

## ODJELJAK 1.: Identifikacija tvari/smjese i podaci o društvu/poduzeću

### 1.1. Identifikacijska oznaka proizvoda

Identifikacija preparata:

Trgovačko ime: FASSA MOUSSE CLEANER

Trgovački kod: 701063

UFI: 8DKM-C0T7-D20H-M809

### 1.2. Utvrđene relevantne uporabe tvari ili smjese i uporabe koje se ne preporučuju

Preporučana upotreba: Sredstvo za čišćenje poliuretanske pjene

### 1.3. Podaci o dobavljaču koji isporučuje sigurnosno-tehnički list

Tvrtka: FASSA Srl

Via Lazzaris, 3 - 31027 Spresiano (TV) - ITALY

Tel. +39 0422 7222

Fax +39 0422 887509

Odgovorna osoba: laboratorio.spresiano@fassabortolo.it

### 1.4. Broj telefona za izvanredna stanja

+3851 2348 342

## ODJELJAK 2.: Identifikacija opasnosti



### 2.1. Razvrstavanje tvari ili smjese

#### Uredba (EC) br. 1272/2008 (CLP)

Aerosols 1 Vrlo lako zapaljivi aerosol. Spremnik pod tlakom: može se rasprsnuti ako se grije.

Eye Irrit. 2 Uzrokuje jako nadraživanje oka.

STOT SE 3 Može izazvati pospanost ili vrtoglavicu.

Fizikalno-kemijski učinci štetni po ljudsko zdravlje i okoliš:

Nema ostalih rizika

### 2.2. Elementi označivanja

#### Uredba (EC) br. 1272/2008 (CLP):

#### Piktogrami i oznaka opasnosti



Opasnost

#### Oznake upozorenja

H222, H229 Vrlo lako zapaljivi aerosol. Spremnik pod tlakom: može se rasprsnuti ako se grije.

H319 Uzrokuje jako nadraživanje oka.

H336 Može izazvati pospanost ili vrtoglavicu.

#### Oznake obavijesti

P210 Čuvati odvojeno od topline, vrućih površina, iskri, otvorenih plamena i ostalih izvora paljenja. Ne pušiti.

P211 Ne prskati u otvoreni plamen ili drugi izvor paljenja.

P251 Ne bušiti, niti paliti čak niti nakon uporabe.

P261 Izbjegavati udisanje dima/plina/magle/pare/aerosola.

P280 Nositi zaštitne rukavice/zaštitno odijelo te zaštitu za oči/zaštitu za lice.

P305+P351+P338 U SLUČAJU DODIRA S OČIMA: oprezno ispirati vodom nekoliko minuta. Ukloniti kontaktne leće ako ih nosite i ako se one lako uklanjaju. Nastaviti ispirati.

P337+P313 Ako nadražaj oka ne prestaje: zatražiti savjet/pomoć liječnika.

P410+P412 Zaštititi od sunčevog svjetla. Ne izlagati temperaturi višoj od 50 °C.

#### Posebna osiguranja:

Sadrži:

aceton

Posebne odredbe prema Prilogu XVII REACH-a i naknadnih amandmana:

Niti jedan

2.3. Ostale opasnosti

Bez PBT-a, vPvB-a ili endokrinih disruptora prisutnih u koncentraciji > = 0,1 %.

U slučaju nedovoljnog provjetravanja i/ili tijekom upotrebe može doći do razvoja eksplozivnih / lako zapaljivih smjesa

DZPAS0203

Nema ostalih rizika

ODJELJAK 3.: Sastav/informacije o sastojcima

3.1. Tvari

Ne primjenjuje se.

3.2. Smjese

Identifikacija preparata: FASSA MOUSSE CLEANER

Opasni sastojci u smislu CLP Uredbe koja se odnosi na razvrstavanje:

Količina	Naziv	Ident. Broj.	Klasifikacija	Broj registriranih slučajeva:
≥50 - <80 %	acetone	CAS:67-64-1 EC:200-662-2 Index:606-001-00-8	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	01-2119471330-49-xxxx

ODJELJAK 4.: Mjere prve pomoći

4.1. Opis mjera prve pomoći

U slučaju kontakta sa kožom:

Smjesta skinuti zagađenu odjeću i ukloniti je na bezbjedan način.

Odmah oprati obilnom količinom tekuće vode i eventualno sapunom dijelove tijela koji su došli u dodir s proizvodom, čak i u slučaju da samo sumnjate da je došlo do kontakta.

Oprati čitavo tijelo (istuširati se ili okupati).

U slučaju kontakta sa očima:

U slučaju kontakta sa očima, ispirati oči vodom neko vrijeme, držati otvorene kapke, a potom zatražiti pomoć oftalmologa.

Zaštititi neozlijeđeno oko.

U slučaju gutanja:

Ne poticati povraćanje, obratiti se liječniku i pokazati listić o sigurnosti i oznaku kemijskog rizika.

U slučaju udisanja:

Izloženu osobu treba iznijeti na svjež zrak, držati je na toplom, a ista mora mirovati.

4.2. Najvažniji simptomi i učinci, akutni i odgođeni

Simptomi i učinci su u skladu s očekivanjima od opasnosti kako je prikazano u 2. odjeljku.

4.3. Navod o potrebi za hitnom liječničkom pomoći i posebnom obradom

U slučaju nesreće ili slabosti smjesta se obratiti liječniku (ako je moguće, pokazati upute za uporabu ili sigurnosni list).

ODJELJAK 5.: Mjere za suzbijanje požara

5.1. Sredstva za gašenje

Prikladna sredstva za gašenje požara:

CO2, aparati za gašenje požara prahom, pjena, raspršivanje vode.

Sredstva za gašenje požara koja ne treba koristiti iz bezbjednosnih razloga:

Voda u mlazovima.

5.2. Posebne opasnosti koje proizlaze iz tvari ili smjese

Sagorijevanjem se oslobađaju teški dimovi.

Ne udisati plinove nastale eksplozijom i/ili izgaranjem (ugljikov monoksid i ugljikov dioksid, dušikove okside).

5.3. Savjeti za gasitelje požara

Koristiti prikladne dišne aparate.

Posebno pokupiti zaprljanu vodu, koja je korištena za gašenje požara. Ne bacati ovu vodu u kanalizacionu mrežu.

Neoštećene spremnike skloniti iz prostora neposredne opasnosti, ukoliko se to može izvršiti na bezbjedan način.

ODJELJAK 6.: Mjere kod slučajnog ispuštanja

6.1. Osobne mjere opreza, zaštitna oprema i postupci za izvanredna stanja

- Koristiti sredstva za osobnu zaštitu.
- Ukloniti svaki izvor plamena.
- Ukloniti osobe na sigurno mjesto.
- Konzultirati mjere zaštite opisane u točkama 7. i 8.

6.2. Mjere zaštite okoliša

- Spriječiti prodiranje u tlo/dublje slojeve zemlje. Spriječiti ulivanje u površinske vode ili u kanalizacionu mrežu.
- U slučaju izlaska plina ili prodiranja u vodene tokove, tlo ili kanalizacionu mrežu, obavijestiti nadležna tijela.

6.3. Metode i materijal za sprečavanje širenja i čišćenje

- Materijal je prikladan za skupljanje: inertni upijajući materijal (npr. pijesak, vermikulit)
- Nakon što je proizvod sakupljen, isprati onečišćeno područje i predmete s vodom.
- Zadržati vodu kojom ste izvršili pranje, pa je eliminirati.

6.4. Uputa na druge odjeljke

- Pogledati također i paragrafe 8. i 13.

ODJELJAK 7.: Rukovanje i skladištenje

7.1. Mjere opreza za sigurno rukovanje

- Izbjegavati dodir s kožom i očima, udisanje para i maglica.
- Ne koristite prazne spremnike prije no što ih očistite.
- Prije prijenosa proizvoda, uvjeriti se da u spremnicima nema ostataka nekompatibilnih tvari.

Savjeti o općoj higijeni na radnom mjestu:

- Kontaminirana odjeća se smjesta mora zamijeniti prije ulaska u menze.
- Ne konzumirati hranu i piće na radnom mjestu.
- Pogledati i paragraf 8. u svezi sa preporučenim napravama za zaštitu.

7.2. Uvjeti sigurnog skladištenja, uzimajući u obzir moguće inkompatibilnosti

- Čuvati spremnike dobro zatvorene na hladnom i dobro prozračenom mjestu daleko od izvora topline.
- Čuvati dalje od nezaštićenog plamena, iskrenja i izvora topline. Izbjegavati izravno izlaganje sunčevoj svjetlosti.
- Držati podalje od hrane, pića i krmiva.
- Eventualna mikropropuštanja pogonskog sredstva raspoređuju se na dnu, a u dodiru sa zrakom i uz prisustvo iskrenja mogu postati eksplozivna.

Inkompatibilne tvari:

- Vidi točku 10.5

Upute za prostorije za skladištenje:

- Hladno i adekvatno prozračeno.

