# Chloromethyl methyl ether

| CAS number: | 107-30-2 |
| --- | --- |
| Synonyms: | Chloro(methoxy)methane, CMME, dimethylchloroether, methyl chloromethyl ether, |
| Chemical formula: | ClCH2OCH3 |
| Structural formula: | — |

Workplace exposure standard (new)

| TWA: | **—** |
| --- | --- |
| STEL: | **—** |
| Peak limitation: | **—** |
| Notations: | **—** |
| IDLH: | **—** |
| Sampling and analysis: | **—** |

## Recommendation and basis for workplace exposure standard

A workplace exposure standard is not recommended for chloromethyl methyl ether as the available data is considered insufficient to support a health-based recommendation.

Occupational exposure should be avoided to protect for the possible severe burns and necrosis.

## Discussion and conclusions

Chloromethyl methyl ether is used as a methylating agent that is expected to cause severe burns and necrosis on contact with skin and eyes. Unless promptly used, chloromethyl methyl ether will soon be contaminated with bis(chloromethyl) ether, a confirmed human carcinogen. Toxicological data are limited and no animal or human data are currently available. It is considered human carcinogen based on analogy to bis(chloromethyl) ether (ACGIH, 2018).

Based on the available data, a workplace exposure standard is not recommended.

## Recommendation for notations

Classified as a category 1A carcinogen according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Not classified as a skin sensitiser or respiratory sensitiser according to the GHS.

There are insufficient data to recommend a skin notation.

# Appendix

### Primary sources with reports

| Source Year set Standard |
| --- |
| SWA 1991 Not assigned | |
|  |
| ACGIH 2001 Not assigned |
| TLV-TWA not recommended and worker exposure by all routes should be avoided and kept as low as possible.  Summary of data:   * Expected to cause severe burns and necrosis on contact with skin and eyes * Often contaminated with bis(chloromethyl) ether, a confirmed human carcinogen.   No animal data presented. |
| DFG NA NA |
| No report. |
| SCOEL NA NA |
| No report. |
| OARS/AIHA NA NA |
| No report. |
| HCOTN NA NA |
| No report. |

### Secondary source reports relied upon

| Source |  | Year | Additional information |
| --- | --- | --- | --- |
| IARC |  | 2012 | No additional information |

### Carcinogenicity — non-threshold based genotoxic carcinogens

| Is the chemical mutagenic? | Insufficient data |
| --- | --- |
| Is the chemical carcinogenic with a mutagenic mechanism of action? | Insufficient data |
| **Insufficient data are available to determine if the chemical is a non-threshold based genotoxic carcinogen.** | |

## Notations

| Source | Notations |
| --- | --- |
| SWA | Carc. 2 |
| HCIS | Carcinogenicity – category 1A |
| NICNAS | NA |
| EU Annex | Carcinogenicity – category 1A |
| ECHA | Carcinogenicity – category 1A |
| ACGIH | Carcinogenicity – A2 |
| DFG | NA |
| SCOEL | NA |
| HCOTN | NA |
| IARC | Carcinogenicity – Group 1 |
| US NIOSH | NA |

NA = not applicable (a recommendation has not been made by this Agency); — = the Agency has assessed available data for this chemical but has not recommended any notations

### Skin notation assessment

| Calculation |
| --- |
| Insufficient information |

### IDLH

| Is there a suitable IDLH value available? | No |
| --- | --- |

## Additional information

| Molecular weight: | 80.5 |
| --- | --- |
| Conversion factors at 25°C and 101.3 kPa: | 1 ppm = Number mg/m3; 1 mg/m3 = Number ppm |
| This chemical is used as a pesticide: |  |
| This chemical is a biological product: |  |
| This chemical is a by-product of a process: |  |
| A biological exposure index has been recommended by these agencies: | ACGIH  DFG  SCOEL |

## Workplace exposure standard history

| Year | Standard |
| --- | --- |
| Click here to enter year |  |

## References

American Conference of Industrial Hygienists (ACGIH®) (2018) TLVs® and BEIs® with 7th Edition Documentation, CD-ROM, Single User Version. Copyright 2018. Reprinted with permission. See the [*TLVs® and BEIs® Guidelines section*](http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations) on the ACGIH website.

European Chemicals Agency Regulation (ECHA) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

International Agency for Research on Cancer (IARC) (2012) Chemical agents and related occupations, Volume 100 F a review of human carcinogens. IARC Monographs on the evaluation of the carcinogenic risk to humans.

Tenth Adaptation to Technical Progress Commission Regulation (EU) No 2017/776 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (the CLP Regulation).