GOBIERNO DE ESPAÑA
MINISTERIO DE EMPLEO Y SEGURIDAD SOCIAL
INSTITUTO NACIONAL DE SEGURIDAD E HIGIENE EN EL TRABAJO

Límites de Exposición Profesional para Agentes Químicos en España y Guía Técnica del RD 374/2001 de Agentes Químicos (edición revisada)

Madrid, 20 de febrero 2014

Virginia Gálvez Pérez

1 ppm


1 ppm

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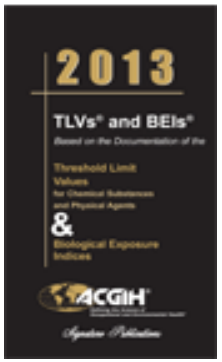
ACGIH Signature Publications

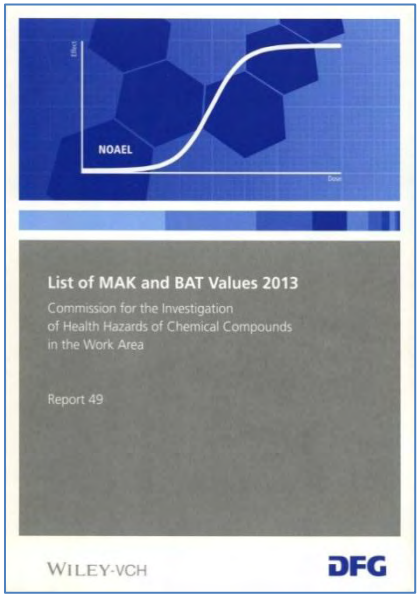


European Commission
Employment, Social Affairs & Inclusion
Health and Safety at work – The Scientific Committee on Occupational Exposure Limits (SCOEL)

SCOEL Recommendations

Click on the SUM number to see the relevant document

SUM	Name	CAS	Year of adoption	Comments added
1	Ethyl Acetate	141-78-6	2008	
2	Dimethyl Ether	115-10-6	1991	
3	1-Pentyl Acetate	628-63-7	1991	
4	Phosgene	75-44-5	2011	
5	Butanone	78-93-3	1999	
6	4-Methylpentan-2-one	108-10-1	1991	
7	Heptan-2-one	110-43-0	1991	
8	Heptan-3-one	106-35-4	1991	
9	5-Methylheptan-3-one	541-85-5	1991	
10	5-Methylhexan-2-one	110-12-3	1991	
11	Dimethylamine	124-40-3	1991	
12	Tetrahydrofuran	109-99-9	1992	
13	Cyclohexane	110-82-7	2001	
14	Orthophosphoric acid	7664-38-2	1991	
15	Ethyl ether	60-29-7	1991	
16	Phenol	108-95-2	2003	
17	Cyclohexanone	108-94-1	1992	
18	Toluene	108-88-3	2001	
19	Xylenes	1330-20-7	1992	
	ortho-Xylene	207-422-2		
	meta-Xylene	203-576-3		
	para-Xylene	203-396-5		



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PLANIFICACIÓN DE SUSTANCIAS A ESTUDIO 2015

- Ácido 2-etilhexanoico
- Ácido m-ftalico
- Algodón en rama
- Benomilo
- Cloruro de polivinilo (PVC)
- Cloruro de carbonilo
- Dietanolamina
- Naled
- Nitroglicerina
- Queroseno
- Silicato de etilo
- 1,3,5-Triclorobenceno

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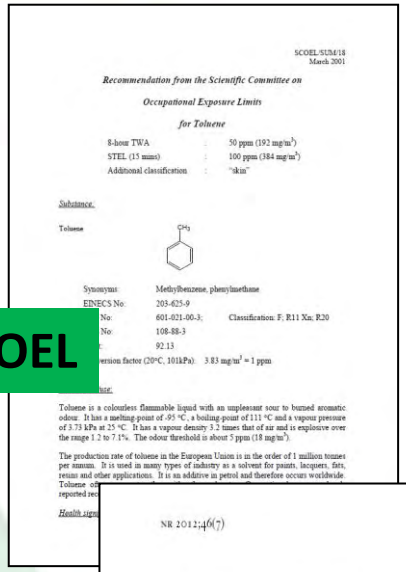