7.3. Posebna krajnja uporaba ili uporabe

Preporuke

- Vidi točku 1.2

Specifične otopine za industrijski sektor

- Nema posebne upotrebe

ODJELJAK 8.: Nadzor nad izloženosti/osobna zaštita

8.1. Nadzorni parametri

Spisak komponenti sa OEL vrijednošću

	OEL Tip zemlja	Dugoročno mg/m3	Dugoročno ppm	Kratkoročno mg/m3	Kratkoročno ppm	Napomen
acetone CAS: 67-64-1	ACGIH		250.000		500.000	A4, BEI - URT and eye irr, CNS impair
	UE	1210.000	500.000			
	MAK AUSTRIA	1200	500	4800.000	2000.000	
	VLEP BELGIUM	1210	500	2420	1000	
	VLEP FRANCE	1210	500.000	2420	1000.000	
	AGW GERMANY	1200.000	500.000	2400.000	1000.000	
	MAK GERMANY	1200.000	500.000	2400.000	1000.000	
	ÁK HUNGARY	1210		2420.000		
	VLEP ITALY	1210	500			
	NDS POLAND	600.000		1800.000		
	VLEP ROMANIA	1210.000	500.000			
	VLA SPAIN	1210.000	500.000			
	SUVA SWITZERLAN	1200.000	500.000	2400.000	1000.000	

D

MAC	NETHERLAND	1210.000		2420.000	
	S				
WEL	U.K.	1210.000	500.000	3620.000	1500.000
VLE	PORTUGAL	1210.000	500.000		
GVI	CROATIA	1210.000	500.000		
MV	SLOVENIA	1210.000	500.000	2420.000	1000.000
TLV	CZECHIA	800.000	331.200	1500.000	621.000

**Granične vrijednosti izloženosti PNEC**

	<b>PNEC Ograni čiti</b>	<b>Putevi izloženosti</b>	<b>Učestalost izloženosti</b>	<b>Primjedbe</b>
acetone CAS: 67-64-1	10.6 mg/l	Svježa voda		
	1.06 mg/l	Morska voda		
	100 mg/l	Mikroorganizmi u postrojenjima za obradu otpadnih voda (STP)		
	30.4 mg/kg	Sedimenti svježe vode		
	3.04 mg/kg	Sedimenti morske vode		
	29.5 mg/kg	Tlo (poljoprivredno)		

**Izvedena razina bez učinka. (DNEL)**

	<b>Industrijski djelatnik</b>	<b>Profesionalni djelatnik</b>	<b>Potrošač</b>	<b>Putevi izloženosti</b>	<b>Učestalost izloženosti</b>	<b>Primjedbe</b>
acetone CAS: 67-64-1	1210 mg/m <sup>3</sup>	200 mg/m <sup>3</sup>		Ljudi inhalacijski	Dugotrajni, sistemski učinci	
	2420 mg/m <sup>3</sup>			Ljudi inhalacijski	Kratkotrajni, lokalni učinci	
	186 mg/kg	62 mg/kg		Ljudi dermalno	Dugotrajni, sistemski učinci	
		62 mg/kg		Ljudi oralno	Dugotrajni, sistemski učinci	

**8.2. Nadzor nad izloženosti**

Osigurati odgovarajuću ventilaciju. Kad je to razumno moguće, to se može postići upotrebom rezervne ventilacije i dobre opće aspiracije.

Zaštita očiju:

Čaše sa bočnom zaštitom (EN 166).

Zaštita kože:

Osoblje treba nositi antistatičku odjeću od prirodnih vlakana ili sintetičkih vlakana otpornih na visoke temperature.

Zaštita za ruke:

Ne postoji materijal ili kombinacija materijala za rukavice koji bi mogli jamčiti neograničenu otpornost na bilo koji kemijski proizvod ili kombinaciju proizvoda.

Ako je riječ o duljem ili ponavljanom rukovanju, koristite se rukavicama otpornim na kemijske proizvode.

Butil guma (butil guma): debljina > = 0,4 mm; vrijeme prodiranja > = 480 min.; Nitrilna guma, Viton, 4H.

Izbior prikladnih rukavica ne ovisi samo o materijalu, nego i o drugim karakteristikama kvalitete koje se razlikuju od proizvođača do proizvođača, i o načinima i vremenu upotrebe smjese.

Zaštita pri disanju:

Ako su radnici izloženi koncentracijama višima od granice izloženosti, moraju upotrebljavati odgovarajuće certificirane respiratore.

Kombinirana filtrirajuća naprava (EN 14387).; Maska s filtrom "A", braon boje; Maska s filtrom "P", bijele boje

Kontrola izlaganja u okolišu:

Vidi točku 6.2

Higijenske i tehničke mjere

Vidi odlomak 7.

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## ODJELJAK 9.: Fizikalna i kemijska svojstva

### 9.1. Informacije o osnovnim fizikalnim i kemijskim svojstvima

Izgled: tekuće  
Boja: prozirno  
Miris: na: aceton  
Točka topljenja/smrzavanja: N.D.  
Početna točka ključanja i vrijeme ključanja: N.D.  
Zapaljivost: Ne primjenjuje se.  
Gornja/donja granica zapaljivosti ili eksplozije: N.D.  
Plamište: Ne primjenjuje se.  
Temperatura samozapaljenja: 240.00 °C  
Temperatura raspadanja: N.D.  
pH:  $\geq 5.00 \leq 6.00$   
Kinematička viskoznost: Ne primjenjuje se.  
Gustoća: 0,65 g/cm<sup>3</sup> ( Interna metoda )  
Gustoća para: N.D.  
Tlak pare: N.D.  
Topljivost u vodi: Ne primjenjuje se.  
Topljivost u ulje: Ne primjenjuje se.  
Koeficijent raspodjele (n-okanol/voda): Ne primjenjuje se.

#### Svojstva čestica:

Veličina čestica: Ne primjenjuje se.

### 9.2. Ostale informacije

Vodljivost: Ne primjenjuje se.  
Explozivne osobine: Ne primjenjuje se.  
Osobine oksidiranja: Ne primjenjuje se.  
Brzina isparavanja: Ne primjenjuje se.

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## ODJELJAK 10.: Stabilnost i reaktivnost

### 10.1. Reaktivnost

Stabilan u normalnim uvjetima

### 10.2. Kemijska stabilnost

Stabilan u normalnim uvjetima

### 10.3. Mogućnost opasnih reakcija

Zbog djelovanja topline ili u slučaju požara može doći do oslobađanja ugljikovih oksida i para koji mogu biti štetni za zdravlje.  
Držati podalje od oksidansa, vrlo lužnatih i vrlo kiselih materijala radi sprečavanja egzotermnih reakcija.

### 10.4. Uvjeti koje treba izbjegavati

Čuvati odvojeno od izvora topline.

### 10.5. Inkompatibilni materijali

Izbjegavati dodir s oksidirajućim materijalima. Proizvod se može zapaliti.  
Vidi točku 10.3

### 10.6. Opasni proizvodi raspadanja

Pri odgovarajućem skladištenju i rukovanju ne razvijaju se opasni proizvodi raspadanja.  
Vidi točku 5.2

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## ODJELJAK 11.: Toksikološke informacije

### 11.1. Informacije o razredima opasnosti kako su definirani u Uredbi (EZ) br. 1272/2008

#### Podaci o toksičnosti proizvoda:

a) akutna toksičnost	Nije kategorizirano Na temelju dostupnih podataka kriteriji za razvrstavanje nisu ispunjeni.
b) kožno nagrizanje/nadraživanje	Nije kategorizirano Na temelju dostupnih podataka kriteriji za razvrstavanje nisu ispunjeni.
c) teške očne ozljede/teško očno nadraživanje	Proizvod je razvrstan kao: Eye Irrit. 2(H319)
d) izazivanje kožne ili dišne preosjetljivosti	Nije kategorizirano Na temelju dostupnih podataka kriteriji za razvrstavanje nisu ispunjeni.
e) mutagenost zametnih stanica	Nije kategorizirano

f) kancerogenost	Na temelju dostupnih podataka kriteriji za razvrstavanje nisu ispunjeni. Nije kategorizirano
g) reproduktivna toksičnost	Na temelju dostupnih podataka kriteriji za razvrstavanje nisu ispunjeni. Nije kategorizirano
h) Specifična toksičnost za ciljne organe (STOT) jednokratno izlaganje	Na temelju dostupnih podataka kriteriji za razvrstavanje nisu ispunjeni. Proizvod je razvrstan kao: STOT SE 3(H336)
i) Specifična toksičnost za ciljne organe (STOT) opetovano izlaganje	Nije kategorizirano
j) opasnost u slučaju udisanja	Na temelju dostupnih podataka kriteriji za razvrstavanje nisu ispunjeni. Nije kategorizirano
	Na temelju dostupnih podataka kriteriji za razvrstavanje nisu ispunjeni.

#### Podaci o toksičnosti glavnih sastojaka u proizvodu:

aceton	a) akutna toksičnost	LD50 Oralno Štakor 5800 mg/kg LD50 Koža Kunić 7400 mg/kg LC50 Udisanje pare Štakor 76 mg/l 4h
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## 11.2. Informacije o drugim opasnostima

### Svojstva endokrine disrupcije:

Bez drugih endokrinih disruptora prisutnih u koncentraciji  $> = 0,1 \%$

## ODJELJAK 12.: Ekološke informacije

Primjeniti dobre radne postupke da se produkt ne oslobađa u okoliš.

