# Clopidol

| CAS number: | 2971-90-6 |
| --- | --- |
| Synonyms: | Coyden, 3,5-dichloro-2,6-dimethyl-4-pyridinol, metaclorpindol, methylchloropindol, clopindol, meticlorpindol. |
| Chemical formula: | C7H7Cl2NO |
| Structural formula: | — |

Workplace exposure standard (amended)

| TWA: | **2 mg/m3** |
| --- | --- |
| STEL: | **—** |
| Peak limitation: | **—** |
| Notations: | **—** |
| IDLH: | **—** |
| Sampling and analysis: | The recommended value is quantifiable through available sampling and analysis techniques. |

## Recommendation and basis for workplace exposure standard

A TWA of 2 mg/m3 is recommended to protect for sperm abnormalities and possible genotoxic effects in exposed workers.

## Discussion and conclusions

Clopidol is used as a coccidiostat in poultry.

No adequate inhalational data in humans or animals are available. Sister chromatid exchanges and sperm abnormalities are reported in mice at 50 mg/kg (ACGIH, 2018). No adverse effects are reported in dogs at 5 mg/kg/day and rats at 15 mg/kg/day exposed orally.

The TWA was calculated using the oral NOAEL of 15 mg/kg/day in rats (ACGIH, 2018). Generic human exposure factors (70 kilogram individual and 10 m3 air respired over eight hours) results in a TWA of 35 mg/m3. An uncertainty factor of 10 is also applied due to the limitations in the available data and for interspecies variation; resulting a TWA that is rounded down to 2 mg/m3.

The recommended TWA is considered sufficiently low to minimise the potential for mutagenic effects in exposed workers.

## Recommendation for notations

Not classified as a 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 TWA: 10 mg/m3 | |
|  |
| ACGIH 2013 TLV-TWA: 3 mg/m3 (Inhalable fraction and vapour) |
| TLV-TWA recommended to minimise the risk of potential mutagenic effects in exposed workers.  Summary of data:  Animal data:   * LD50: 8,000 mg/kg (rats, oral) * Exposure to rabbit skin proved not dermally irritating whilst dry and produces slight irritation while in suspension with alcohol * LOAEL: 500 mg/kg (sheep, oral), duration unknown * Exposure to 0–5 mg/kg/d (dogs, 2 yr) reported no symptoms * Exposure to 0–15 mg/kg/d (rats, 2 yr) reported no symptoms * Exposure to 0–15 mg/kg/d (rats, 3 generations) reported no reproductive/development symptoms * Exposure to 4, 20, 100 and 200 mg/kg/d (rats, oral) on GD 6–15 reported: * 200 ppm: maternal body weight affected * 100–200 ppm: pregnancy rates affected * developmental delays, foetal weight gain and malformations reported, groups not specified * Negative results in *in vitro* mutagenicity assays * Oral *in vivo* genotoxicity studies on mice exposed to 50–160 mg/kg reported sperm abnormalities and increased SCE.   Assigned an A4, not classified as human carcinogen.  Insufficient data to recommend a skin or sensitiser notation. |
| DFG NA NA |
| No report. |
| SCOEL NA NA |
| No report. |
| OARS/AIHA NA NA |
| No report. |
| HCOTN 2003 TWA: 10 mg/m3 |
| Insufficient information to comment on the level of the present MAC value. Recommends further investigation of mutagenicity/genotoxicity and reproduction toxicity. |

### Secondary source reports relied upon

NIL.

### 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 | NA |
| HCIS | NA |
| NICNAS | NA |
| EU Annex | NA |
| ECHA | NA |
| ACGIH | Carcinogenicity – A4 |
| DFG | NA |
| SCOEL | NA |
| HCOTN | NA |
| IARC | NA |
| 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

Insufficient data to assign a skin notation.

### IDLH

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

## Additional information

| Molecular weight: | 192.06 |
| --- | --- |
| 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.

Health Council of the Netherlands (HCOTN) (2003) Clopidol. Health-based Reassessment of Administrative Occupational Exposure Limits. The Hague: Health Council of the Netherlands; publication no. 2000/15OSH/079.