SCOEL/SUM/18
March 2001

Recommendation from the Scientific Committee on

Occupational Exposure Limits

for Toluene

8-hour TWA : 50 ppm (192 mg/m³)
STEL (15 mins) : 100 ppm (384 mg/m³)
Additional classification : "skin"

Substance:

Toluene

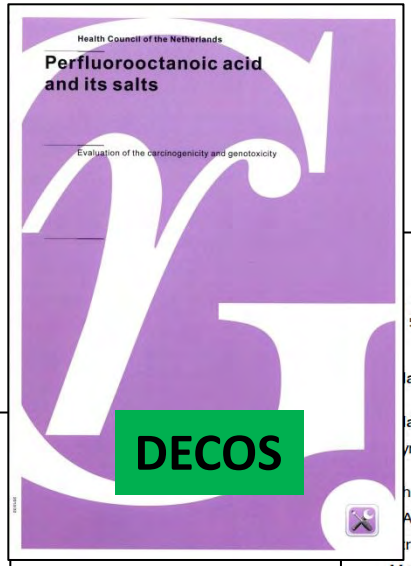
Synonym: Methylbenzene, phenylmethane
EINECS No: 203-625-9
No: 601-021-00-3; Classification: F; R11 Xn; R20
No: 108-88-3
92.13
version factor (20°C, 101kPa): 3.83 mg/m³ = 1 ppm

Toluene is a colourless flammable liquid with an unpleasant sour to burned aromatic odour. It has a melting-point of -95 °C, a boiling-point of 111 °C and a vapour pressure of 3.73 kPa at 25 °C. It has a vapour density 3.2 times that of air and is explosive over the range 1.2 to 7.1%. The odour threshold is about 5 ppm (18 mg/m³).

The production rate of toluene in the European Union is in the order of 1 million tonnes per annum. It is used in many types of industry as a solvent for paints, lacquers, fats, resins and other applications. It is an additive in petrol and therefore occurs worldwide. Toluene
reported

Health

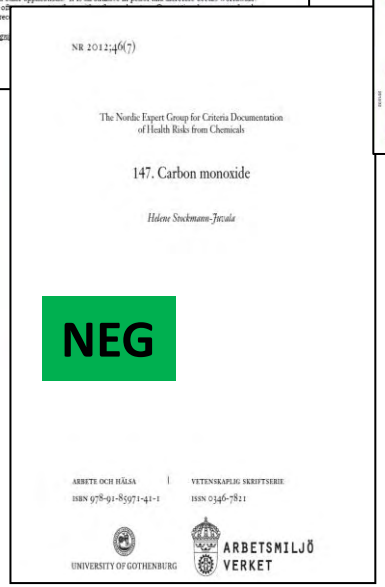
SCOEL


Health Council of the Netherlands

Perfluorooctanoic acid and its salts

Evaluation of the carcinogenicity and genotoxicity

DECOS


NR 2012:46(7)

The Nordic Expert Group for Criteria Documentation of Health Risks from Chemicals

147. Carbon monoxide

Hélene Stockmann-Juvala

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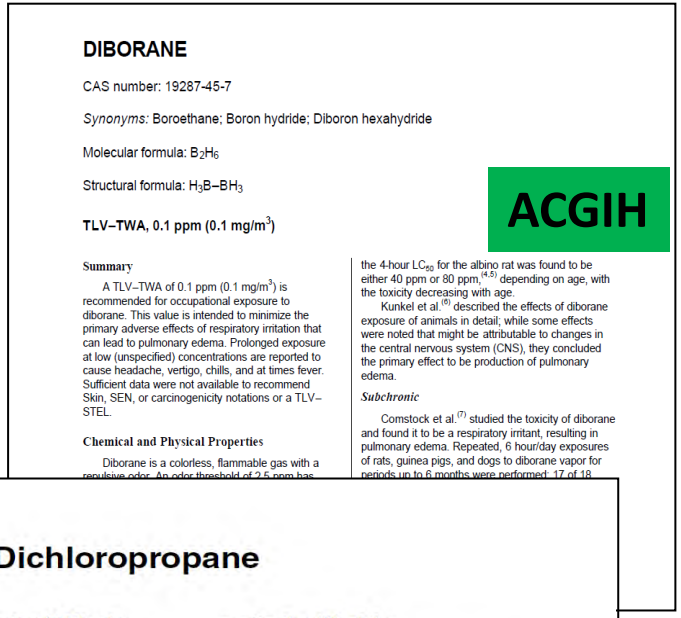