Proizvod ne sadrži tvari koje se smatraju štetnima za ozon.

### 12.1. Toksičnost

Eko-Toksikološke informacije:

#### Popis eko-toksikoloških svojstava proizvoda

Nije razvrstan kao opasan za okoliš

Nema raspoloživih podataka za proizvod

#### Popis sastojaka sa eko-toksikološkim svojstvima

Sastojak	Ident. Broj.	Ekotoksik. Informacije
aceton	CAS: 67-64-1 - EINECS: 200- 662-2 - INDEX: 606-001-00-8	a) Akutna otrovnost na vodene organizme : LC50 Ribe 5540 mg/l 96h  a) Akutna otrovnost na vodene organizme : LC50 Daphnia 8800 mg/l 48h b) Hronična otrovnost na vodene organizme : NOEC Daphnia 2212 mg/l

### 12.2. Postojanost i razgradivost

#### Sastojak Postojanost/razgradivost:

aceton	Brzo-biološki razgradiv
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### 12.3. Bioakumulacijski potencijal

Ne primjenjuje se.

### 12.4. Pokretljivost u tlu

Ne primjenjuje se.

### 12.5. Rezultati procjene svojstava PBT i vPvB

Prema dostupnim podacima proizvod ne sadrži  
PBT/vPvB u postotku većem  $\geq 0.1\%$ .

### 12.6. Svojstva endokrine disrupcije

Bez drugih endokrinih disruptora prisutnih u koncentraciji  $> = 0,1 \%$

### 12.7. Ostali štetni učinci

Ne primjenjuje se.

## ODJELJAK 13.: Zbrinjavanje

### 13.1. Metode obrade otpada

Regenerirati ako je moguće. Poslati ovlaštenim postrojenjima za odlaganje ili na spaljivanje pod kontroliranim uvjetima. Pri tome se pridržavati vrijedećih lokalnih i državnih regulativa.

Ne dopustiti prodor u kanalizaciju ili vodene tokove.

Zbrinite kontejnera onečišćenih proizvoda u skladu s lokalnim ili nacionalnim zakonskim odredbama.

Proizvod se nakon isteka roka trajanja mora odložiti prema propisima na snazi.

## ODJELJAK 14.: Informacije o prijevozu



### 14.1. UN broj ili identifikacijski broj

1950

### 14.2. Ispravno otpremno ime prema UN-u

ADR-Naziv za otpremu: AEROSOLI, zapaljivi

IATA-Tehnički naziv: AEROSOLS, FLAMMABLE

IMDG-Tehnički naziv: AEROSOLS

### 14.3. Razred(i) opasnosti pri prijevozu

ADR-Razred: 2

IATA-Razred: 2.1

IMDG-Razred: 2

### 14.4. Skupina pakiranja

ADR-Grupa pakiranja: -

IATA-Grupa pakiranja: -

IMDG-Grupa pakiranja: -

### 14.5. Opasnosti za okoliš

Morski polutant: Ne

Zagađivači okoliša: Ne

IMDG-EMS: F-D, S-U

### 14.6. Posebne mjere opreza za korisnika

Ceste i Željeznica (ADR-RID):

ADR-Označavanje: 2.1

ADR - Identifikacijski broj opasnosti: -

ADR-Posebne odredbe: 190 327 344 625

ADR ograničenja prijevoza u tunelu:

Zrak (IATA):

IATA-Putnički zrakoplov: 203

IATA-Teretni zrakoplov: 203

IATA-Označavanje: 2.1

IATA-Sporedni opasnosti: -

IATA-Erg: 10L

IATA-Posebne odredbe: A145 A167 A802

More (IMDG):

IMDG-Šifra utovara u brod: SW1 SW22

IMDG-Napomena za utovar u brod: SG69

IMDG-Sporedni opasnosti See SP63

IMDG-Posebne odredbe: 63 190 277 327 344 381 959

### 14.7. Prijevoz morem u razlišenom stanju u skladu s instrumentima IMO-a

Ne primjenjuje se.

## ODJELJAK 15.: Informacije o propisima

### 15.1. Propisi u području sigurnosti, zdravlja i okoliša/posebno zakonodavstvo za tvar ili smjesu

Direktiva 98/24/EC (Rizici koji nastaju od kemijskih agenasa na radu)

Direktiva 2000/39/EC (Granična vrijednost profesionalne izloženosti)

Direktiva 2010/75/EU

Uredba (EC) br. 1907/2006 (REACH)

Uredba (EC) br. 1272/2008 (CLP)

Uredba (EC) br. 790/2009 (ATP 1 CLP) i (EZ) br. 758/2013

Uredba (EZ) br. 2020/878

Uredba (EZ) br. 286/2011 (ATP 2 CLP)

Uredba (EZ) br. 618/2012 (ATP 3 CLP)

Uredba (EZ) br. 487/2013 (ATP 4 CLP)

Uredba (EZ) br. 944/2013 (ATP 5 CLP)

Uredba (EZ) br. 605/2014 (ATP 6 CLP)

Uredba (EZ) br. 2015/1221 (ATP 7 CLP)

Uredba (EZ) br. 2016/918 (ATP 8 CLP)

Uredba (EZ) br. 2016/1179 (ATP 9 CLP)

Uredba (EZ) br. 2017/776 (ATP 10 CLP)

Uredba (EZ) br. 2018/669 (ATP 11 CLP)

Uredba (EZ) br. 2018/1480 (ATP 13 CLP)

Uredba (EZ) br. 2019/521 (ATP 12 CLP)

Uredba (EZ) br. 2020/217 (ATP 14 CLP)

Uredba (EZ) br. 2020/1182 (ATP 15 CLP)

Uredba (EZ) br. 2021/643 (ATP 16 CLP)

Uredba (EZ) br. 2021/849 (ATP 17 CLP)

Uredba (EZ) br. 2022/692 (ATP 18 CLP)

**Ograničenja u vezi s produktom ili sadržajnim tvarima u skladu s Prilogom XVII Uredbe (EZ-a) 1907/2006 (REACH) i naknadne izmjene:**

Ograničenja koja se odnose na proizvod: 3, 40

Ograničenja koja se odnose na sadržane tvari: 75

**Odredbe prema direktivi 2012/18/EU (Seveso III)**

**Kategorija Seveso III prema dijelu 1. Priloga 1.**

proizvod pripada kategoriji: P3a

**Donje granične količine opasnih tvari (u tonama) - male količine**

150

**Donje granične količine opasnih tvari (u tonama) - velike količine**

500

**Uredba (EU) br. 649/2012 (Uredba PIC)**

Nijedna tvar nije navedena

**Njemačka klasifikacija opasnosti za vodu.**

1: Low hazard to waters

**SVHC tvari:**

Prema dostupnim podacima proizvod ne sadrži SVHC u postotku većem  $\geq 0.1\%$ .

Tvar „acetone“ sadržana u ovom proizvodu prethodnica je eksplozivna uređenih Uredbom (EU) 2019/1148.

Sve sumnjive transakcije, na primjer nestanci većih količina i krađe, moraju se prijaviti nacionalnoj točki za kontakt.

Nacionalne točke za kontakt možete naći ovdje:

[https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/crisis-and-terrorism/explosives/explosives-precursors/docs/list\\_of\\_competent\\_authorities\\_and\\_national\\_contact\\_points\\_en.pdf](https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/crisis-and-terrorism/explosives/explosives-precursors/docs/list_of_competent_authorities_and_national_contact_points_en.pdf) [ec.europa.eu]

**15.2. Procjena kemijske sigurnosti**

Procjena kemijske sigurnosti nije provedena za smjesu

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**ODJELJAK 16.: Ostale informacije**

Šifra	Opis
EUH066	Ponavljano izlaganje može prouzročiti sušenje ili pucanje kože.
H222, H229	Vrlo lako zapaljivi aerosol. Spremnik pod tlakom: može se rasprsnuti ako se grije.
H225	Lako zapaljiva tekućina i para.
H319	Uzrokuje jako nadraživanje oka.
H336	Može izazvati pospanost ili vrtoglavicu.

Šifra	Razred opasnosti i kategorija opasnosti Opis	
2.3/1	Aerosols 1	Aerosol, kategorija 1
2.6/2	Flam. Liq. 2	Zapaljiva tekućina, kategorija 2
3.3/2	Eye Irrit. 2	Nadražujuće za oči, kategorija 2
3.8/3	STOT SE 3	Specifična toksičnost za ciljane organe – jednokratno izlaganje, Kategorija 3



## Razvrstavanje i postupak razvrstavanja za smjese sukladno Uredbi (EZ) br. 1272/2008 (CLP):

### Razvrstavanje prema Uredbi (EZ) br. 1272/2008      Postupak razvrstavanja

2.3/1	Na temelju rezultata ispitivanja
3.3/2	Računska metoda
3.8/3	Računska metoda

Ovaj dokument izradila je tehnički kompetentna osoba za SDS, te koja je prikladno za to osposobljena.

