

Stofdocument deel A

CAS-nr: 107-20-0

2-Chloorethanal

ClCH₂-CHO

VN-nr: 2232

GEVI: 66

Synoniemen: chlooracetaldehyde, monochloroacetaldehyde (Engels: chloroacetaldehyde)

Interventiewaarden		10 min.	30 min.	1 uur	2 uur	4 uur	8 uur
Voorlichtingsrichtwaarden	VRW (mg/m³)	37	15	8,3	4,6	2,6	1,5
Alarmeringsgrenswaarden	AGW (mg/m³)	64	26	14	8,1	4,5	2,5
Levensbedreigende waarden	LBW (mg/m³)	140	58	32	18	10	5,7
Datum vaststelling: November 2015		1 mg/m ³ = 0,306 ppm; 1 ppm = 3,27 mg/m ³					
Explosiegrens: Geen data			Geur: penetrant, stekend LOA: niet afgeleid				
Fysisch-chemische eigenschappen						Overige informatie	
Uiterlijk: kleurloze vloeistof		Molecuulmassa: 78,50 g/mol				Publieke grenswaarde: niet afgeleid	
Brand: niet brandbaar maar kan boven 88°C een brandbaar/explosief mengsel vormen.		Zuurgraad: Geen data				MAK: niet afgeleid	
Relatieve dichtheid van verzadigd damp-lucht mengsel: 2,7		LogKow: 0,37				TLV-TWA: 3,3 mg/m ³ ceiling	
Wateroplosbaarheid: Goed							
Verzadigde dampdruk: 133 mbar							
Toxicologische eigenschappen							
Effecten bij inhalatoire blootstelling				Toxiciteit bij eenmalige, inhalatoire blootstelling			
<u>Onder VRW:</u> lichte irritatie van ogen, neus en luchtwegen				<ul style="list-style-type: none"> De stof is bijtend voor de ogen, huid en de luchtwegen. De damp van de stof is sterk irriterend tot bijtend. Blootstelling aan de stof kan longoedeem veroorzaken. De verschijnselen hiervan kunnen vertraagd optreden en versterkt worden door lichamelijke inspanning. 			
<u>VRW → AGW:</u> sterke irritatie van ogen, neus en luchtwegen, tranenvloed							
<u>AGW → LBW:</u> tranenvloed, verlies van gezichtsvermogen, longoedeem, benauwdheid							
<u>Boven LBW:</u> sterfte							
Effecten bij blootstelling aan vloeistof				Carcinogeniteit			
<u>Huidcontact:</u> Roodheid en pijn. Blaarvorming. Gele verkleuring van de huid. Brandwonden.				IARC classificatie: niet geclassificeerd			
<u>Oogcontact:</u> Oogirritatie, pijn.				CRP: niet afgeleid			
Beknorte medische informatie							
Ontsmetting damp							
<u>algemeen:</u> frisse lucht, rust, halfzittende houding en direct spoedeisende medische hulp inzetten.							
<u>ogen:</u> minimaal 15 min. spoelen met water (evt. contactlenzen verwijderen), dan naar oogarts brengen.							
Ontsmetting vloeistof							
<u>huid:</u> bij verbranding aan de huid vastgeplakte kleding NIET lostrekken, spoelen met veel water / kleding verwijderen, en direct spoedeisende medische hulp inzetten.							
<u>ogen:</u> minimaal 15 min. spoelen met water (evt. contactlenzen verwijderen), dan naar oogarts brengen, blijven spoelen tijdens vervoer..							
<u>inslikken:</u> mond laten spoelen (uitspugen!), GEEN braken opwekken, en direct spoedeisende medische hulp inzetten.							
Specifieke behandeling en materialen: geen.							
Neem contact op met het NVIC (Tel: +31 (0)30 274 8888) voor aanvullende informatie met betrekking tot medisch handelen							

