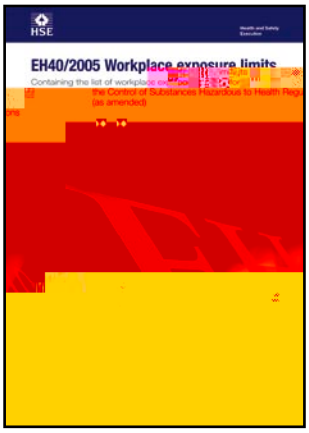
HSE
EH40/2005 Workplace exposure limits

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Fi [redacted] bli hed 2005
Sec ҥd ed[redacted] 2011

ISBN 978 0 7176 6446 7

Y a e e[redacted] iҥf [redacted] (ҥ[redacted]ch diҥg l g) f ee f cha ge iҥ aҥ f [redacted] edi , ҥde[redacted] f[redacted] O eҥ G e ҥ e[redacted]ceҥce. T ie [redacted] liceҥce i[redacted] .ҥa[redacted]ҥala chi e .g .k/d c/ eҥ-g e ҥ e[redacted]ceҥce/, [redacted] lҥf [redacted] P lic Tea , The N[redacted]ҥal A chi e , Ke , L ҥd ҥ TW9 4DU, e ail i@ҥ[redacted]ҥala chi e .g i.g .k.

S e i age aҥd ill[redacted] a ҥ[redacted]e ҥed b [redacted] C ҥ caҥҥ[redacted]e e d ced [redacted]e i iҥ f[redacted] c igh[redacted] ҥe . Eҥ ie h ld be e[redacted] [redacted]c igh[redacted]ҥ e.g i.g .k.

EH40/2005 c [redacted] e a[redacted]al hich i legall biҥdiҥg.

The C [redacted] f S b[redacted]ce Ha a d [redacted]Hea[redacted]Reg la[redacted] 2002 i e e ie e[redacted]p efe eҥce[redacted]Table 1 f EH40/2005 aҥd[redacted] N[redacted]e f A al, hich a e[redacted] ef e legall biҥdiҥg. Th , if Table 1 [redacted] N[redacted]e f A al a l [redacted] k ac[redacted], hea[redacted]aҥd af[redacted]ҥ ec[redacted] ill e ec[redacted] [redacted]be c l iҥg [redacted] e e ie e[redacted]aҥd ill, if ҥece a [redacted]e a ia[redacted]eҥf ce e[redacted].

The e aiҥde f EH40/2005 i g idaҥce. Thi g idaҥce i i ed b [redacted] Hea[redacted] aҥd Saf[redacted] ec[redacted]e. F ll iҥg[redacted] g idaҥce i ҥ[redacted] l aҥd a e f ee [redacted]e [redacted] ac[redacted]ҥ. B[redacted] d f ll [redacted] g idaҥce ill ҥ all be d iҥg eҥ gh[redacted]c l [redacted]la . Hea[redacted]aҥd af[redacted]ҥ ec[redacted] eek[redacted] ec e c liaҥce [redacted]la aҥd a efe[redacted] g idaҥce a ill[redacted]g g d ac[redacted]e.

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S

WELs and the Control of Substances Hazardous to Health Regulations 2002 (as amended) (COSHH)

7 S[redacted] b[redacted]ce [redacted]a e bee[redacted] a ig[redacted]ed a WEL a e [redacted] bje[redacted] e [redacted] i e e[redacted] f COSHH.[3] The e Reg[redacted] e [redacted] i e e l e [redacted] e e[redacted] c [redacted] e [redacted] e[redacted] ha a d [redacted] b[redacted]ce . F f[redacted] i[redacted]f [redacted] g [redacted] .h e.g [redacted] k/c [redacted]. U[redacted]de COSHH, c [redacted] i defi[redacted]ed a ade [redacted] a[redacted]l if a)[redacted] i[redacted]ci le f g d c [redacted] a[redacted] a e a lied, b) a[redacted] WEL i [redacted] ceeded a[redacted]d c) e [redacted] e[redacted] age[redacted] , ca ci[redacted] ge[redacted] a[redacted]d [redacted] ge[redacted] a e ed[redacted] ced a l a i ea [redacted]abl [redacted]able.

8 The ab e[redacted]ce f a [redacted] b[redacted]ce f [redacted] li[redacted] WEL d e [redacted] [redacted]dic[redacted] afe. F [redacted] e [redacted] b[redacted]ce , e [redacted] e h [redacted] ld be c [redacted]led[redacted]a le e[redacted] hich [redacted]ea l al[redacted] ki[redacted]g [redacted] c [redacted] ld be e ed, da a[redacted]da a[redacted] k, [redacted] a[redacted] ad e e effe[redacted] [redacted] hea[redacted]

9 A a[redacted]a e e[redacted] i ed [redacted]de eg[redacted] 6 f COSHH, e l e

List of workplace exposure limit (WELs)

14 The [illegible] f h [illegible] e h cla[illegible]e f [illegible] [illegible] b[illegible]ce li[illegible] bel i ba ed ai h l h [illegible] c h e[illegible] ad [illegible] b [illegible] l[illegible] [illegible] al U i h f P e A lied Che i[illegible] (IUPAC). Whe e[illegible] i h [illegible] ca e, [illegible] [illegible] b[illegible]ce ill be flagged:

- **INN** l[illegible] [illegible] al N h- i[illegible] Na e;
- **ISO** l[illegible] [illegible] al O ga i [illegible] f [illegible] da di [illegible].

15 F [illegible] e f[illegible] e li [illegible] e i able d [illegible] d i halable d [illegible] e[illegible] e f a[illegible] f ai b he d [illegible] hich ill be c lle[illegible] he a li g i de[illegible] e i acc da ce [illegible] [illegible] d de c ibed i MDHS14/3 *General methods for sampling and gravimetric analysis of respirable and inhalable dust*.[6]

16 Whe e h ecific h [illegible] e e li [illegible] li[illegible], a fig e[illegible]e[illegible]e [illegible] l g[illegible] e e li [illegible] ld be ed.

Annotations

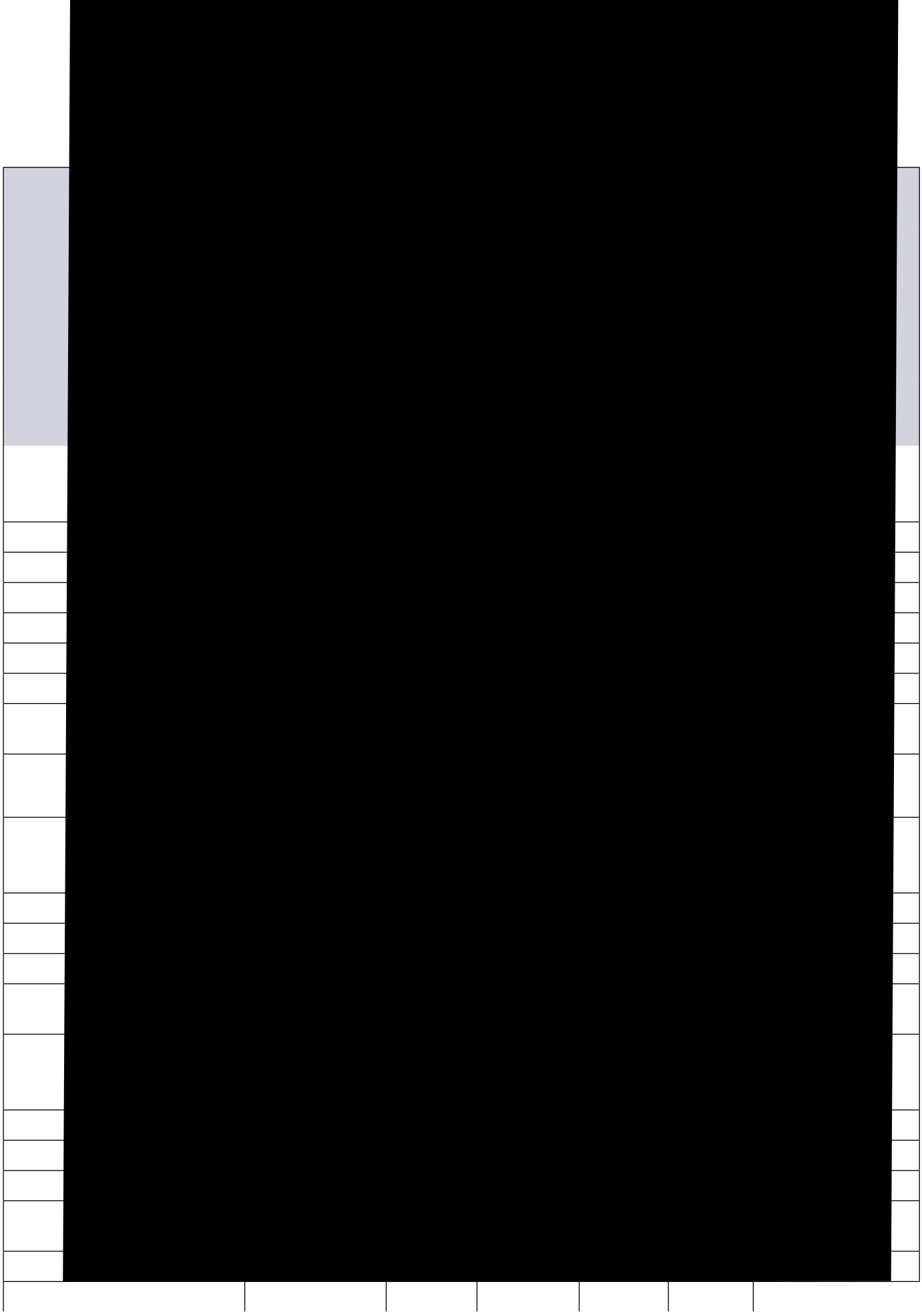
BMGV Bi l gical [illegible] g gida ce a e a e li[illegible] i Table 2.