Glavni bibliografski izvori:

ECDIN – Informacijska mreža za ekološke podatke za kemikalije – Zajednički istraživački centar, Komisija Europskih zajednica  
SAX's OPASNE OSOBINE INDUSTRIJSKIH TVARI- Osmo izdanje - Van Nostrand Reinold  
Sigurnosno-tehnički listovi dobavljača sirovina.

Ovdje objavljenе informacije se temelje na našem znanju u vrijeme gore navedenog datuma. Odnose se samo na navedene proizvode i ne predstavlja garanciju neke određene kvalitete.

Obaveza je korisnika da utvrdi da je ova informacija cjelovita i da odgovara specifičnoj upotrebi.

Ovaj MSDS poništava i zamjenjuje sva predhodna izdanja.

Legenda kratica i akronima upotrebljenih u sigurnosno-tehničkom listu:

ACGIH: Američka konferencija vladinih specijalista za industrijsku higijenu  
ADR: Europski sporazum o međunarodnom cestovnom prijevozu opasnih tvari.  
ATE: Procjena akutne toksičnosti  
ATEmix: Procijenjena vrijednost akutne toksičnosti (Mješavine)  
BEI: Indeks biološke izloženosti  
CAS: CAS registarski broj (Američko kemijsko društvo)  
CAV: Centar za otrove  
CE: Europska zajednica  
CLP: Razvrstavanje, označavanje, pakiranje.  
CMR: Karcinogeno, Mutageno i Reprotoksično  
COV: Hlapivi organski spoj  
CSA: Procjena kemijske sigurnosti  
CSR: Izvješće o kemijskoj sigurnosti  
DNEL: Izvedena razina bez učinka.  
EC50: Pulu maksimalna efektivna koncentracija  
ECHA: Europska agencija za kemijske proizvode  
EINECS: Europski propis postojećih trgovačkih kemijskih tvari.  
ES: Scenario izloženosti  
GefStoffVO: Propis o opasnim tvarima, Njemačka.  
GHS: Globalno harmonizirani sustav razvrstavanja i označavanja kemikalija  
IARC: Međunarodna agencija za istraživanja o karcinomu  
IATA: Međunarodna udruga za zračni prijevoz.  
IC50: Pulu maksimalna koncentracija inhibitora  
IMDG: Međunarodni pomorski kodeks opasnog tereta.  
LC50: Smrtna koncentracija u 50% slučajeva ispitivane populacije.  
LD50: Smrtna doza u 50% slučajeva ispitivane populacije.  
LDLo: Niska smrtonosna doza  
N.A.: Nije primjenjivo  
N/A: Nije primjenjivo  
N/D: Nije definirano/Nije dostupno  
N.D.: Nije dostupno  
NIOSH: Državni institut za zaštitu na radu  
NOEL: Razina bez uočenih štetnih učinaka  
OSHA: Upravljanje zaštitom na radu  
PBT: Persistentno, bioakumulativno i toksično  
PGK: Packaging Instruction  
PNEC: Predviđena koncentracija bez učinka.  
PSG: Putnici  
RID: Propis o međunarodnom prijevozu opasnih tvari željeznicom  
STEL: Granica kratkotrajne izloženosti.  
STOT: Toksičnost za ciljani organ.  
TLV: Granična vrijednost praga.  
TLV-TWA: Granična vrijednost praga za vremenski ponderirani prosjek. (ACGIH standard)  
vPvB: Vrlo persistentno, vrlo bioakumulativno  
WGK: Njemačka klasifikacija opasnosti za vodu.

# Acetone

## Identification of the exposure scenario

**Product name:** Acetone

**CAS number:** 67-64-1

**Review date:** 13/03/2020

## 2 - INDUSTRIAL USES

**Identified industrial uses of acetone and generic exposure scenario.**

Table 1 lists the industrial uses identified for acetone.

If DUs wish to verify compliance with the ES, they should start with summary table 1 and, based on the textual description of the exposure scenarios, determine their own identified use, the PROC and the ERC associated with their specific activity.

DUs may identify the specific scenarios of their interest in section 2.2.1 for the environment, 2.2.2 for workers and 2.2.3 for consumers and verify the exposure and risk characterisation for the environment and for workers in section 2.3. The operating conditions described in each specific scenario do not necessarily apply to all sites. It may therefore be necessary to apply the graduated scaling method (appropriate adaptation to the actual conditions on site), in order to identify compliance with the conditions described in the exposure scenarios.

### Table 1. Industrial uses identified for acetone

**Identifier use:** Production, processing and distribution of substances and mixtures.

**Description:** Production, processing (see example below), formulation and distribution of the substance or mixtures. Includes recycling/recovery, material transfers, storage, maintenance and loading (including vessels/barges, road/rail car and IBC), sampling and associated laboratory activities.

**Sector of use (SU):** SU3

**Process categories (PROC):** 1, 2, 3, 4, 5, 6, 8a, 8b, 9, 10, 14, 15

**Environmental Release Categories (ERC):** 1, 2, 4, 6a

**Identifier use:** Use in laboratories

**Description:** Use of the substance in the laboratory, including material transfer and equipment cleaning.

**Sector of use (SU):** SU3

**Process categories (PROC):** 10, 15

**Environmental Release Categories (ERC):** 4

**Identifier use:** Use in coatings

**Description:** Covers the use in coatings (paints, inks, adhesives, production of textiles etc.), including exposures during use (including materials receipt, storage, preparation and bulk and semi-bulk transfer, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities.

**Sector of use (SU):** SU3

**Process categories (PROC):** 1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 15, 19

**Environmental Release Categories (ERC):** 4

**Identifier use:** Use as a binder and release agent.

**Description:** Covers the use as binders and release agents including material transfers, mixing, application (including spraying and brushing), mould forming and casting, and handling of waste.

**Sector of use (SU):** SU3

**Process categories (PROC):** 1, 2, 3, 4, 5, 6, 7, 8a, 8b, 9, 10, 13

**Environmental Release Categories (ERC):** 5

**Identifier use:** Rubber production and processing

**Description:** Production of tyres and rubber articles in general, including processing of (uncured) rubber, maintenance and mixing of rubber additives, vulcanisation, cooling and finishing.

**Sector of use (SU):** SU3

**Process categories (PROC):** 1, 2, 3, 4, 5, 6, 8a, 8b, 9, 10, 13, 14

**Environmental Release Categories (ERC):** 6d

**Identifier use:** Polymer production

**Description:** Production of formulated polymers, including material transfers, additives handling (e.g. pigments, stabilisers, fillers, plasticisers, etc.), moulding, curing and forming activities, material re-works, storage and associated maintenance.

**Sector of use (SU):** SU3

**Process categories (PROC):** 1, 2, 3, 4, 5, 6, 8a, 8b, 9, 10, 13, 14, 15

**Environmental Release Categories (ERC):** 6d

**Identifier use:** Polymer processing

**Description:** Processing of formulated polymers, including material transfers, additives handling (e.g. pigments, stabilisers, fillers, plasticisers, etc.), moulding, curing and forming activities, material re-works, storage and associated maintenance.

**Sector of use (SU):** SU3

**Process categories (PROC):** 1, 2, 3, 4, 5, 6, 8a, 8b, 9, 10, 13, 14, 15

**Environmental Release Categories (ERC):** 6d

**Identifier use:** Use in cleaning agents

**Description:** Covers the use as a component of cleaning products including transfer from storage, pouring/unloading from drums or containers. Exposures during mixing/dilution in preparation and cleaning activities (including spraying, brushing, dipping, wiping, automatic and by hand), related equipment cleaning and maintenance.

**Sector of use (SU):** SU3

**Process categories (PROC):** 1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 19

**Environmental Release Categories (ERC):** 4

**Identifier use:** Use in oil fields in drilling and production operations

**Description:** Covers the use as a component of cleaning products including transfer from storage, pouring/unloading from drums or containers.

**Sector of use (SU):** SU3

**Process categories (PROC):** 1, 2, 3, 4, 8a, 8b

**Environmental Release Categories (ERC):** 4

**Identifier use:** Blowing agent

**Description:** Use as a blowing agent for rigid and flexible foams, including material transfers, mixing and injection, curing, cutting, storage and packing.

**Sector of use (SU):** SU3

**Process categories (PROC):** 1, 2, 3, 4, 8a, 9, 12

**Environmental Release Categories (ERC):** 4, 10a

**Identifier use:** Use in mining chemicals

**Description:** Covers the use of the substance in extraction processes at mining operations, including material transfers, winning and separation activities and substance recovery and disposal.