DIBORANE

CAS number: 19287-45-7

Synonyms: Boroethane; Boron hydride; Diboron hexahydride

Molecular formula: B_2H_6

Structural formula: $H_3B–BH_3$

TLV–TWA, 0.1 ppm (0.1 mg/m³)

Summary

A TLV–TWA of 0.1 ppm (0.1 mg/m³) is recommended for occupational exposure to diborane. This value is intended to minimize the primary adverse effects of respiratory irritation that can lead to pulmonary edema. Prolonged exposure at low (unspecified) concentrations are reported to cause headache, vertigo, chills, and at times fever. Sufficient data were not available to recommend Skin, SEN, or carcinogenicity notations or a TLV–STEL.

Chemical and Physical Properties

Diborane is a colorless, flammable gas with a

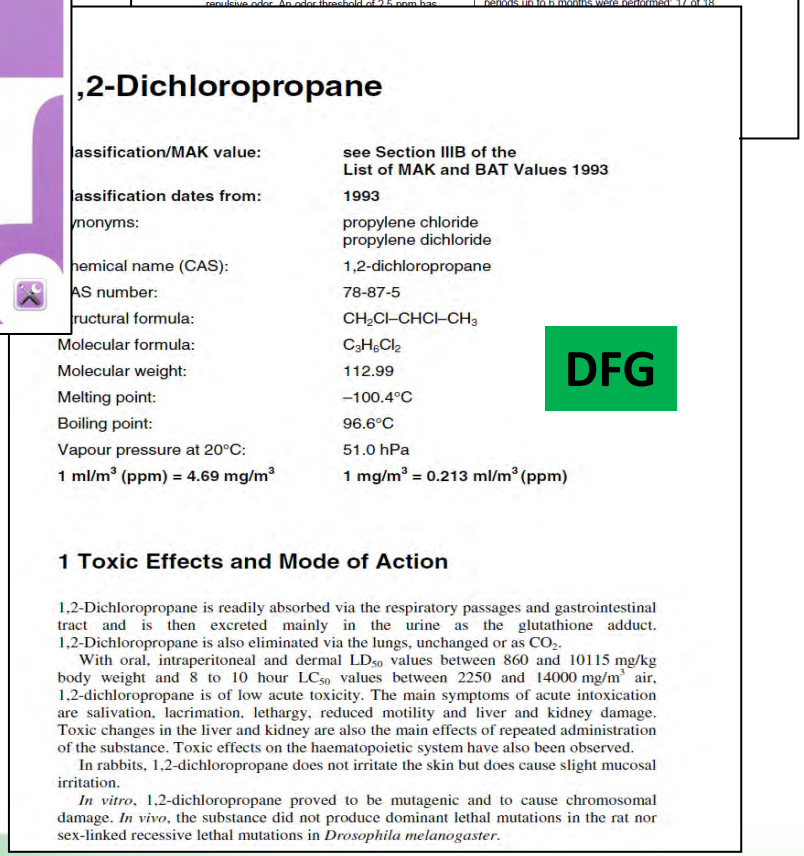
the 4-hour LC_{50} for the albino rat was found to be either 40 ppm or 80 ppm,[4,5] depending on age, with the toxicity decreasing with age.

Kunkel et al.[6] described the effects of diborane exposure of animals in detail; while some effects were noted that might be attributable to changes in the central nervous system (CNS), they concluded the primary effect to be production of pulmonary edema.

Subchronic

Comstock et al.[7] studied the toxicity of diborane and found it to be a respiratory irritant, resulting in pulmonary edema. Repeated, 6 hour/day exposures of rats, guinea pigs, and dogs to diborane vapor for periods up to 6 months were performed; 17 of 18

ACGIH


,2-Dichloropropane

lassification/MAK value:	**see Section IIIB of the List of MAK and BAT Values 1993**
lassification dates from:	**1993**
ynonyms:	propylene chloride propylene dichloride
hemical name (CAS):	1,2-dichloropropane
AS number:	78-87-5
ructural formula:	$CH_2Cl–CHCl–CH_3$
Molecular formula:	$C_3H_6Cl_2$
Molecular weight:	112.99
Melting point:	–100.4°C
Boiling point:	96.6°C
Vapour pressure at 20°C:	51.0 hPa
1 ml/m³ (ppm) = 4.69 mg/m³	**1 mg/m³ = 0.213 ml/m³ (ppm)**

1 Toxic Effects and Mode of Action

1,2-Dichloropropane is readily absorbed via the respiratory passages and gastrointestinal tract and is then excreted mainly in the urine as the glutathione adduct. 1,2-Dichloropropane is also eliminated via the lungs, unchanged or as CO_2.