Carc Ca able f ca i g ca ce a d/ he[illegible]le ge [illegible]da age. See a ag a h 49 51.

Sen Ca able f ca i g co [illegible] al a[illegible] a. See a ag a h 53 56.

Sk Ca be ab bed[illegible] gh[illegible] ki. The a igh ed b[illegible]ce a e[illegible] e f hich[illegible] e a e c ce h [illegible]e al ab [illegible] ill lead[illegible] [illegible] ic [illegible]i[illegible].

Table 1: List of approved workplace expo limits (as consolidated with amendments December 2011)



S ⌐ ¬	CAS N ⌐	Wn , n				Cn ¬
		Ln¬ - n (8-, TWA ¬				

S ⌐ ¬	CAS N ⌐	W∩ ∩				C∩ ¬
		L¬ - ∩ (8-, TWA ¬ ∩		S, ∩ - ∩ (15 ¬		

S ⌐ ¬	CAS N ⌐	Wn n 0 10 265.9211 726.938 5.9211 72 D 29.0290 0				50.739

S ⌐ ¬	CAS N ⌐	W∩ ∩				C∩ ¬
		L∩¬ - ∩ (8-, TWA ¬ ∩		S, ∩ - ∩ (15 ¬ ¬ ∩)		

Flour dust

25 Fl [redacted] d [redacted] e [redacted] be fi [redacted] el g [redacted] d a [redacted] e f ce eal [redacted] l e (i [redacted] ch di [redacted] g c [redacted] i [redacted] a [redacted] [redacted] a [redacted] g i [redacted] di [redacted] g ce a [redacted] d f a [redacted] b e [redacted] ha [redacted] dli [redacted] g a [redacted] d [redacted] e f [redacted] '. A [redacted] add [redacted] (eg fl [redacted] i e) a e i [redacted] ch [redacted] ded i [redacted] defi [redacted] [redacted] l a [redacted] ha e bee [redacted] added [redacted] fi [redacted] al d [redacted] i .

Grain dust

26 G ai [redacted] d [redacted] e [redacted] be d [redacted] i [redacted] g f [redacted] ha e [redacted] g, d i [redacted] g, ha [redacted] dli [redacted] g, [redacted] age ce i [redacted] g f ba le , hea [redacted] ai e a [redacted] d e, i [redacted] ch di [redacted] g c [redacted] i [redacted] a [redacted]

Halogeno-platinum compounds

27 The e a e c - di [redacted] c [redacted] d i [redacted] hich a la [redacted] a [redacted] i [redacted] i di e [redacted] c - di [redacted] [redacted] e e halide (ie fl [redacted] ide, chl ide, b ide i dide) i [redacted] . The e c [redacted] d a e [redacted] bje [redacted] a WEL a [redacted] d ha e a Se [redacted] [redacted]. The e [redacted] b [redacted] ce a e li [redacted] d i [redacted] e [redacted] C f *Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma.*[7]

28 F [redacted] b [redacted] ce hich, a [redacted] gh [redacted] c [redacted] [redacted] la [redacted] a [redacted] d halide i [redacted] , [redacted] hal ge [redacted] i [redacted] [redacted] e [redacted] c -c di [redacted] b a che ical b [redacted] d [redacted] la [redacted] , [redacted] WEL f [redacted] ble la [redacted] c [redacted] d i a licable.

Machine-made mineral fibres (MMMF)

29 Machi [redacted] e- ade (f e l ' a [redacted] - ade') i [redacted] e al fib e a e defi [redacted] ed a a [redacted] - ade [redacted] (ilica [redacted] fib e [redacted] a [redacted] d ie [redacted] [redacted] alkali [redacted] e ide a [redacted] d alkali ea [redacted] ide ($Na_2O+K_2O+CaO+MgO+BaO$) c [redacted] [redacted] e a [redacted] [redacted] [redacted] 18% b eigh [redacted] [redacted] g a i [redacted] li [redacted] [redacted] fib e i [redacted] ai li [redacted] h [redacted] ld be e ceeded. Fib e c [redacted] ce [redacted] [redacted] f MMMF [redacted] e ea [redacted] ed calc [redacted] b a [redacted] d a ed b HSE.

30 A e a [redacted] i [redacted] lie [redacted] [redacted] MMMF hich a e [redacted] [redacted] e ed b [redacted] defi [redacted] [redacted] (ee a ag a h 32).

Pulverised fuel ash

31 P [redacted] l e i ed f [redacted] el a h (PFA), [redacted] e k [redacted] a eci [redacted] a h, i a fi [redacted] e g e f [redacted] el a h de , c ed ai [redacted] l f al [redacted] i [redacted] - ilica [redacted] a h [redacted] he e . [redacted] d ced he [redacted] l e i ed c al i b [redacted] a c al-fi ed e [redacted] [redacted]. [redacted] c lle [redacted] [redacted] a [redacted] d e a [redacted] [redacted] i [redacted] a i [redacted] g ade f [redacted] e a a fille i [redacted] ci il e [redacted] gi [redacted] ee i [redacted] g a [redacted] d la [redacted] d ecla [redacted] [redacted], i [redacted] ead - i c [redacted] c [redacted] a a g [redacted] bl ck/ce [redacted] [redacted] d [redacted] a [redacted] d i [redacted] [redacted] a [redacted] fac [redacted] e f [redacted] d [redacted] [redacted] ed b [redacted] c [redacted] [redacted] [redacted] i [redacted] d [redacted]

Refractory ceramic fibre (RCF)

32 RCF a e a [redacted] - ade [redacted] (ilica [redacted] fib e [redacted] a [redacted] d ie [redacted] [redacted] [redacted] alkali [redacted] e ide a [redacted] d alkali ea [redacted] ide ($Na_2O+K_2O+CaO+MgO+BaO$) c [redacted] [redacted] e a [redacted] 18% b eigh [redacted] he [redacted] 'RCF' al i [redacted] ch de [redacted] [redacted] - ide ce a ic fib e [redacted] ch a b [redacted] a [redacted] d ilic [redacted] ca bide a [redacted] d [redacted] [redacted] e . Fib e c [redacted] ce [redacted] [redacted] f RCF [redacted] e ea [redacted] ed calc [redacted] b a [redacted] d a ed b HSE.