**Sector of use (SU):** SU3

**Process categories (PROC):** 1, 2, 3, 4, 5, 8b, 9

**Environmental Release Categories (ERC):** 8d

## 2.1 INDUSTRIAL USES OF ACETONE AND ACETONE-CONTAINING PRODUCTS

**Title:** Industrial uses of acetone and acetone-containing products

**Sectors of use:** All Industrial Uses (SU3)

**Process categories:** 1, 2, 3, 4, 5, 6, 7, 8a, 8b, 9, 10, 12, 13, 14, 15, 19

**Environmental Release Categories:** 1, 2, 4, 5, 6a, 6d, 10a, 8d (ERCs must be verified with the ECT tool) (ERCs must be verified with the ECT tool)

**Scope of the process:** Industrial processes relevant to acetone and acetone-containing products

## 2.2 OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES

### 2.2.1. Contributing scenario controlling exposure for the environment

**Method used for evaluation:** Based on currently available information on chemical-physical properties, environmental behaviour and ecotoxicity, acetone should not be classified as environmentally hazardous or assessed as PBT or vPvB. An environmental risk characterisation that quantitatively assesses all uses identified by the registrant is not required. To provide DUs with the information to assess their local conditions, the ECT tool can, however, be used to perform an environmental risk assessment. If necessary, this includes predefined scenarios for safe use to assess the local working conditions of the DUs.

#### Operating conditions

**Product features:** Liquid. The substance has a single structure, a readily biodegradable ketone.

**Frequency and duration of use:** 360 days (default value used in the ECT-acetone tool)

**Quantity used:** See table 2.

**Environmental factors not influenced by risk management:** See table 2.

**Other given operational conditions affecting environmental exposure:** See table 2.

#### Risk Management Measures

**Local technical conditions and measures to reduce and limit discharges, air emissions and soil release:** Locate bulk storage outdoors [E2]. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures [DSU1].

**Organizational measures to prevent/limit release from site:** Common practices vary across sites thus conservative process release estimates used [TCS1]. Typical technical measures are closed systems, scrubbers or carbon absorbers. Typical onsite gaseous effluent treatment technology provides a removal efficiency of 90%.

**Conditions and measures for the domestic sewage treatment plan:** Use the "ECT Acetone" Excel tool to verify your local conditions.

**Conditions and measures for external treatment of waste for disposal:** External treatment and disposal of waste should comply with applicable local and/or national regulations [ETW3].

**Conditions and measures for external recovery of waste:** External treatment and disposal of waste should comply with applicable local and/or national regulations [ETW3].

### 2.2.2 Contributing scenario controlling exposure for workers

**Product features:** Liquid, vapour pressure > 10 kPa [OC5].

**Concentration of the substance in the product:** Covers a percentage substance in the product up to 100% (unless otherwise stated) [G13].

**Frequency and duration of use/exposure:** Covers a daily exposure up to 8 hours (unless otherwise specified) [G2].

**Human factors not influenced by risk management:** None identified by this scenario.

**Other given operating conditions affecting employee exposure:** Assumes a good basic standard of occupational hygiene has been implemented [G1]

#### Operational conditions and risk management measures affecting worker exposure

Assumes a good basic standard of occupational hygiene has been implemented [G1]. Locate bulk storage outdoors [E2]. Use suitable eye protection. [PPE26]. If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to EN374 and provide employee skin care programmes. [PPE20]. Provide a basic standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan [E1].

For the operational conditions and risk reduction measures for each contributing scenario, see Table 3.

Note: Guidance is based on operational conditions that may not be applicable to all sites. The DU may therefore have to adapt or apply other appropriate site-specific risk reduction measures that are at least as efficient as those described here.

## 2.2.3 Contributing scenario controlling consumer exposure

There is no consumer exposure for this scenario.

## 2.3 EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

### 2.3.1 Contributing scenario for estimating environmental exposure

**Tool used for evaluation:** ECT-acetone tool based on EUSES

### 2.3.2 Contributing scenario for estimating worker exposure

**Tool used for evaluation** ECETOC TRA v2 ([www.ecetoc.org/tra](http://www.ecetoc.org/tra))

**General parameters used:**

Environment type: industrial

Dustiness: low (liquid substance)

Duration of exposure: > 4 hours/day, unless otherwise stated in the RMMs

Ventilation use: none, unless otherwise stated in the RMMs

Use of respiratory protection: none, unless otherwise stated in the RMMs

Use of skin protection: none, unless otherwise stated in the RMMs

Concentration in preparations: > 25%

When complying with the recommended risk management measures (RMMs) and operating conditions (OCs), exposure is not expected to exceed the DNELs and the risk characterisation ratios should be less than 1, as shown in table 3.

### 2.3.3 Contributing scenario for estimating consumer exposure

There is no consumer exposure for this scenario.

## 2.4. GUIDELINES FOR THE DU TO VERIFY COMPLIANCE WITH THE EXPOSURE SCENARIO

### 2.4.1 Guidelines for DU to verify compliance with the environmental exposure scenario

Based on currently available information on chemical-physical properties, environmental behaviour and ecotoxicity, acetone should not be classified as environmentally hazardous or assessed as PBT or vPvB. An environmental risk characterisation that quantitatively assesses all uses identified by the registrant is not required.

However, a dedicated scaling tool (ECT acetone tool) is provided to calculate the maximum allowable tonnage per year for both water and soil. The tool can be downloaded from the REACH consortium's webpage for phenol and derivatives.

<http://www.reachcentrum.eu/en/consortium-management/consortia-under-reach/phenol-derivatives-reach-consortium/phenol-derivatives-dossiers.aspx>

For different environmental release categories (ERC), the maximum allowable tonnage for a site may change considerably. Site-specific properties (local release factors, watercourse flow speeds, dilution factors, reduction efficiency of wastewater treatment plants, etc.) can also have a considerable impact on the annual allowable tonnage for a site. As stated before, changes in allowable tonnage due to differences in operating conditions can be calculated using the ECT acetone tool. A similar scaling is provided for the soil compartment.

2.4.2 Guidelines for DU to verify compliance with the contributing scenario for worker exposure estimation

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in Table 3 are implemented [G22].

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels [G23].

Risk characterisation ratios (RCRs) are calculated by comparing the estimated exposure levels with the corresponding DNELs ( $RCR = \text{exposure level}/\text{DNEL}$ ).

## Table 2. OC, RMM, Risk Characterization - Environment - Industrial uses

### Identifiers:

All ES

### Operating Conditions and Risk Management Measures

**ERC/SpERC:** ERC must be verified with the ECT tool.

### Quantity used

Tonnage per site: The ECT tool for acetone can be used to calculate the maximum tonnage allowed for the site.

### Dilution factors

Fresh water: 10 (unless other data are available)

Sea water: 100 (unless other data are available)

### Risk characteristics

An environmental risk characterization report is not required.

<b>Table 3. OC, RMM, Risk Characterization - Workers - Industrial uses</b>
----------------------------------------------------------------------------

**Identifier: ES1****Operating Conditions and Risk Management Measures**

Contributing scenario: General exposures (closed systems) [CS15].

Proc: 1

OC and typical RMMs: Closed systems [CS107]. In-Process Sampling [CS2].

RMM to be implemented: Sample via a closed loop or other system to avoid exposure [E8]. Handle substance within a closed system [E47].

**Risk characteristics**

RCR Inhalation: 0.00002

Dermal RCR: 0.002

RCR (all ways): 0.002

**Identifier: ES2****Operating Conditions and Risk Management Measures**

Contributing scenario: General exposures (closed systems) [CS15].

Proc: 2

OC and typical RMMs: Continuous process [CS54]. In-Process Sampling [CS2].

RMM to be implemented: Sample via a closed loop or other system to avoid exposure [E8]. Handle substance within a closed system [E47].

**Risk characteristics**

RCR Inhalation: 0.10

Dermal RCR: 0.01

RCR (all ways): 0.11

**Identifier: ES3****Operating Conditions and Risk Management Measures**

Contributing scenario: General exposures (closed systems) [CS15].

Proc: 3

OC and typical RMMs: Batch process [CS55]. In-Process Sampling [CS2].

RMM to be implemented: Sample via a closed loop or other system to avoid exposure [E8]. Handle substance within a closed system [E47].

**Risk characteristics**

RCR Inhalation: 0.20

Dermal RCR: 0.002

RCR (all ways): 0.20

**Identifier: ES4****Operating Conditions and Risk Management Measures**

Contributing scenario: In-Process Sampling [CS2]. Open systems [CS108].

Proc: 4

RMM to be implemented: No additional RMM (apart from the basic measures described above) is necessary to achieve safe use.

**Risk characteristics**

RCR Inhalation: 0.20

Dermal RCR: 0.04

RCR (all ways): 0.24

**Identifier: ES5****Operating Conditions and Risk Management Measures**

Contributing scenario: Mixing operations (open systems) [CS30].

Proc: 5

OC and typical RMMs: Batch process [CS55]. In-Process Sampling [CS2].

RMM to be implemented: No additional RMM (apart from the basic measures described above) is necessary to achieve safe use.

**Risk characteristics**

RCR Inhalation: 0.50

Dermal RCR: 0.07

RCR (all ways): 0.57

**Identifier: ES6****Operating Conditions and Risk Management Measures**

Contributing scenario: Calendering (including Banbury) [CS64]

Proc: 6

RMM to be implemented: No additional RMM (apart from the basic measures described above) is necessary to achieve safe use.

**Risk characteristics**

RCR Inhalation: 0.50

Dermal RCR: 0.15

RCR (all ways): 0.65

## Identifier: ES7

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Machine spraying/fogging [CS25].