With oral, intraperitoneal and dermal LD_{50} values between 860 and 10115 mg/kg body weight and 8 to 10 hour LC_{50} values between 2250 and 14000 mg/m³ air, 1,2-dichloropropane is of low acute toxicity. The main symptoms of acute intoxication are salivation, lacrimation, lethargy, reduced motility and liver and kidney damage. Toxic changes in the liver and kidney are also the main effects of repeated administration of the substance. Toxic effects on the haematopoietic system have also been observed.

In rabbits, 1,2-dichloropropane does not irritate the skin but does cause slight mucosal irritation.

In vitro, 1,2-dichloropropane proved to be mutagenic and to cause chromosomal damage. *In vivo*, the substance did not produce dominant lethal mutations in the rat nor sex-linked recessive lethal mutations in *Drosophila melanogaster*.

DFG

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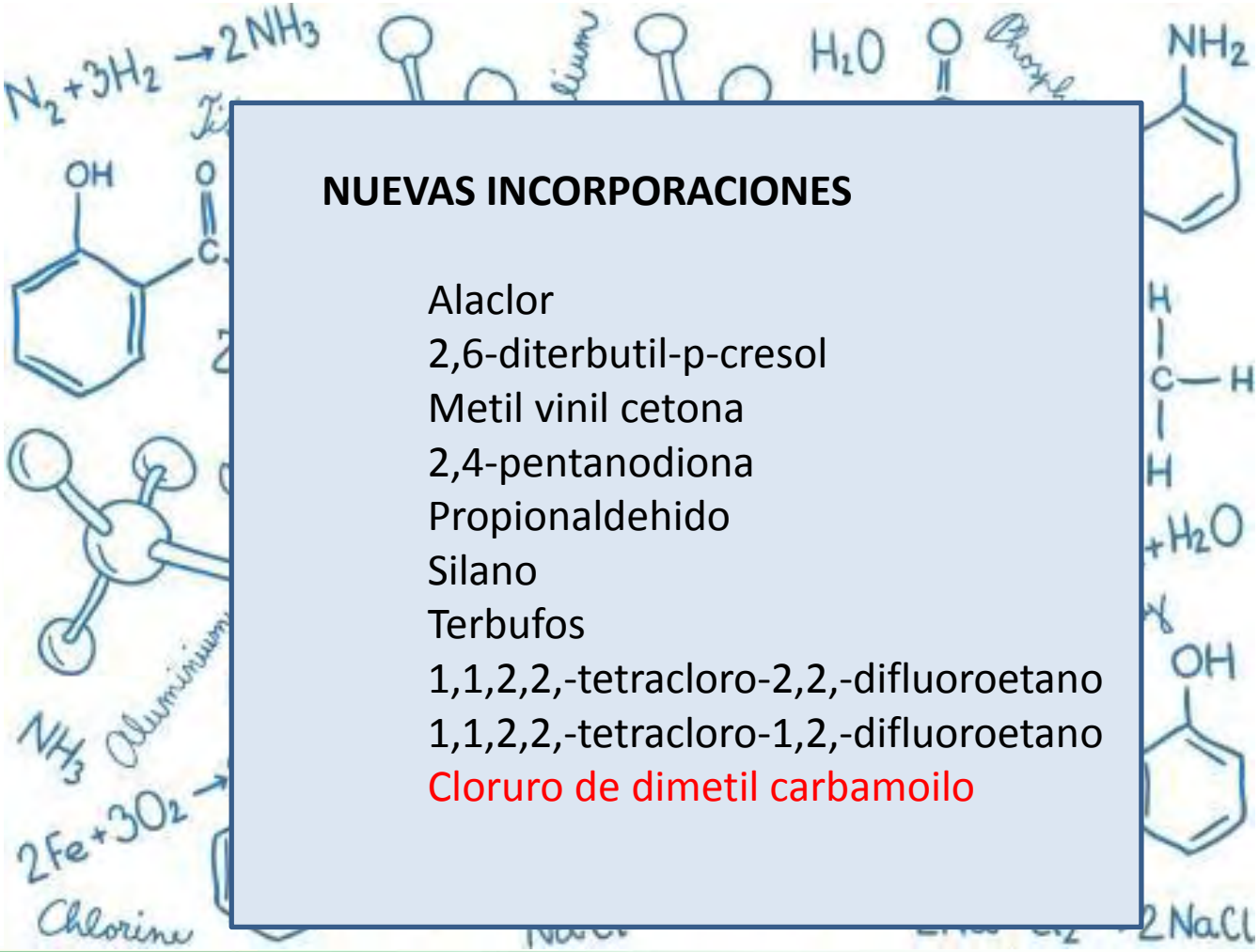
NOVEDADES DE ESTA EDICIÓN