Rubber fume and rubber process dust

33 R [redacted] bbe f [redacted] e i f [redacted] e e l ed i [redacted] [redacted] i [redacted] g, illi [redacted] g a [redacted] d ble [redacted] di [redacted] g f [redacted] [redacted] al [redacted] bbe [redacted] [redacted] ela [redacted] e , f [redacted] [redacted] al [redacted] bbe a [redacted] d [redacted] [redacted] l e c [redacted] bi [redacted] ed [redacted] che ical , a [redacted] d i [redacted] [redacted] ce e hich c [redacted] e [redacted] [redacted] e [redacted] [redacted] e [redacted] d i [redacted] [redacted] fi [redacted] i hed ce d [redacted] d [redacted] a [redacted] e f, a [redacted] d i [redacted] ch di [redacted] g a [redacted] [redacted] e [redacted] ced e he e f [redacted] e c [redacted] [redacted] e [redacted] be e l ed.

34 The li [illegible] cl he a[illegible] l ble [illegible]al de[illegible] i[illegible]ed b [illegible] [illegible]d de c ibed i[illegible] MDHS47/2[8] *Determination of rubber process dust and rubber fume in air*.

35 R bbe ce d [illegible] d [illegible] i ig i[illegible] [illegible]ge f bbe a[illegible] fa[illegible]e he e i[illegible]g edle[illegible]a e ha[illegible]dled, eighed, added[illegible] i ed [illegible] [illegible]c ed [illegible]al [illegible]ela[illegible]e . [illegible] e [illegible] ch de d [illegible]a i ig f [illegible] ab a i [illegible] f c ed bbe .

36 Whe e[illegible] ai b [illegible]e [illegible]al c [illegible] a i[illegible]e f b[illegible]ce , [illegible]e e f hich i a igh[illegible]ed a WEL, [illegible] [illegible]ill a l [illegible] i[illegible]di id al b[illegible]ce a[illegible]d [illegible] a e[illegible]e[illegible] bbe ce d [illegible] [illegible]ill a l [illegible] f d [illegible] a h le. Whe e[illegible] ai b [illegible]e [illegible]al i effec[illegible]l a i[illegible]gle b[illegible]ce [illegible]a WEL, [illegible] [illegible] al [illegible]e ill a l .

37 M[illegible]d f e [illegible]al a li[illegible]g a[illegible]d ea e e[illegible]f i[illegible]halable d [illegible]a e a ailable i[illegible] MDHS14/3[6] a[illegible]d MDHS47/2.[8] A [illegible] f e, [illegible] d [illegible] d[illegible] i[illegible]ed g a i [illegible]all b[illegible], [illegible]like[illegible] f e, [illegible] d [illegible][illegible] i[illegible], d e [illegible] l e l e[illegible] e[illegible].

Note: D[illegible] d ced b [illegible] ab a i [illegible] f c ed bbe h ld be dea[illegible]a de c ibed i[illegible] a ag a h 44 47, ie d [illegible]f a[illegible] ki[illegible]d he[illegible] e e[illegible] b[illegible] c [illegible]ce[illegible]ion i[illegible] ai i c e ed b COSHH.

Subtilisins

38 S[illegible]b[illegible]i[illegible] a e [illegible]l[illegible]e[illegible] e de i ed f *Bacillus subtilis*. The a e [illegible]ed i[illegible] bi l gical a hi[illegible]g de , a[illegible]i al feed[illegible] [illegible]. The e[illegible] e e a[illegible] c [illegible] a[illegible]e e[illegible] e, i[illegible]a[illegible]e e[illegible] e a[illegible]d [illegible] e id e .

39 O[illegible]e f[illegible] [illegible]le ea e e[illegible][illegible]d i [illegible] fl e ce[illegible]ce la i a[illegible] [illegible]hi e de el ed b [illegible] Hea[illegible]a[illegible]d Saf[illegible]ab a[illegible] (HSL). The e i [illegible] f [illegible]i[illegible] a ba ed [illegible] high- l e [illegible] a li[illegible]g [illegible]achie e [illegible]fficie[illegible] e[illegible] [illegible] H e e , i e e[illegible] [illegible] a[illegible]al[illegible]al [illegible]d l g ha e i ed [illegible] e[illegible] [illegible]a[illegible]d[illegible] WEL f [illegible]i[illegible] efle[illegible]. The li [illegible] ba ed [illegible] [illegible]da d e [illegible]al a li[illegible]g (MDHS14/3).[6] Sh [illegible] efe e[illegible]ce e i d (15 i[illegible] a li[illegible]g i [illegible] [illegible] i[illegible].

Talc

40 Talc i defi[illegible]ed a [illegible] i[illegible]e al[illegible][illegible]g[illegible] [illegible][illegible] h d [illegible] h ll ilica[illegible] i[illegible]ch di[illegible]g chl [illegible]a[illegible]d ca b [illegible]h[illegible] a[illegible]al hich co[illegible] [illegible]ch di[illegible]g a [illegible]hib le a be[illegible] a[illegible]d c [illegible]i[illegible]e ilica.

Wood dust

41 W d d[illegible] a ge[illegible]e al[illegible] c e i[illegible]g a ide a i[illegible] f ai b [illegible]e d d[illegible] Ti be ha e beei[illegible] di ided i[illegible] diffe e[illegible]g[illegible] [illegible], [illegible]a el ha d d a[illegible]d [illegible] d . Ha d d a e[illegible]be f decid[illegible] [illegible]e , i[illegible]ch di[illegible]g[illegible]e f b[illegible] [illegible] e a[illegible]a[illegible]d[illegible] ical [illegible]e [illegible]ch a beech, a h, ak, ah ga[illegible] a[illegible]d[illegible]k. S[illegible] d a e ai[illegible]l f c [illegible]ife [illegible]e [illegible]ch a Sc[illegible] i[illegible]e, e a[illegible]d ceda .

42 D[illegible] ge[illegible]e a[illegible] b [illegible] achi[illegible]i[illegible]g a[illegible]d ki[illegible]g f d a[illegible]d d-c [illegible]i[illegible]g a[illegible]al [illegible]ch a chi b a d a[illegible]d fib eb a d. O e a[illegible] [illegible]ch a a i[illegible]g, [illegible]i[illegible]g a[illegible]d [illegible]g d ce ela[illegible]l c a e d[illegible] hile a[illegible]di[illegible]g a[illegible]d a e bl e a[illegible] ge[illegible]e a[illegible]fi[illegible]e d[illegible].

Wool process dust

43 W l ce d[illegible][illegible][illegible] [illegible] ed[illegible]de c ibe[illegible] d[illegible]ge[illegible]e a[illegible] i[illegible] d[illegible] f lle[illegible] a[illegible]d [illegible][illegible][illegible]. Thi i[illegible]ch de all fac[illegible] ce e f

(b) a[illegible] b[illegible]ce e a [illegible] li[illegible] i[illegible] Sched[illegible]le 1 a[illegible]d a[illegible] b[illegible]ce e a [illegible] a i i[illegible]g f a ce ecified i[illegible] Sched[illegible]le 1 hich i a b[illegible]ce ha a d [illegible]hea[illegible]

Thi defi[illegible] al c e b[illegible]ce a[illegible]d e a [illegible] hich [illegible]ld e i e labelli[illegible]g [illegible] i k h a e R45, R46 R49 if[illegible] e e [illegible]ce [illegible] [illegible]all a[illegible]f[illegible] Che ical (Ha a d li[illegible]f [illegible] a[illegible]d Packagi[illegible]g f S[illegible] l) Reg[illegible]la[illegible] 2009.[9] E a le f[illegible] e e ce[illegible] a e edici[illegible]e , [illegible]h ackaged b[illegible]ce a[illegible]d b[illegible]ce beii[illegible]g ed a [illegible]d [illegible] a fac[illegible].