**Proc:** 7

**OC and typical RMMs:** With local suction [CS109].

**RMM to be implemented:** Ensure material transfers are under containment or extract ventilation [E66].

### *Risk characteristics*

**RCR Inhalation:** 0.05 Efficiency TRA 95%.

**Dermal RCR:** 0.01 Skin exposure TRA LEV reduction factor 0.05.

**RCR (all ways):** 0.06

## Identifier: ES8

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Machine spraying/fogging [CS25].

**Proc:** 7

**RMM to be implemented:** Ensure operation is undertaken outdoors [E69].

### *Risk characteristics*

**RCR Inhalation:** 0.70 Effectiveness of dilution by ventilation 30%.

**Dermal RCR:** 0.23

**RCR (all ways):** 0.93

## Identifier: ES9

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Machine spraying/fogging [CS25].

**Proc:** 7

**RMM to be implemented:** Wear a respirator conforming to EN140 with type A filter or better [PPE22].

### *Risk characteristics*

**RCR Inhalation:** 0.10 TRA RPE half mask.

**Dermal RCR:** 0.23

**RCR (all ways):** 0.33

## Identifier: ES10

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Bulk product transfer [CS14].

**Proc:** 8a

**OC and typical RMMs:** Non-dedicated system [CS82]. Transfer from / pour from containers [CS22].

**RMM to be implemented:** No additional RMM (apart from the basic measures described above) is necessary to achieve safe use.

### *Risk characteristics*

**RCR Inhalation:** 0.50

**Dermal RCR:** 0.07

**RCR (all ways):** 0.57

## Identifier: ES11

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Bulk product transfer [CS14].

**Proc:** 8b

**OC and typical RMMs:** Dedicated system [CS81]. Pouring from small containers [CS22].

**RMM to be implemented:** No additional RMM (apart from the basic measures described above) is necessary to achieve safe use.

### *Risk characteristics*

**RCR Inhalation:** 0.30

**Dermal RCR:** 0.037

**RCR (all ways):** 0.34

## Identifier: ES12

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Filling of small packages [CS7].

**Proc:** 9

**OC and typical RMMs:** Dedicated system [CS81]. Pouring from small containers [CS9].

**RMM to be implemented:** No additional RMM (apart from the basic measures described above) is necessary to achieve safe use.

### *Risk characteristics*

**RCR Inhalation:** 0.40

**Dermal RCR:** 0.04

**RCR (all ways):** 0.44

## Identifier: ES13

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Application by roller, brush [CS51].

**Proc:** 10

**RMM to be implemented:** No additional RMM (apart from the basic measures described above) is necessary to achieve safe use.

### *Risk characteristics*

**RCR Inhalation:** 0.50

**Dermal RCR:** 0.15

**RCR (all ways):** 0.65

## Identifier: ES14

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Cleaning and maintenance of equipment [CS39].

**Proc:** 10

**RMM to be implemented:** No additional RMM (apart from the basic measures described above) is necessary to achieve safe use.

### *Risk characteristics*

**RCR Inhalation:** 0.50

**Dermal RCR:** 0.15

**RCR (all ways):** 0.65

## Identifier: ES16

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Immersion, dipping and pouring [CS4].

**Proc:** 13

**OC and typical RMMs:** In-Process Sampling [CS2].

**RMM to be implemented:** No additional RMM (apart from the basic measures described above) is necessary to achieve safe use.

### *Risk characteristics*

**RCR Inhalation:** 0.50

**Dermal RCR:** 0.074

**RCR (all ways):** 0.57

## Identifier: ES18

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Laboratory activity [CS36].

**Proc:** 15

**OC and typical RMMs:** Production of objects in foam [CS125].

**RMM to be implemented:** No additional RMM (apart from the basic measures described above) is necessary to achieve safe use.

### *Risk characteristics*

**RCR Inhalation:** 0.10

**Dermal RCR:** 0.00

**RCR (all ways):** 0.10

## Identifier: ES19

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Hand application - fingerpaints, pastels, adhesives [CS72].

**Proc:** 19

**RMM to be implemented:** Wear suitable gloves tested to EN374 [PPE15].

### *Risk characteristics*

**RCR Inhalation:** 0.50

**Dermal RCR:** 0.15

**RCR (all ways):** 0.65

### 3 - PROFESSIONAL USES

Identified professional uses of acetone and generic exposure scenario.

Table 4 lists the professional uses identified for Acetone.

If DUs wish to verify compliance with the ES, they should start with summary table 4 and, based on the textual description of the exposure scenarios, determine their own identified use, the PROC and the ERC associated with their specific activity.

DU can identify the specific scenarios of their interest in section 3.2.1 for the environment, for workers 3.2.2 and 3.2.3 for the consumer, check in section 3.3 the exposure and risk characterization for the environment and for the workers. The operating conditions described in each specific scenario do not necessarily apply to all sites. It may therefore be necessary to apply the graduated scaling method (appropriate adaptation to the actual conditions on site), in order to identify compliance with the conditions described in the exposure scenarios.

**Table 4. Identified professional uses for acetone**

**Identifier use:** Use in laboratories

**Description:** Use of small amounts in laboratory environments, including accidental exposures during material transfers and equipment cleaning.

**Sector of use (SU):** SU22

**Process categories (PROC):** 10, 15

**Environmental Release Categories (ERC):** 8a

**Identifier use:** Use in coatings

**Description:** Covers use in coatings (paints, inks, adhesives, etc.), including exposures during use (including materials receipt, storage, preparation and bulk and semi-bulk transfer, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities.

**Sector of use (SU):** SU22

**Process categories (PROC):** 5, 8a, 10, 13

**Environmental Release Categories (ERC):** 8a, 8c, 8d, 8f

**Identifier use:** Use as a binder and release agent.

**Description:** Covers the use as binders and release agents, including material transfers, mixing, application (including spraying and brushing), mould forming and casting and handling of waste.

**Sector of use (SU):** SU22

**Process categories (PROC):** 1, 2, 3, 4, 5, 6, 8a, 8b, 9, 10, 11

**Environmental Release Categories (ERC):** 8a, 8b, 8c, 8d, 8e, 8f

**Identifier use:** Polymer production

**Description:** Production of formulated polymers, including material transfers, moulding and forming activities, material re-works and associated maintenance.

**Sector of use (SU):** SU22

**Process categories (PROC):** 8a

**Environmental Release Categories (ERC):** 8a, 8d, 8c, 8f

**Identifier use:** Polymer processing

**Description:** Processing of formulated polymers, including material transfers, moulding and forming activities, material re-works and associated maintenance.

**Sector of use (SU):** SU22

**Process categories (PROC):** 8a

**Environmental Release Categories (ERC):** 8a, 8d, 8c, 8f

**Identifier use:** Use in cleaning agents

**Description:** Covers the use as a component of cleaning products, including pouring/unloading from drums or containers. Exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping, automated and by hand).

**Sector of use (SU):** SU22

**Process categories (PROC):** 1, 2, 3, 4, 5, 8a, 8b, 9, 10, 11, 13, 19

**Environmental Release Categories (ERC):** 8a

**Identifier use:** Use in oil and gas field drilling and production operations

**Description:** Covers the use as a component of cleaning products including transfer from storage, pouring/unloading from drums or containers.

**Sector of use (SU):** SU22

**Process categories (PROC):** 1, 2, 3, 4, 8a, 8b

**Environmental Release Categories (ERC):** 8d

**Identifier use:** Use in agrochemicals

**Description:** Use as an agrochemical excipient for application by manual or machine spraying, smokes and fogging; including equipment clean-downs and disposal.

**Sector of use (SU):** SU22

**Process categories (PROC):** 1, 2, 4, 8a, 8b, 11, 13, 19

**Environmental Release Categories (ERC):** 8a, 8d

**Identifier use:** Anti-freeze and de-icing products

**Description:** Ice prevention and de-icing of vehicles, aircraft and other equipment by spraying.

**Sector of use (SU):** SU22

**Process categories (PROC):** 1, 2, 8b, 11, 19

**Environmental Release Categories (ERC):** 8d

**Identifier use:** Production and use of explosives

**Description:** Covers exposures arising from the manufacture and use of slurry explosives (including material transfers, mixing and charging) and equipment cleaning.

**Sector of use (SU):** SU22

**Process categories (PROC):** 1, 3, 5, 8a, 8b

**Environmental Release Categories (ERC):** 8d



## 3.1 PROFESSIONAL USES OF ACETONE AND ACETONE-CONTAINING PRODUCTS

**Title:** Professional uses of acetone and acetone-containing products

**Sectors of use:** All professional uses (SU22)

**Process categories:** 1, 2, 3, 4, 5, 6, 8a, 8b, 9, 10, 12, 13, 15, 19

**Environmental Release Categories:** 8a, 8b, 8c, 8d, 8e, 8f (ERCs must be verified with the ECT tool) (ERCs must be verified with the ECT tool)

**Scope of the process:** Professional processes relevant to acetone and acetone-containing products

## 3.2 OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES

### 3.2.1. Contributing scenario controlling exposure for the environment

**Method used for evaluation:** Based on currently available information on chemical-physical properties, environmental behaviour and ecotoxicity, acetone should not be classified as environmentally hazardous or assessed as PBT or vPvB. An environmental risk characterisation that quantitatively assesses all uses identified by the registrant is not required. To provide DUs with the information to assess their local conditions, the ECT tool can, however, be used to perform an environmental risk assessment. If necessary, this includes predefined scenarios for safe use to assess the local working conditions of the DUs.