Stofdocument deel B

CAS-nr: 107-20-0

Chloroacetaldehyde

CICH2-CHO

UN-nr:2232

Basis for the Dutch Intervention Values							
VRW:	Same point of departure as for AEGL values, but modifying factor was deleted, 2h value added						
AGW:	Same point of departure as for AEGL values, but modifying factor was deleted, 2h value added						
LBW:	AEGL value is adopted, 2h value added						
Date: November 2015				AEGL document: Final, 2014			
Dutch Intervention Values (mg/m³)							
	10 min	30 min	1 h	2 h	4 h	8 h	End point
VRW	37	15	8.3	4.6	2.6	1.5	Threshold for ocular and nasal irritation in rats
AGW	64	26	14	8.1	4.5	2.5	Threshold for pulmonary effects in rats
LBW	140	58	32	18	10	5.7	Estimate BMCL ₀₅ lethality threshold in rats
Derivation of the Dutch Intervention Values							
VRW:	<p>The VRW values are based on animal data. A study showed that ocular and nasal irritation were slight to very slight in rats, mice and one rabbit when exposed to a concentration of 5 ppm (16 mg/m³) for 7 hours. In guinea pigs no effects were reported at this concentration. The concentration of 5 ppm (16 mg/m³) for 7 hours was used as point of departure for VRW derivation. The default total uncertainty factor of 10 (3x3) was considered sufficient to account for inter- and intraspecies differences. Data in rat indicate that the level of irritation was related to concentration as well as duration of exposure. At higher concentration other effects occurred including laboured breathing and slight drowsiness. Therefore it was considered to be inappropriate to use the same value for all exposure durations. Time scaling was performed using the equation $C^n \times t = k$ with the chemical specific value for $n = 1.2$ based on lethality data in rats to extrapolate from 420-min of exposure to 10, 30, 60, 120, 240 and 480-min exposures.</p>						
AGW:	<p>The AGW values are based on animal data. In a study in rats a concentration of 44 ppm (144 mg/m³) at a duration of 1 hour was considered to be the LOAEL for decreased pulmonary function. The default total uncertainty factor of 10 (3x3) was considered sufficient to account for inter- and intraspecies differences. Time scaling was performed using the equation $C^n \times t = k$ with the chemical specific value $n = 1.2$ based on lethality data in rats.</p>						
LBW:	<p>The LBW values were determined by using available mortality data in rats in a benchmark dose approach. The BMCL₀₅ value of 99 ppm (323 mg/m³) for 1 hour was used as a point of departure for deriving the LBW values. The default total uncertainty factor of 10 (3x3) was considered sufficient to account for inter- and intraspecies differences. Time scaling was performed using the equation $C^n \times t = k$ with the chemical specific value for $n = 1.2$ based on lethality data from a second rat study.</p>						
Additional toxicological information (including relevant results of a general literature search, if any)							
<p>Chloroacetaldehyde is a corrosive substance. The substance is irritating to the skin, eyes and respiratory tract. Exposure via inhalation resulted in impairment of the pulmonary function, pulmonary edema, and death in laboratory animals. Steep concentration-response and time-response relationships appeared to be present for chloroacetaldehyde</p> <p>Data on developmental and reproductive toxicity and carcinogenicity are too limited to draw conclusions.</p> <p>H330: Fatal if inhaled, H311: Toxic in contact with skin, H301: Toxic if swallowed, H314: Causes severe skin burns and eye damage, H351: Suspected of causing cancer</p>							
Carcinogenicity and derivation of the CRP value				Odour and derivation of the LOA value			
IARC classification: not classified				Odour: acrid, penetrating odour.			
No carcinogenic risk potency (CRP) was derived.				No LOA was derived due to lack of data.			

Other standards and guidelines (1h values in mg/m³, unless otherwise indicated)				
VRW level 8.3	AEGL-1 4.2	ERPG-1 -		IDLH: 147
AGW level 14	AEGL-2 7.1	ERPG-2 -		
LBW level 32	AEGL-3 32	ERPG-3 -		