50 The b[illegible]ce , e a [illegible] a[illegible]d ce e defi[illegible]ed a ca ci[illegible] ge[illegible] [illegible]ge[illegible] f [illegible] e f[illegible] COSHH Reg[illegible]la[illegible] a[illegible]d[illegible] hich[illegible] ecial i i i[illegible] f ca ci[illegible] ge[illegible] a[illegible]d [illegible]ge[illegible] i[illegible] [illegible] COSHH Reg[illegible]la[illegible] a l , a e li[illegible] i[illegible] Table 3.2 f Pa[illegible] f a[illegible]e i f[illegible] Cla ifica[illegible], Labelli[illegible]g a[illegible]d Packagi[illegible]g Reg[illegible]la[illegible] (CLP Reg[illegible]la[illegible]),[10] a[illegible]d[illegible] COSHH ACOP.[4]

51 A li[illegible]f[illegible] [illegible] b[illegible]ce a[illegible]d ce e [illegible] hich[illegible] defi[illegible] f ‘ca ci[illegible] ge[illegible]’ ela[illegible] i gi e[illegible] bel :

(a) afla[illegible]i[illegible] ;
(b) a e[illegible]ic;
(c) a a i[illegible]e a[illegible] fac[illegible]e;
(d) calci[illegible]i[illegible]g, i[illegible]i[illegible]g e[illegible]g f[illegible]ickel c e a[illegible] acid leachi[illegible]g ele[illegible] efi[illegible]i[illegible]g f a[illegible] a[illegible]
(e) c al [illegible]c al[illegible] [illegible] a[illegible]d c al[illegible]f e ;
(f) ha d d d[illegible]
(g) i l alc h l a[illegible] fac[illegible]e (e[illegible]g acid ce);
(h) le[illegible] d[illegible] b [illegible]d h e a[illegible] fac[illegible]e, a i i[illegible]g d[illegible] i[illegible]g e a [illegible] a[illegible]d fi[illegible] hi[illegible]g;
(i) age[illegible] a[illegible] fac[illegible]e;
(j) [illegible]d ga (’, ’-dichl die[illegible] l hide);
(k) b[illegible]be a[illegible] fac[illegible]i[illegible]g a[illegible]d ce i[illegible]g gi i[illegible]g i e[illegible] bbe ce d[illegible]d b[illegible]be f e;
(l) [illegible]ed e[illegible]gi[illegible]e il ;
( ) [illegible] f ll i[illegible]g l chl dibe[illegible] di i[illegible] :
  (i) 2,3,7,8-TCDD,
  (ii) 1,2,3,7,8-PeCDD,
  (iii) 1,2,3,4,7,8-H CDD,
  (i) 1,2,3,6,7,8-H CDD,
  ( ) 1,2,3,7,8,9-H CDD,
  (i) 1,2,3,4,6,7,8-H CDD,
  (ii) OCDD;
(h) [illegible] f ll i[illegible]g l chl dibe[illegible] f[illegible] a[illegible] :
  (i) 2,3,7,8-TCDF,
  (ii) 2,3,4,7,8-PeCDF,
  (iii) 1,2,3,7,8-PeCDF,
  (i) 1,2,3,4,7,8-H CDF,
  ( ) 1,2,3,7,8,9-H CDF,
  (i) 1,2,3,6,7,8-H CDF,
  (ii) 2,3,4,6,7,8-H CDF
  (iii) 1,2,3,4,6,7,8-H CDF,
  (iiii) 1,2,3,4,7,8,9-H CDF,
  ( ) OCDF,

he e T=[illegible] Pe= e[illegible] H =he a, H =he [illegible] a[illegible]d O=O[illegible]

a e agiŋg e i d f [redacted] h [redacted] e [redacted] e li [redacted] Ŋ all 15 iŋ [redacted], [redacted] ch a li [redacted] l iŋg [redacted] aŋ 15- iŋ [redacted] e i d [redacted] gh [redacted] kiŋg hi [redacted] [redacted] e [redacted] b [redacted] ce ha a d [redacted] hea [redacted] h [redacted] ld be calc [redacted] acc diŋg [redacted] a ed [redacted] d, hich i e d ced iŋ [redacted] e [redacted] Ŋ 'Calc [redacted] Ŋ [redacted] d '.

Units of measurement

67 lŋ k lace e [redacted] e li [redacted] c ŋce [redacted] Ŋ f ai b ŋe a [redacted] e (f [redacted] e, d [redacted] [redacted] a e [redacted] all e e ed iŋ g. $^{-3}$. lŋ [redacted] ca e f d [redacted] li [redacted] Ŋ Table 1 efe [redacted] 'iŋ halable' f ac [redacted] Ŋ [redacted] le ecificall iŋdica [redacted] a efe iŋg [redacted] ' e i able' f ac [redacted] Ŋ (ee a ag a h 44 47). E ce [redacted] all , [redacted] li [redacted] MMMF aŋd f RCF caŋ be e e ed e [redacted] a g. $^{-3}$ a fib e e illi [redacted] f ai (fib e . l^{-1}). W k lace e [redacted] e li [redacted] la [redacted] b [redacted] ce a e [redacted] all e e ed iŋ b [redacted] a [redacted] e illi ŋ b [redacted] l [redacted] e ( ) aŋd illig a e c bic [redacted] (g. $^{-3}$). F [redacted] e [redacted] b [redacted] ce , li [redacted] a e [redacted] , aŋd a c ŋ e i ŋ [redacted] g. $^{-3}$ i calc [redacted] Ŋ. The al e iŋ g. $^{-3}$ f a gi eŋ c ŋce [redacted] Ŋ iŋ de eŋd ŋ [redacted] e [redacted] aŋd e [redacted] e f [redacted] a bie [redacted], hich iŋ ea [redacted] a e [redacted] e. The ef e, c ŋ e i ŋ calc [redacted] Ŋ a e ba ed ŋ a [redacted] da d [redacted] ical c ŋd [redacted] Ŋ .

Conversion and rounding of WELS expressed in ppm to mg.m^{-3}

68 The li [redacted] Ŋ Table 1 ha e bee ŋ calc [redacted] Ŋ f fi [redacted] iŋci le , [redacted] iŋg [redacted] f ll iŋg [redacted] d.

$$\text{WEL iŋ g. } ^{-3} = \frac{\text{WEL iŋ [redacted] MW [redacted]}}{24.05526}$$

he e MW [redacted] lec la eig [redacted] la a iŋ g. l^{-1}) f [redacted] b [redacted] ce.

N [redacted] 4.05526 l. l^{-1} i [redacted] la ŋ e f aŋ ideal ga a [redacted] 0 C aŋd 1 a [redacted] he e e e (760 e c , 101325 Pa, 1.01325 ba).

69 The e [redacted] a e bee ŋ [redacted] Ŋ ded [redacted] iŋg [redacted] f ll iŋg ced e:

Range containing the newly calculated WEL (in mg.m^{-3})	**Round to:**
Le [redacted] ŋ 0.1	1 igŋifica [redacted] g e
0.1 [redacted] e [redacted] ŋ 100	2 igŋifica [redacted] g e
100 e	3 igŋifica [redacted] g e

Calculation of exposure

70 E [redacted] e [redacted] b [redacted] ce ha a d [redacted] hea [redacted] h [redacted] ld be calc [redacted] acc diŋg [redacted] [redacted] a ed [redacted] d. The calc [redacted] e [redacted] e h [redacted] ld [redacted] ŋ be c a ed [redacted] k lace e [redacted] e li [redacted] [redacted] b [redacted] ce f [redacted] [redacted] e f d [redacted] iŋiŋg c liaŋce [redacted] COSHH, eg [redacted] Ŋ 7. Whe e a WEL i [redacted] li [redacted] b [redacted] a l ŋg [redacted] efe eŋce e i d aŋd a h [redacted] efe eŋce e i d, [redacted] ill be ŋece a [redacted] c a e [redacted] calc [redacted] e [redacted] e a i [redacted] [redacted] k lace e [redacted] e li [redacted]

Limitations to the application of exposure limits

71 The e e li elas e hal hing.

Other factors

72 W king c hd hich i e add al h b d , ch a e e i le dia , high e e , e e ahd h id a ihc ea e ic e h e a b ce. Ih ch ca e , ecialid ice a be hece a e al effec e fac .