#### Operating conditions

**Product features:** Liquid. The substance has a single structure, a readily biodegradable ketone.

**Frequency and duration of use:** 360 days (default value used in the ECT-acetone tool)

**Quantity used:** See table 5.

**Environmental factors not influenced by risk management:** See table 5.

**Other given operational conditions affecting environmental exposure:** See table 5.

#### Risk Management Measures

**Local technical conditions and measures to reduce and limit discharges, air emissions and soil release:** Locate bulk storage outdoors [E2]. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

**Organizational measures to prevent/limit release from site:** Common practices vary across sites thus conservative process release estimates used. Use of the "ECT Acetone" Excel tool to verify your local conditions is recommended.

**Conditions and measures for the domestic sewage treatment plan:** Use the "ECT Acetone" Excel tool to verify your local conditions.

**Conditions and measures for external treatment of waste for disposal:** External treatment and disposal of waste should comply with applicable local and/or national regulations.

**Conditions and measures for external recovery of waste:** External treatment and disposal of waste should comply with applicable local and/or national regulations.

### 3.2.2 Contributing scenario controlling exposure for workers

**Product features:** Liquid, vapour pressure > 10 kPa [OC5].

**Concentration of the substance in the product:** Covers a percentage substance in the product up to 100% (unless otherwise stated) [G13].

**Frequency and duration of use/exposure:** Covers a daily exposure up to 8 hours (unless otherwise specified) [G2].

**Human factors not influenced by risk management:** None identified by this scenario.

**Other given operating conditions affecting employee exposure:** Assumes a good basic standard of occupational hygiene has been implemented [G1]

#### Operational conditions and risk management measures affecting worker exposure

Assumes a good basic standard of occupational hygiene has been implemented [G1]. Locate bulk storage outdoors [E2]. Use suitable eye protection. [PPE26]. If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to EN374 and provide employee skin care programmes. [PPE20]. Provide a basic standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan [E1].

For the operational conditions and risk reduction measures for each contributing scenario, see Table 6.

Note: Guidance is based on operational conditions that may not be applicable to all sites. The DU may therefore have to adapt or apply other appropriate site-specific risk reduction measures that are at least as efficient as those described here.

### 3.2.3 Contributing scenario controlling consumer exposure

There is no consumer exposure for this scenario.

## 3.3 EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

### 3.3.1 Contributing scenario for estimating environmental exposure

**Tool used for evaluation:** ECT-acetone tool based on EUSES

### 3.3.2 Contributing scenario for estimating worker exposure

**Tool used for evaluation:** ECETOC TRA v2 ([www.ecetoc.org/tra](http://www.ecetoc.org/tra))

**General parameters used:**

Environment type: professional

Dustiness: low (liquid substance)

Duration of exposure: > 4 hours/day, unless otherwise stated in the RMMs

Ventilation use: none, unless otherwise stated in the RMMs

Use of respiratory protection: none, unless otherwise stated in the RMMs

Use of skin protection: none, unless otherwise stated in the RMMs

Concentration in preparations: > 25%

When complying with the recommended risk management measures (RMMs) and operating conditions (OCs), exposure is not expected to exceed the DNELs and the risk characterisation ratios should be less than 1, as shown in table 6.

### 3.3.3 Contributing scenario for estimating consumer exposure

There is no consumer exposure for this scenario.

## 3.4. GUIDELINES FOR THE DU TO VERIFY COMPLIANCE WITH THE EXPOSURE SCENARIO

### 3.4.1 Guidelines for DU to verify compliance with the environmental exposure scenario

Based on currently available information on chemical-physical properties, environmental behaviour and ecotoxicity, acetone should not be classified as environmentally hazardous or assessed as PBT or vPvB. An environmental risk characterisation that quantitatively assesses all uses identified by the registrant is not required. However, a dedicated scaling tool (ECT acetone tool) is provided to calculate the maximum allowable tonnage per year for both water and soil. The tool can be downloaded from the REACH consortium's webpage for phenol and derivatives.

<http://www.reachcentrum.eu/en/consortium-management/consortia-under-reach/phenol-derivatives-reach-consortium/phenol-derivatives-dossiers.aspx>

For different environmental release categories (ERC), the maximum allowable tonnage for a site may change considerably. Site-specific properties (local release factors, watercourse flow speeds, dilution factors, reduction efficiency of wastewater treatment plants, etc.) can also have a considerable impact on the annual allowable tonnage for a site. As stated before, changes in allowable tonnage due to differences in operating conditions can be calculated using the ECT acetone tool. A similar scaling is provided for the soil compartment.

### 3.4.2 Guidelines for DU to verify compliance with the contributing scenario for worker exposure estimation

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in Table 5 are implemented [G22]. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels [G23].

Risk characterisation ratios (RCRs) are calculated by comparing the estimated exposure levels with the corresponding DNELs ( $RCR = \text{exposure level}/\text{DNEL}$ ).

## Table 5. OC, RMM, Risk Characterization - Environment - Professional use.

### Identifiers:

All ES

### Operating Conditions and Risk Management Measures

**ERC/SpERC:** ERC must be verified with the ECT tool.

### Quantity used

Tonnage per site: The ECT tool for acetone can be used to calculate the maximum tonnage allowed for the site.

### Dilution factors

Fresh water: 10 (unless other data are available)

Sea water: 100 (unless other data are available)

### Risk characteristics

An environmental risk characterization report is not required.

## Table 6. OC, RMM, Risk Characterization - Workers - Professional use.

### Identifier: ES1

### Operating Conditions and Risk Management Measures

**Contributing scenario:** General exposures (closed systems) [CS15].

**Proc:** 1

**OC and typical RMMs:** Closed systems [CS107]. In-Process Sampling [CS2].

**RMM to be implemented:** Sample via a closed loop or other system to avoid exposure [E8]. Handle substance within a closed system [E47].

### Risk characteristics

**RCR Inhalation:** 0.00002

**Dermal RCR:** 0.002

**RCR (all ways):** 0.002

### Identifier: ES2

### Operating Conditions and Risk Management Measures

**Contributing scenario:** General exposures (closed systems) [CS15].

**Proc:** 2

**OC and typical RMMs:** Continuous process [CS54]. In-Process Sampling [CS2].

**RMM to be implemented:** Sample via a closed loop or other system to avoid exposure [E8]. Handle substance within a closed system [E47].

### Risk characteristics

**RCR Inhalation:** 0.10

**Dermal RCR:** 0.01

**RCR (all ways):** 0.11

### Identifier: ES3

### Operating Conditions and Risk Management Measures

**Contributing scenario:** General exposures (closed systems) [CS15].

**Proc:** 3

**OC and typical RMMs:** Batch process [CS55]. In-Process Sampling [CS2].

**RMM to be implemented:** Sample via a closed loop or other system to avoid exposure [E8]. Handle substance within a closed system [E47].

### Risk characteristics

**RCR Inhalation:** 0.20

**Dermal RCR:** 0.002

**RCR (all ways):** 0.20

## Identifier: ES4

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** In-Process Sampling [CS2]. Open systems [CS15].

**Proc:** 4

**RMM to be implemented:** No additional RMM (apart from the basic measures described above) is necessary to achieve safe use.

### *Risk characteristics*

**RCR Inhalation:** 0.50

**Dermal RCR:** 0.04

**RCR (all ways):** 0.54

## Identifier: ES5

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Mixing operations (open systems) [CS30].

**Proc:** 5

**OC and typical RMMs:** Batch process [CS55]. In-Process Sampling [CS2]. With local suction [CS109].

**RMM to be implemented:** Ensure material transfers are under containment or extract ventilation [E66].

### *Risk characteristics*

**RCR Inhalation:** 0.20 Efficiency TRA LEV 80%.

**Dermal RCR:** 0.00 Dermal exposure TRA LEV reduction factor 0.01.

**RCR (all ways):** 0.20

## Identifier: ES6

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Mixing operations (open systems) [CS30].

**Proc:** 5

**OC and typical RMMs:** Batch process [CS55]. In-Process Sampling [CS2].

**RMM to be implemented:** Ensure operation is undertaken outdoors [E69].

### *Risk characteristics*

**RCR Inhalation:** 0.70 Effectiveness of dilution by ventilation 30%.

**Dermal RCR:** 0.07

**RCR (all ways):** 0.77

## Identifier: ES7

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Mixing operations (open systems) [CS30].

**Proc:** 5

**OC and typical RMMs:** Batch process [CS55]. In-Process Sampling [CS2].

**RMM to be implemented:** Avoid carrying out activities involving exposure for more than 4 hours per day. [OC28].

## Risk characteristics

**RCR Inhalation:** 0.60 Duration factor TRA 1-4 hours.

**Dermal RCR:** 0.07

**RCR (all ways):** 0.67

## Identifier: ES8

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Calendering (including Banbury) [CS64] With local suction [CS109].