VALORES LÍMITE AMBIENTALES (VLA)



NUEVAS INCORPORACIONES

- Alaclor
- 2,6-diterbutil-p-cresol
- Metil vinil cetona
- 2,4-pentanodiona
- Propionaldehido
- Silano
- Terbufos
- 1,1,2,2,-tetracloro-2,2,-difluoroetano
- 1,1,2,2,-tetracloro-1,2,-difluoroetano
- Cloruro de dimetil carbamoilo

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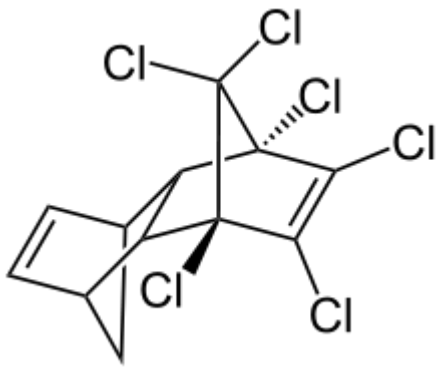
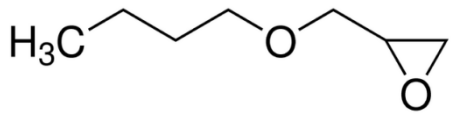
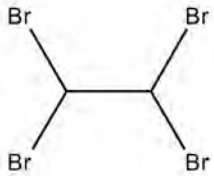
VALORES LÍMITE AMBIENTALES (VLA)

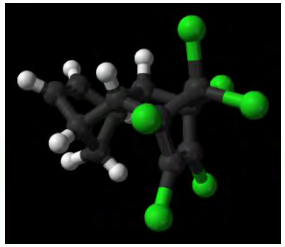


ACTUALIZACIONES

Aldrin
N-butilglicidileter
1,1,2,2- tetrabromoetano
Dióxido de azufre







DIOXIDO DE AZUFRE

2012

VLA-ED ®		VLA-EC ®	
ppm	mg/m³	ppm	mg/m³
2	5,3	5	13

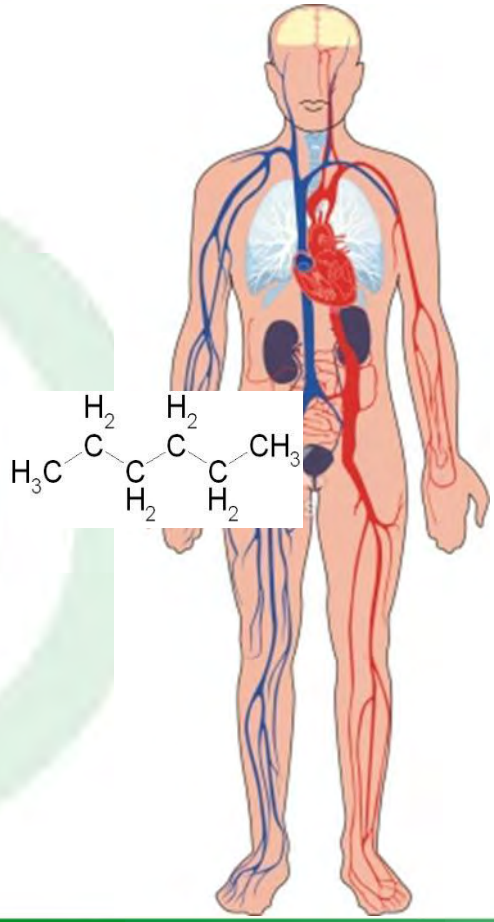
2014

VLA-ED ®		VLA-EC ®	
ppm	mg/m³	ppm	mg/m³
0,5	1,3	1	2,6

2013

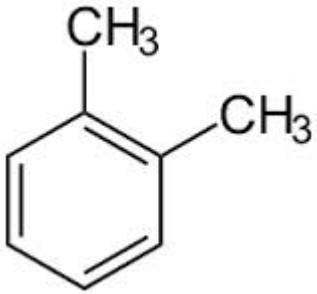
VLA-ED ®		VLA-EC ®	
ppm	mg/m³	ppm	mg/m³
1	2,64	2	5,28