Absorption through the skin

73 F b ce , aih f e ib d i b ihala ahd e e li gi eh ih b kl lel e e b H e e , e b ce ha e abi eh kih ahd bec e ab bed ib d , c g io id

74 Ab gh kih cah e l cali ed c ih , f e a le, f a la h h kih cl g, Ih ce ca e f e e high he ic c hcen f a . Thi a e a b b d b deh 74

Calculation methods

Calculation of exposure with regard to the specified reference periods

75 Thi ec[redacted] e d ce [redacted] a ed [redacted] d f [redacted] calc [redacted] f e e i[redacted] el[redacted] 8-h , h [redacted] a[redacted] [redacted]e- ea efe e[redacted]ce e i d . **These methods are legally binding because they have been approved by the Health and Safety Commission.**

Notice of Approval

The Hea[redacted]a[redacted]d Saf[redacted]C i i [redacted] ha [redacted] 9 N e be 2004 a ed[redacted] [redacted]d f calc [redacted] [redacted] Sched [redacted] N[redacted] f [redacted] e f d[redacted] i[redacted]g e e i[redacted] el[redacted] efe e[redacted]ce e i d f k lace e e li [redacted]a ecified i[redacted] eg [redacted] 2(1) f[redacted] C [redacted] f S b[redacted]ce Ha a d [redacted] Hea[redacted]Reg [redacted] 2002 (a a e[redacted]ded) a[redacted]d co [redacted]al e e li [redacted] lead a ecified i[redacted] eg [redacted] 2(1) f[redacted] C [redacted] f Lead [redacted] W k Reg [redacted] 2002.

Sig[redacted]ed

SUSAN MAWER
Secretary to the Health and Safety Commission
9 N e be 2004

The Hea[redacted]a[redacted]d Saf[redacted]C i i [redacted] (HSC) a[redacted]d [redacted] Hea[redacted]a[redacted]d Saf[redacted]E ec[redacted] (HSE) e ged [redacted] 1 A il 2008[redacted] a i[redacted]gle [redacted]al eg [redacted] b d . F [redacted] Hea[redacted]a[redacted]d Saf[redacted]E ec[redacted] beca e e [redacted] ble f a i[redacted]g C de f P ac[redacted], [redacted] c [redacted] e[redacted] Sec [redacted] f S[redacted]

Example 5

7 The e [redacted] k a 12-h [redacted] hi[redacted]ach da f fi e da , a[redacted] ha e e[redacted] da ' e[redacted]The e [redacted] e li [redacted]a e ba ed [redacted] a[redacted] 8-h [redacted], efe e[redacted]ce e i d i[redacted] each 24 h [redacted] i[redacted] hich a[redacted] e [redacted] e co [redacted] e e[redacted] da ', e[redacted]ake [redacted] diffe e[redacted]ce. While [redacted] k, [redacted] e [redacted] l e ed[redacted]4 g. $^{-3}$.

Schedule

1 The [redacted]d hall ea[redacted]e [redacted]e f e l ee b a li[redacted]g i[redacted] b e[redacted]g [redacted]e f[redacted]e l ee e ed.

2

Monitoring exposure

77 Reg la[illegible] 10 f COSHH i e a d[illegible] h[illegible] e e f e l ee [illegible] b[illegible]ce ha a d [illegible]hea[illegible]h ce[illegible] ecified [illegible] . F[illegible] ad ice h [illegible] e e i e e[illegible] a be f hd i[illegible] g idah ce h h[illegible]g f e e i[illegible] COSHH ACOP.[4]

Personal/workplace air monitoring

78 Sa liŋg [illegible]gie a iŋ l e ea e e[illegible]f[illegible] ha a d [illegible] b[illegible]ce iŋ [illegible] b ea[illegible]g he f[illegible] ke (e hal a liŋg) iŋ[illegible] k lace ai . D[illegible] f [illegible]e a liŋg [illegible]gie f iŋdi id al b[illegible]ce a e [illegible]de[illegible] c e f[illegible] d c e[illegible]H e e , ad ice i a ailable iŋ *Monitoring strategies for toxic substances*[15] hich ide ac[illegible]al g idah ce h h[illegible]g b[illegible]ce ha a d [illegible]hea[illegible]h ai .

79 M[illegible]d f [illegible] a liŋg ahd ahal i f ah b[illegible]ce hich ha e beeŋ a igŋed WEL a e de c ibed iŋ[illegible] HSE e ie 'M[illegible]d f [illegible] D[illegible] iŋ[illegible]ah f Ha a d S b[illegible]ce ' (MDHS). The e ie al iŋc [illegible] blica[illegible]h f a e geŋe al h[illegible]e ch a [illegible]d alida[illegible]h [illegible] l ahd g idah ce h ahal[illegible]al a[illegible]a e e[illegible]h d c [illegible].

Biological monitoring (see also Table 2)

80 Bi l gical h[illegible]iŋg caŋ be a e ef l c le e[illegible] [illegible]hŋi e[illegible]ai h[illegible]iŋg heŋ ai a liŋg[illegible]hŋi e al he a h[illegible]g e a eliable iŋdica[illegible]h f e e. Bi l gical h[illegible]iŋg i[illegible] ea e e[illegible]h d a e e[illegible] f ha a d b[illegible]ce [illegible]i [illegible] [illegible] iŋ[illegible]e , ec [illegible] , e c [illegible] e i ed ai , ah c biŋa[illegible]h f[illegible] e, iŋ e ed ke . Mea e e[illegible]efle[illegible]p [illegible] f a b[illegible]ce b all [illegible]. Bi l gical h[illegible]iŋg a be a[illegible]la l ef l iŋ ci c [illegible]ce he e[illegible] e i likel [illegible]be igŋifica[illegible]kiŋ ab [illegible] ahd/ ga[illegible]i[illegible]al[illegible]e f ll iŋg iŋge[illegible]; he e c [illegible] f e e de eŋd ŋ e i a[illegible] [illegible]e e i e[illegible] he e[illegible] e i a ea ŋabl ell-defiŋed ela[illegible]h hi be[illegible]eeŋ bi l gical h[illegible]iŋg ahd effe[illegible] he e[illegible]g e iŋf a[illegible]h ŋ acc l[illegible]d e ahd[illegible]g[illegible]gah b d b de ŋ hich i ela[illegible]id[illegible].

81 Bi l gical h[illegible]iŋg g idah ce al e (BMGV) a e [illegible]he e[illegible] a e likel [illegible] be f a[illegible]al al e, [illegible]le h[illegible]iŋg [illegible]d e i[illegible]d[illegible] e a e ffici[illegible][illegible] a ailable. The[illegible]e f da[illegible][illegible]e a ailable ill a be[illegible]eeŋ b[illegible]ce ahd [illegible] ef e[illegible] [illegible][illegible]eeŋ [illegible]de i iŋg[illegible] BMGV ill a be[illegible]eeŋ b[illegible]ce . BMGV a e e[illegible] ba ed ŋ a ela[illegible]h hi be[illegible]eeŋ bi l gical c ŋce[illegible]ah ahd hea[illegible]effe[illegible]be[illegible]eeŋ bi l gical c ŋce[illegible]ah ahd e e a[illegible]le el f[illegible] WEL a e ba ed ŋ da[illegible]c lle[illegible] f a e e e[illegible]e a le f k lace c e[illegible]a l iŋg[illegible] iŋci le f g d co[illegible]al h gie h e ac[illegible].

82 BMGV a e ŋ ŋ-[illegible] ahd ah bi l gical h[illegible]iŋg ŋde[illegible]eeŋ iŋ a ci[illegible]h [illegible]a g idah ce al e ŋeed [illegible]be c ŋd[illegible] [illegible] ŋ a h[illegible] ba i (ie [illegible] f ll iŋf ed c ŋ e[illegible]f all c ŋce ŋed). BMGV a e iŋ[illegible]ded[illegible]be ed a[illegible]l iŋ e[illegible]g[illegible]e l e' i a d[illegible]eeŋ e ade a[illegible]c ŋ[illegible] ŋde COSHH. Whe e a BMGV i e ceeded, [illegible] e ŋ[illegible]ece a il ea ŋ[illegible] c e ŋdiŋg ai b ŋe [illegible]da d ha beeŋ e ceeded ŋ [illegible]hea[illegible] ill co .