**Proc:** 6

**RMM to be implemented:** Ensure operation is undertaken outdoors [E69].

### *Risk characteristics*

**RCR Inhalation:** 0.80 TRA efficiency LEV 80%.

**Dermal RCR:** 0.15

**RCR (all ways):** 0.99

## Identifier: ES9

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Calendering (including Banbury) [CS64].

**Proc:** 6

**RMM to be implemented:** Ensure operation is undertaken outdoors [E69].

### *Risk characteristics*

**RCR Inhalation:** 0.84 Effectiveness of dilution by ventilation 30%.

**Dermal RCR:** 0.15

**RCR (all ways):** 0.99

## Identifier: ES10

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Calendering (including Banbury) [CS64].

**Proc:** 6

**RMM to be implemented:** Ensure operation is undertaken outdoors [E69].

### *Risk characteristics*

**RCR Inhalation:** 0.72 Duration factor TRA 1-4 hours.

**Dermal RCR:** 0.15

**RCR (all ways):** 0.87

## Identifier: ES11

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Bulk product transfer [CS14].

**Proc:** 8a

**OC and typical RMMs:** Non-dedicated system [CS82]. Pouring from small containers [CS22]. With local suction [CS109].

**RMM to be implemented:** Ensure material transfers are under containment or extract ventilation [E66].

### *Risk characteristics*

**RCR Inhalation:** 0.20 TRA efficiency LEV 80%.

**Dermal RCR:** 0.001 Dermal exposure TRA LEV reduction factor 0.01.

**RCR (all ways):** 0.20

## Identifier: ES12

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Bulk product transfer [CS14].

**Proc:** 8a

**OC and typical RMMs:** Non-dedicated facility [CS82]. Transfer from / pour from containers [CS22].

**RMM to be implemented:** Make sure the operation is performed outdoors [E69].

### *Risk characteristics*

**RCR Inhalation:** 0.70 Effectiveness of dilution by ventilation 30%.

**Dermal RCR:** 0.07

**RCR (all ways):** 0.77

## Identifier: ES13

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Bulk product transfer [CS14].

**Proc:** 8a

**OC and typical RMMs:** Non-dedicated facility [CS82]. Transfer from / pour from containers [CS22].

**RMM to be implemented:** Avoid carrying out activities involving exposure for more than 4 hours [OC28].

### *Risk characteristics*

**RCR Inhalation:** 0.60 Duration factor TRA 1-4 hours.

**Dermal RCR:** 0.07

**RCR (all ways):** 0.67

## Identifier: ES14

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Bulk product transfer [CS14].

**Proc:** 8b

**OC and typical RMMs:** Dedicated system [CS81]. Transfer from / pour from containers [CS22].

**RMM to be implemented:** No additional RMM (apart from the basic measures described above) is necessary to achieve safe use.

### *Risk characteristics*

**RCR Inhalation:** 0.50

**Dermal RCR:** 0.04

**RCR (all ways):** 0.54

## Identifier: ES15

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Filling of small packages [CS7].

**Proc:** 9

**OC and typical RMMs:** Dedicated system [CS81]. Pouring from small containers [CS9].

**RMM to be implemented:** No additional RMM (apart from the basic measures described above) is necessary to achieve safe use.

### *Risk characteristics*

**RCR Inhalation:** 0.50

**Dermal RCR:** 0.04

**RCR (all ways):** 0.54

## Identifier: ES16

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Application by roller, brush [CS51].

**Proc:** 10

**OC and typical RMMs:** Cleaning and maintenance of equipment [CS39]. With local suction [CS109].

**RMM to be implemented:** Ensure material transfers are under containment or extract ventilation [E66].

### *Risk characteristics*

**RCR Inhalation:** 0.20 TRA efficiency LEV 80%.

**Dermal RCR:** 0.007 Skin exposure TRA LEV reduction factor 0.05.

**RCR (all ways):** 0.21

## Identifier: ES17

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Application by roller, brush [CS51].

**Proc:** 10

**OC and typical RMMs:** Cleaning and maintenance of equipment [CS39].

**RMM to be implemented:** Limit the substance content in the product to 25% [OC18].

### *Risk characteristics*

**RCR Inhalation:** 0.60 Concentration factor TRA 5-25%.

**Dermal RCR:** 0.09 Concentration factor TRA 5-25%.

**RCR (all ways):** 0.69

## Identifier: ES18

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Application by roller, brush [CS51].

**Proc:** 10

**OC and typical RMMs:** Cleaning and maintenance of equipment [CS39].

**RMM to be implemented:** Avoid carrying out activities involving exposure for more than 4 hours [OC28].

### *Risk characteristics*

**RCR Inhalation:** 0.60 Duration factor TRA 1-4 hours.

**Dermal RCR:** 0.15

**RCR (all ways):** 0.75

## Identifier: ES19

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Spray or mist application with manual systems [CS24].

**Proc:** 11

**OC and typical RMMs:** With local suction [CS109].

**RMM to be implemented:** Ensure material transfers are under containment or extract ventilation [E66].

### *Risk characteristics*

**RCR Inhalation:** 0.40 TRA efficiency LEV 80%.

**Dermal RCR:** 0.01 Dermal exposure TRA LEV reduction factor 0.02.

**RCR (all ways):** 0.41

## Identifier: ES20

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Spray or mist application with manual systems [CS24].

**Proc:** 11

**RMM to be implemented:** Make sure the operation is performed outdoors [E69]. Limit the substance content in the product to 25% [OC18]. Avoid carrying out activities involving exposure for more than 4 hours per day. [OC28].

### *Risk characteristics*

**RCR Inhalation:** 0.50 Effectiveness of dilution by ventilation 30%. Duration factor TRA 1-4 hours. Concentration factor TRA 5-25%.

**Dermal RCR:** 0.35 Concentration factor TRA 5-25%.

**RCR (all ways):** 0.85

## Identifier: ES21

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Spray or mist application with manual systems [CS24].

**Proc:** 11

**RMM to be implemented:** Avoid carrying out activities involving exposure for more than 1 hour [OC27].

### *Risk characteristics*

**RCR Inhalation:** 0.40 Duration factor BETWEEN 15 min - 1 hour.

**Dermal RCR:** 0.58

**RCR (all ways):** 0.98

## Identifier: ES22

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Spray or mist application with manual systems [CS24].

**Proc:** 11

**RMM to be implemented:** Wear a respirator conforming to EN140 with type A filter or better [PPE22].

### *Risk characteristics*

**RCR Inhalation:** 0.20 TRA factor RPE half mask.

**Dermal RCR:** 0.58

**RCR (all ways):** 0.78

## Identifier: ES23

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Immersion, dipping and pouring [CS4].

**Proc:** 13

**RMM to be implemented:** No additional RMM (apart from the basic measures described above) is necessary to achieve safe use.

### *Risk characteristics*

**RCR Inhalation:** 0.50

**Dermal RCR:** 0.07

**RCR (all ways):** 0.57

## Identifier: ES24

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Production of preparations or articles by tableting, compression, extrusion, pelettisation [CS100].

**Proc:** 14

**OC and typical RMMs:** With local suction [CS109].

**RMM to be implemented:** Ensure material transfers are under containment or extract ventilation [E66].

### *Risk characteristics*

**RCR Inhalation:** 0.20 TRA efficiency LEV 80%.

**Dermal RCR:** 0.002

**RCR (all ways):** 0.20

## Identifier: ES25

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Production of preparations or articles by tableting, compression, extrusion, pelettisation [CS100].

**Proc:** 15

**RMM to be implemented:** Avoid carrying out activities involving exposure for more than 4 hours [OC28].

### *Risk characteristics*

**RCR Inhalation:** 0.60 Duration factor TRA 1-4 hours.

**Dermal RCR:** 0.02

**RCR (all ways):** 0.62

## Identifier: ES26

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Laboratory activity [CS36].

**Proc:** 15

**RMM to be implemented:** No additional RMM (apart from the basic measures described above) is necessary to achieve safe use.

### *Risk characteristics*

**RCR Inhalation:** 0.10

**Dermal RCR:** 0.002

**RCR (all ways):** 0.10

## Identifier: ES27

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Hand application - fingerpaints, pastels, adhesives [CS72].

**Proc:** 19

**RMM to be implemented:** Limit the substance content in the product to 25% [OC18]. Wear suitable gloves tested to EN374 [PPE15].

### *Risk characteristics*

**RCR Inhalation:** 0.60 Concentration factor TRA 5-25%.

**Dermal RCR:** 0.09 Concentration factor TRA 5-25% PPE factor gloves.

**RCR (all ways):** 0.96

## Identifier: ES28

### *Operating Conditions and Risk Management Measures*

**Contributing scenario:** Hand application - fingerpaints, pastels, adhesives [CS72].

**Proc:** 19

**RMM to be implemented:** Avoid carrying out activities involving exposure for more than 1 hour [OC27].

### *Risk characteristics*

**RCR Inhalation:** 0.20 Duration factor BETWEEN 15 min - 1 hour.

**Dermal RCR:** 0.76

**RCR (all ways):** 0.96