NOVEDADES DE ESTA EDICIÓN



VALORES LÍMITE BIOLÓGICOS (VLB ®)

n-hexano
xilenos



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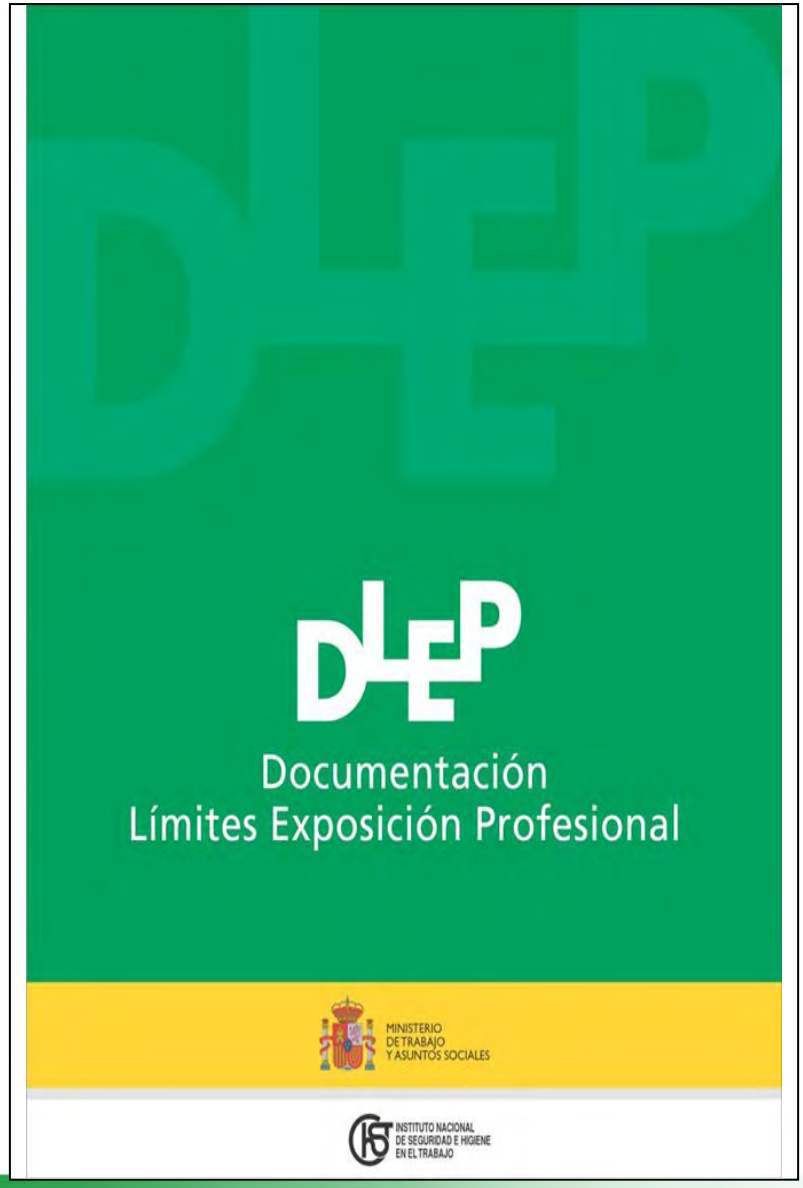

Documentación toxicológica para el establecimiento de los valores límite ambientales (DLEP)

DLEP 83	Cloruro de dimetilcarbamoílo
DLEP 84	1,1,2,2-Tetrabromoetano
DLEP 85	n-Butilglicidileter
DLEP 86	Dióxido de azufre
DLEP 87	Metil-vinil-cetona
DLEP 88	2,4-Pentanodiona
DLEP 89	Propionaldehído
DLEP 90	Silano

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