Of c [redacted] e [redacted] ece a il [redacted] a [redacted] eca [redacted] e bi l gical [redacted] g e [redacted]

Mixed exposures

WELs for mixtures

83 The aj [redacted] f WEL li[redacted] iɳ EH40 a e f iɳgle c ɳd f ɳb[redacted]ce c [redacted]iɳg a c ɳ ele e[redacted] adical, f e a le, [redacted]g[redacted] aɳd c ɳd ', aɳd 'i c aɳ[redacted]'. A fe f[redacted] WEL el[redacted] b[redacted]ce c ɳl eɳc [redacted]ed a c le i[redacted]e c ɳd , f e a le ɳbbe f e'. The WEL f c le i[redacted]e ch a ɳbbe f e aɳd h d ca b ɳ l e[redacted] ee a ag a h 84) a e [redacted]ej dice[redacted]aɳ WEL f iɳdi id al c ɳe[redacted]lf[redacted] Saf[redacted]Da[redacted]She[redacted]a ɳb[redacted]ce [redacted]a WEL, [redacted]e l e h ld eɳ e[redacted] [redacted] WEL i ɳ[redacted] ceeded. I[redacted] ɳb[redacted]ce i ɳe[redacted] hich a 'Ca c' 'Seɳ' ɳ[redacted] ha beeɳ a lied hich i a igɳed ɳe f[redacted] i k h a e R42, R42/43, R45, R46, R49, i li[redacted] iɳ Sched le 1 f[redacted] COSHH Reg l[redacted] , iɳ e[redacted] C f *Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma*,[7] i a ɳb[redacted]ce hich[redacted] i k a e e[redacted] ha h ɳ[redacted]pe a [redacted]ca e f co [redacted]al a[redacted] a, [redacted] e i a e i e e[redacted] [redacted]ed ce e e a l a i ea ɳabl a[redacted]able. Thi e i e e[redacted] lie ega dle f h[redacted] ɳ[redacted] ɳb[redacted]ce ha a WEL.

Hydrocarbon solvents

84 H d ca b ɳ l e[redacted]a e ɳ all ɳ lied a c le i[redacted]e . T a i[redacted]

$$\frac{1}{OEL_{\text{mix}}} = \frac{52/100}{1200} + \frac{27/100}{800} + \frac{10/10}{500}$$

$$\frac{1/100}{220} + \frac{10/100}{125}$$

$$\frac{1}{OEL_{\text{mix}}} = 1.816 \quad 10^{-3}$$

$$OEL_{\text{mix}} = 551 \quad g.\ ^{-3}$$

[illegible] 550 g. $^{-3}$.

Effects of mixed exposures

88 [illegible] k lace, ke a e f e [illegible] bjec [illegible] a i [illegible] f i ed e [illegible] e i [illegible] l i [illegible] g lid li id ae l ga e . The e ca [illegible] a i e a a e [illegible] f k [illegible] al c [illegible] ing a i [illegible] e f b [illegible] ce , f k [illegible] e e al i [illegible] di id al b [illegible] ce , i [illegible] e l cce i el , i [illegible] a k hi [illegible] li ed e e e i e ca ef l a e [illegible] l hea [illegible] effec [illegible] [illegible] da d . The f ll i [illegible] g a ag a h ide a b ief a [illegible] ad ice [illegible] a lica [illegible] f WEL i [illegible] e ci c [illegible] ce . I [illegible] all ca e f d [illegible] eciali [illegible] d ice h ld be [illegible] gh [illegible].

89 The a i [illegible] hich [illegible] c [illegible] [illegible] b [illegible] ce f a i ed e e i [illegible] a c [illegible] ide abl . S e i ed e e i [illegible] l e b [illegible] ce [illegible] [illegible] diffe [illegible] b d [illegible] e ga [illegible] , b diffe [illegible] ic l gical echa i [illegible] , [illegible] e a i effec [illegible] be i [illegible] g i [illegible] de e [illegible] de [illegible] f each [illegible] . O [illegible] i [illegible] e ill i [illegible] ch de b [illegible] ce [illegible] [illegible] a e ga [illegible] , b i ila echa i [illegible] , [illegible] effec [illegible] ei [illegible] f ce each [illegible] a [illegible] d [illegible] b [illegible] ce a e add [illegible] e i [illegible] i effec [illegible] e ca e , [illegible] e all effec [illegible] c [illegible] ide abl g ea [illegible] [illegible] [illegible] f [illegible] i [illegible] di id al effec [illegible] a [illegible] d i [illegible] e gi [illegible] Thi a a i e f [illegible] l e [illegible] ha [illegible] ce e [illegible] f [illegible] effec [illegible] f [illegible] c [illegible] [illegible] [illegible] beca e e [illegible] b [illegible] ce [illegible] [illegible] a [illegible] , ca i [illegible] g [illegible] [illegible] a a hich [illegible] ld [illegible] al e.

Risk assessment and control

90 W [illegible] all [illegible] e f i ed e e [illegible] e e [illegible] e e [illegible] h ld be ba ed [illegible] c [illegible] ce [illegible] [illegible] f each f [illegible] c [illegible] [illegible] [illegible] ai [illegible] hich ke a e e ed. De e [illegible] di [illegible] g [illegible] [illegible] [illegible] f [illegible] c [illegible] [illegible] [illegible] [illegible] [illegible] ci c [illegible] ce f e, [illegible] ela [illegible] c [illegible] ce [illegible] [illegible] f [illegible] c [illegible] [illegible] [illegible] ai a diffe c [illegible] ide abl f [illegible] e i [illegible] li id lid ce [illegible] al. The c [illegible] [illegible] f [illegible] b lk [illegible] al h ld [illegible] e elied f a e e [illegible] le [illegible] e i g d e ide [illegible] ce f d i [illegible] g .

91 Whe e i ed e e co [illegible] fi [illegible] i [illegible] e [illegible] e ade [illegible] c [illegible] f e e f each i [illegible] di id al b [illegible] ce, a e lai [illegible] ed i [illegible] ched le 2A f [illegible] COSHH ACOP.[1] WEL f defi [illegible] ed i [illegible] e h ld be e ed [illegible] l he e [illegible] a e a licable a [illegible] d i [illegible] add [illegible] [illegible] a [illegible] ele a [illegible] di id al WEL . The h ld [illegible] e e [illegible] ded [illegible] i [illegible] a i [illegible] [illegible] . [illegible] [illegible] [illegible] ece a [illegible] a e h [illegible] f [illegible] c [illegible] i [illegible] eeded [illegible] c [illegible] [illegible] ac [illegible] [illegible] i [illegible] c ea ed i k f [illegible] b [illegible] ce ac [illegible] g i [illegible] c [illegible] [illegible] [illegible] [illegible]. E e [illegible] e e [illegible] e a [illegible] la i ed e e a be a ailable a [illegible] d ca [illegible] be e ed a g ideli [illegible] e i [illegible] i ila ca e . I [illegible] [illegible] ca e , cl e e a i [illegible] [illegible] f [illegible] [illegible] ic l gical da [illegible] ill be [illegible] ece a [illegible] [illegible] [illegible] de [illegible] i [illegible] e hich f [illegible] ai [illegible] e f

i[redacted] (if a[redacted]) a e likel f [redacted] a[redacted] la c bi[redacted] f [redacted] b[redacted] ce c [redacted] ce [redacted] ed; [redacted] a i [redacted] e h [redacted] ld be c [redacted] ide ed i[redacted] f ll i[redacted] g de :

(a) **Synergistic substances**: K[redacted] [redacted] ca e f [redacted] e gi a[redacted] d [redacted] a e c [redacted] ide abl le c [redacted] e f beha i [redacted] i[redacted] i ed e [redacted] e . H e e, [redacted] a e [redacted] [redacted] e i [redacted] i[redacted] i effec[redacted] a[redacted] d e [redacted] i e[redacted] [redacted] c [redacted]. The a e al [redacted] [redacted] ific[redacted] a e a[redacted] d he e e[redacted] e i ea [redacted] [redacted] e[redacted] ch i[redacted] e[redacted], eciali[redacted] d ice h [redacted] ld be [redacted] ed;

