830/2015 amending Regulation (EC) No 1907/2006 and Commission Regulation (EU) no. 453/2010 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

”SOLVER”

Release area increases over time	
Release area	1.00E5 cm ²
Release temperature	20 °C
Dermal	
Uptake fraction	100 %