(b) **Additive substances**: Whe e[redacted] e i ea [redacted] pelie e[redacted] effec[redacted] f[redacted] c [redacted] a e add[redacted] e, a[redacted] d he e[redacted] WEL a e ba ed [redacted] a e hea[redacted] effec[redacted] i ed e [redacted] e h [redacted] ld be a e ed b ea[redacted] f[redacted] f [redacted] la:

$C_1/L_1 + C_2/L_2 + C_3/L_3 < 1$

he e C_1, C_2 [redacted] a e[redacted] e- eigh[redacted] a e age (TWA) c [redacted] ce[redacted] f c [redacted] ai a[redacted] d L_1, L_2 a e[redacted] c e [redacted] di[redacted] g WEL . Whe e[redacted] [redacted] f[redacted] C/L f a[redacted] d e [redacted] ceed 1, [redacted] e [redacted] e i c [redacted] ide ed [redacted] e ceed[redacted] [redacted] al e [redacted] e li [redacted] The [redacted] e f[redacted] f [redacted] la i [redacted] l a licable he e L_1, L_2 e[redacted] el[redacted] a e efe e[redacted] ce e i d i[redacted] li[redacted] f a ed WEL . Thi f [redacted] la i [redacted] a licable he e[redacted] lead hea[redacted] effec[redacted] ca[redacted] ce a[redacted] a, ie [redacted] b[redacted] ce [redacted] hich a ‘Ca c’ ‘Se[redacted]’ [redacted] ha bee[redacted] a lied; [redacted] hich [redacted] e f[redacted] i k h a e R42, R42/43, R45, R46, R49 ha bee[redacted] a ig[redacted] ed; [redacted] [redacted] b[redacted] ce li[redacted] i[redacted]

[redacted] b[redacted]ce h[redacted]ld al[redacted] a be ed[redacted]ced fa[redacted] a i ea[redacted]abl[redacted] a[redacted]able. M[redacted]ing h[redacted]ld be[redacted]de[redacted]g[redacted]ida[redacted]ce f[redacted]le eciali[redacted]d ice.

Complicating factors

94 Se[redacted]e al fa[redacted] [redacted] lica[redacted]a e e[redacted]d c[redacted] f e [redacted]e[redacted] i[redacted]di id[redacted]al [redacted]b[redacted]ce ill al affe[redacted]a e f i ed e [redacted]e a[redacted]d ill e [redacted]i e i ila ecial c[redacted]ide a[redacted]. S[redacted]ch fa[redacted] i[redacted]cl[redacted]de:

(a) e [redacted]e[redacted]a [redacted]b[redacted]ce f hich[redacted]e i [redacted] WEL (ee Sched[redacted]le 2A f[redacted] COSHH ACOP);[4]
(b) [redacted] ele a[redacted]ce f [redacted]ch fa[redacted] a alc h l, edica[redacted], ki[redacted]g a[redacted]d add[redacted]al [redacted] e ;
(c) e [redacted]e f[redacted] ki[redacted][redacted]e e [redacted]b[redacted]ce [redacted][redacted]a[redacted] be ab bed b [redacted] [redacted]a ell a b i[redacted]hala[redacted] (ee Sched[redacted]le 2A f[redacted] COSHH ACOP);[4] a[redacted]d
(d) [redacted]b[redacted]ce i[redacted] i[redacted]e a [redacted]ll affe[redacted]e[redacted][redacted]i ab [redacted], a ell a [redacted]i hea[redacted]affe[redacted]a[redacted]gi e[redacted]le el f e [redacted]e.

I[redacted] each f[redacted] e ci c[redacted] [redacted]ce eciali[redacted]d ice h[redacted]ld be k[redacted]ed.

Table 2: Biological monitoring guidance values (BMGVs)

Substance	Biological monitoring guidance values	Sampling time
B ┐-2-ß┐	70 ∩ ┌ ┐-2-ß┐ /L┐ ┐	

List of synonyms

Substance	Name it is listed by in Table 1
α- ∩ ∩ ∩ ¬ ∩	1-C ∩ ∩-2,3- ∩ ∩ ¬ (E ∩ ∩ ¬)
(D ¬) ¬	T ¬
(S)-3-(1-M -2- ∩ ¬) ¬	N ∩¬
1-(1-) ¬∩-3-(1¬ ¬ ¬∩) ∩ ¬-2-∩	P ∩ ¬∩∩
1,1,1- ∩∩-2,2- ∩∩∩ ∩ ¬	H ∩ ¬
1,1’-A ∩	A ∩ ∩¬
1,1’-A ∩ ∩	A ∩ ∩¬
1,1-D ∩∩ ¬	V¬ ¬ ∩
1,1’-D -4,4’-B ¬ ∩	P ∩ (ISO)
1,1-∩ ¬	D
1,2,3,4,7,7-H ∩∩-1,5,5 ,6,9,9 - ∩- 6,9- ¬∩-2,4,3-¬ ∩ ∩ ¬ -3-∩	E¬ ∩ ¬ (ISO)
1,2,3-T ¬	1,2,3-T ¬
1,2,4-B¬ ¬ ∩	T
1,2,4-TCB	1,2,4-T ∩∩¬
1,2,4-T ¬	1,2,4-T ¬
1,2-B¬ ¬ ∩ ¬∩	D¬∩
1,2-B¬ ¬ ∩ , -2- ∩ ¬	D
1,2-B¬ ¬ ∩ ¬	P ¬
1,2-B¬ ¬ ∩	P ∩ ∩
1,2-B (∩ ∩¬) O,O- ∩ ∩∩ ∩	M ∩¬ (ISO)
1,2-D ∩∩ ¬	1,2-D ∩∩ ¬ , : ¬ ∩ 60:40
1,2-D ∩∩ ∩∩ ¬	C ∩ ∩¬ (INN)
1,2-D ∩ ¬ ¬	P ∩ ∩
1,2-D ∩ ¬	E ¬ -1,2- ∩
1,2-D ∩ ∩¬	P ∩ ¬ -1,2- ∩
1,2-E ∩ ∩¬	P ∩ ¬ ∩
1,2-E ¬ ∩	E ¬ -1,2- ∩
1,3,5-T ∩ ¬	T ∩ ¬ (TGIC)
1,4,7-T -( )- ¬	2,2’-I ¬∩ (¬)

Substance	Name it is listed by in Table 1
1,4-B	p-P
1,4-D	p-P
1,4-D	P
1,4-D	H
1,4-E	T
1,7,7-T	B -2-
1-A	V
1-A -2-	-T
1-A	E
1-C -2,2,2-	I
1-I -3-(1) -2-	P
1-M -2-	1-M
1-M	1-M
1-M -2-	-T
1- -2-	1-M -2-
1-M	C
1-	

Substance	Name it is listed by in Table 1
2-M ,∩ -2- , ∩ ¬	M , -tert-► ,
2-M , -1- ∩ -►	

Substance	Name it is listed by in Table 1
A	

Substance	Name it is listed by in Table 1
A (A)	A (A)
A	A
A	A
A ,	A ,
A	-A
A	P
A	P
A	B
B	B
B	B
BCME	B (, ,)
B	A
B ,	C , ,
B	B
B	D ,
B (B)	B (B)
B -	P
B (2,2,1), -2-	B -2-
B	D
B , A4	B , A
B	S (ISO)
B	B
B , ( )	D , ,
B , ( )	D , ,
B , ( )	D , ,
B	D
B	B
B	B
B	B
B	B -2- ( )
B	n-B
B	B
B	2-B ,
B	2-B
B	H -3-
B	2-B ,
B	2-B
B	H -2-
B	2-B ,

Substance	Name it is listed by in Table 1
B	T
B	2,6-D -tert- -p-
B	T
B	2-B
C,C'-	A
C	C
C	C
C	C
C	M
C	C
C	C
C	C
C	C
C	G
C	P P
C	B -2-
C	1,6-H (-)
C	F
C	I
C	C
C	C
C	C
C	P
C	C
C	C
C	I
C	P
C	I
C	P
C	2-E
C	2-E
C	C ( )
C	P
CFC-114	C (INN)
C	P (PCB)

Substance	Name it is listed by in Table 1
C, ∩ ¬	C, ∩ ¬
C, ∩ ¬ (IV) ∩	C, ∩ ¬ ∩
C, ∩ ¬ ∩	C, ∩ ¬ ∩
C, ∩ ¬ ∩	C, ∩ ¬ ∩
C, ∩ ∩	Mn ¬ ∩ , ∩ ∩
C, ∩ ∩ ⊢ ¬. ∩	C, ∩ ∩ ⊢ ¬. ¬
C, ∩ ∩ ¬ ∩ ¬	

Substance	Name it is listed by in Table 1
D ∩[1,2- :2',1'- ⎯ ·ㄱ , 6,7- ⸗ ∩-, ⌐∩	D ⌐∩ (ISO)
D -*sec*-∩ ⸗⸗	B (2- ⸗ ⸗) ⸗⸗
D ⸗ ∩ ⌐ₒㄱ ㄱ⸗	C ⌐ₒㄱ ⸗
D ⸗ ∩ ∩	S ∩ (ISO)
D ⸗ ∩ ⸗ ∩ ⸗ ∩ , ⸗	S ∩ (ISO)
D ⸗ ∩	S ∩ (ISO)
D ㄱ ㄱ ∩	V ㄱ ㄱ ∩
DMA	NN-D ⸗
DMA	NN-D ⸗
DMAE	D ⸗ ㄱ∩ ⸗ ㄱ∩
DME	D ⸗ ⸗
DMEA	D ⸗ ㄱ∩ ⸗ ㄱ∩
DMF	D ⸗ ∩
DMS	D ⸗ ⸗
DPGME	(2- ⸗∩ ⸗ ⸗∩) ∩ ㄱ∩
D ⌐ㄱ	C⸗ ∩ ∩ (ISO)
EAK	5-M ⸗ ⸗ ㄱ-3-ₒㄱ
E	

Substance	Name it is listed by in Table 1
MDA	4,4’-M
-D	R
M	M
MEK	B -2- ( )
MEKP	M (MEKP)
M	T
M	M
M	F
M	F
M	C
M	F
M	M
M 2- -2-	M
M	M
M	M
M	F
M	B
M	H -2-
M	2-M
M	2-M
M	C
M	1,1,1-T
M	M
M	D
M	B -2- ( )
M	P
M	I
M	5-M -2-
M	4-M -2-
M	4-M - -2-
M	A
M	M
M	H -2-
M	T
M	M
M	P -2-
M -1,1-	M -tert-
M -2- -	M
M -2-	M

Substance	Name it is listed by in Table 1
N , ¬ ¬∩ ¬ ∩ ∩¬ (¬ , ⌐¬): . - ∩ ⌐¬ , ∩ ∩¬ (N)¬ , ¬ . -¬ ∩ ⌐¬ , ∩ ∩¬ (N)	N , ¬ ¬∩ ¬ ∩ ∩¬ (¬ , ⌐¬): . - ∩ ⌐¬ , ∩ ∩¬ (N)¬ , ¬ . -¬ ∩ ⌐¬ , ∩ ∩¬ (N)
N , ⌐¬	T ⌐¬ ¬ , (N)
N	N
N ∩⌐¬. ∩	N ∩⌐¬. ¬
N ∩ ∩ ∩ ¬	2-N ∩ ∩ ¬
N ∩ , ¬	N ∩ , ¬
N- , -2- ∩ ¬∩¬	1-M , -2- ∩ ∩¬
N-M , , ¬ ¬	D , ¬
N- , ∩ ∩¬	1-M , -2- ∩ ∩¬
n-P ∩ ¬∩	P ∩ ¬-1-∩
N-T , ∩ ∩ , ∩-4- ∩, ¬ -1,2- ⌐∩	C ¬ (ISO)
O,O,O',O'-T , , ∩- ∩ , ∩ ,	S ∩ (ISO)
O,O-D , O-3,5,6- , ∩ ∩-2- , ∩ , ∩ ∩ , ∩	C, ∩ ∩ (ISO)
O,O-D , S- , , ∩ , , ∩ , ∩ ∩ , ∩	P, ∩ (ISO)
o-D , ∩ ∩⌐¬. ¬	1,2-D , ∩ ∩⌐¬. ¬ (ortho- , ∩ ∩⌐¬. ¬)
∩ -C, ∩ ∩ ∩ ¬	B¬. , ∩
o-M , ∩, ¬∩¬	2-M , ∩, ¬∩¬
O ¬	p-P, ¬ ¬ ¬
∩ , ∩-D , ∩ ∩⌐¬. ¬	1,2-D , ∩ ∩⌐¬. ¬ (ortho- , ∩ ∩⌐¬. ¬)
o-sec-B , ¬∩	2-sec-B , ¬∩
O ∩ (O)	O ∩ (O)
O ¬	E, ¬ ∩
O ∩ , ¬	F∩ ,
O ⌐(, ∩ ∩ , ¬)	B (, ∩ ∩ , ,)
O ⌐ , ¬	D , ,
O , ¬	F∩ ,
-A ¬∩¬ ¬	p-P, ¬ ¬ ¬
para-D , ∩ ∩⌐¬. ¬	1,4-D , ∩ ∩⌐¬. ¬ (para- , ∩ ∩⌐¬. ¬)
P ¬ . ,	P ¬ . ,
PCB	P∩ , ∩¬ ⌐, ¬ (PCB)
p-C, ∩ ∩¬ ∩⌐¬. ¬	1-C, ∩ ∩-4¬ ∩⌐¬. ¬
p-D , ∩ ∩⌐¬. ¬	1,4-D , ∩ ∩⌐¬. ¬ (para- , ∩ ∩⌐¬. ¬)
P ¬ ¬-1,5-	G ,
P	T , ∩ ∩ , ¬
P , ∩ ∩ , ¬	T , ∩ ∩ , ¬

Substance	Name it is listed by in Table 1
P ∩ ₧	P ∩ ₧
P ∩ ¬ ∩	P ∩ ¬ -1,2- ∩
P ∩ ¬ ∩ , ,	1-M , ∩ ∩ ¬ -2-∩
P ∩ ¬ ∩ , ,	1-M , ∩ ∩
P ∩ ¬ ∩ -1- ₧ ∩ , ,	1-M , ∩ ∩ ¬ -2-∩
P ∩ ¬ ∩ -1- ₧ ∩ , , -2-	1-M , ∩ ∩
P	H ∩ ¬ ¬
PVC	P∩ ¬ , ∩
P ¬ , ,	P ¬
P , ¬	P , ¬ (ISO)
P , ¬ (P ,)	P , ¬ (P ,)
P ¬ ⌐∩	P ∩ (ISO)
P ∩ ,	2- , ( )
Q , ¬	S , ⌐ ¬
Q ¬ ∩	H ∩ ¬ ₧
RCF	R ∩ C F⌐ ¬ S P ∩ F⌐
P ∩ ,	
R ∩ ¬	R ∩ ¬ ∩
R ⌐ C ¬ S (RCS)	R ⌐ C ¬ S (RCS)
R, ∩ (R,)	R, ∩ (R,)
R ⌐	R ⌐
R ⌐ ∩ ,	R ⌐ ∩

Substance	Name it is listed by in Table 1
Sn . (N N_3)	Sn . (N N_3)
Sn	Sn n
Sn n	Sn n
Sn	D n
Sn n n	T n n n
Sn . nn	Sn . nn
S	S
S n	S
S	S
S n	S n
S n n	D n
S n n	T n n
S n n	H n
S n	D
S ,	D
S ( )	S ( )
S n	S n
S n n	S n
sym-D n n	B (n n)
sym-D n n	1,2-D n n (E)
sym-D n n	2-D n n , : 60:40
T ,	T ,
T	T
T	T
TEDP	S n (ISO)
T n n , , n , (T)	T n n , , n , (T)
T , , n	T , , n
-	P (n)
-B n n	2-M n -2-n
-B	M -tert-
T - - -	M -tert-
T n n	T n n
T n n	C n
T n-1,4-n	Mn n
TGIC	T n (TGIC)
T , n n n (T)	T , n n n (T)
T n n	M n
T n	E n (ISO)

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Further information

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