

The New Dutchlist

| Contaminant | Soil Sediment (mg/kg dry weight) | | Groundwater (µg/l) | |
|---|-------------------------------------|--------|-----------------------|--------|
| | optimum | action | optimum | action |
| Metals | optimum | action | optimum | action |
| Arsenic | 29 | 55 | 10 | 60 |
| Barium | 200 | 625 | 50 | 625 |
| Cadmium | 0.8 | 12 | 0.4 | 6 |
| Chromium | 100 | 380 | 1 | 30 |
| Cobalt | 20 | 240 | 20 | 100 |
| Copper | 36 | 190 | 15 | 75 |
| Lead | 85 | 530 | 15 | 75 |
| Molybdenum | 10 | 200 | 5 | 300 |
| Nickel | 35 | 210 | 15 | 75 |
| Mercury | 0.3 | 10 | 0.05 | 0.3 |
| Zinc | 140 | 720 | 65 | 800 |
| Cyanides | optimum | action | optimum | action |
| Free | 1 | 20 | 5 | 1500 |
| Complex (pH<5) (1) | 5 | 650 | 10 | 1500 |
| Complex (pH>5) (1) | 5 | 50 | 10 | 1500 |
| Thiocyanate | - | - | 20 | 1500 |
| Aromatics | optimum | action | optimum | action |
| Benzene | 0.05[d] | 2 | 0.2 | 30 |
| Ethylbenzene | 0.05[d] | 50 | 0.2 | 150 |
| Phenol | 0.05[d] | 40 | 0.2 | 2000 |
| Toluene | 0.05[d] | 130 | 0.2 | 1000 |
| Xylene | 0.05[d] | 25 | 0.2 | 70 |
| Cresol | - | 5[d] | - | 200 |
| Catechin | - | 20 | - | 1250 |
| Resorein | - | 10 | - | 600 |
| Hydroquinone | - | 10 | - | 800 |
| Polycyclic Aromatic Hydrocarbons (PAH) | optimum | action | optimum | action |
| Anthracene | - | - | 0.02 | 5 |
| Benzo(a)pyrene | -- | - | 0.001 | 0.5 |
| Fluoroanthrene | -- | - | 0.005 | 1 |
| Naphtalene | - | - | 0.1 | 70 |
| Phenanthrene | - | - | 0.03 | 5 |
| Benzo(a)anthracene | - | - | 0.002 | 0.5 |
| Chrysene | - | - | 0.002 | 0.05 |
| Benzo(a)fluoranthrene | - | - | 0.003 | 0.5 |
| Benzo(k)fluoranthrene | - | - | 0.001 | 0.05 |
| Benzo(g,h,i)perylene | - | - | 0.0002 | 0.05 |
| Indenol(1,2,3-c,d)pyrene | -- | - | 0.0004 | 0.05 |
| Total PAH (2) (10) | 1 | 40 | - | - |
| Chlorinated Hydrocarbons | optimum | action | optimum | action |
| 1,2 Dichloroethane | - | 4 | 0.01[d] | 400 |

| | | | | |
|-------------------------------------|-----------|--------|----------|---------|
| Dichloromethane | [d] | 20 | 0.01[d] | 1000 |
| Tetrachloromethane | 0.001 | 1 | 0.01[d] | 10 |
| Tetrachloroethane | 0.01 | 4 | 0.01[d] | 40 |
| Trichloromethane | 0.001 | 10 | 0.01[d] | 400 |
| Trichloroethene | 0.001 | 60 | 0.01[d] | 500 |
| Vinylchloride | - | 0.1 | - | 0.7 |
| Monochlorobenzene | [d] | - | 0.01[d] | 180 |
| Dichlorobenzol (total) | 0.01 | - | 0.01[d] | 50 |
| Trichlorobenzol (total) | 0.01 | - | 0.01[d] | 10 |
| Tetrachlorobenzol (total) | 0.01 | - | 0.01[d] | 2.5 |
| Pentachlorobenzene | 0.0035 | - | 0.01[d] | 1 |
| Hexachlorobenzene | 0.0025 | - | 0.01[d] | 0.5 |
| Chlorobenzenes (3) (10) | - | 30 | - | - |
| Monochlorophenol | 0.0025 | - | 0.25 | 100 |
| Dichlorophenol | 0.003 | - | 0.08 | 30 |
| Trichlorophenol | 0.001 | - | 0.025 | 10 |
| Tetrachlorophenol | 0.001 | - | 0.01 | 10 |
| Pentachlorophenol | 0.002 | 5 | 0.02 | 3 |
| Chlorophenols (total) (4) (10) | - | 10 | - | - |
| Chloronaphthylene | - | 10 | - | 6 |
| PolyChloroBiphenyls (total)(5) (10) | 0.02 | 1 | 0.01 | 0.01[d] |
| Pesticides | optimum | action | optimum | action |
| DDT/DDD/DDE (total) (6) | 0.0025 | 4 | [d] | 0.01 |
| Aldrin | 0.0025 | - | [d] | - |
| Dieldrin | 0.0005 | - | 0.02ng/l | - |
| Endrin | 0.001 | [d] | - | - |
| Drins (total) | - | 4 | - | 0.1 |
| alpha HCH | 0.0025 | - | [d] | - |
| beta HCH | 0.001 | - | [d] | - |
| gamma HCH | 0.05 µg/l | - | 0.2 ng/l | - |
| HCH combined (7) | - | 2 | - | 1 |
| Carbaryl | - | 5 | 0.01[d] | 0.1 |
| Carbofuran | - | 2 | 0.01[d] | 0.1 |
| Maneb | - | 35 | [d] | 0.1 |
| Atrazin | 0.05 µg/l | 6 | 0.0075 | 150 |
| Miscellaneous | optimum | action | optimum | action |
| Tetrahydrofuran | 0.1 | 0.4 | 0.5 | 1 |
| Pyridine | 0.1 | 1 | 0.5 | 3 |
| Tetrahydrothiophene | 0.1 | 90 | 0.5 | 30 |
| Cyclohexanone | 0.1 | 270 | 0.5 | 15000 |
| Styrene | 0.1 | 100 | 0.5 | 300 |
| Mineral Oil (9) | 50 | 5000 | 50 | 600 |
| Phthalates (total) | 0.1 | 60 | 0.5 | 5 |

Notes :-

Values are for a Standard Dutch Soil (10% organic matter and 25% dry content)
[d] = Detection Limit.

1. Acidity: pH (0.01M CaCl₂) The 90 percentile of the measured value is used to determine the pH value.

2. PAH (total of 10) is the total of Anthracene, Benzo(a)anthracene, Benzo(a)fluoranthrene, Benzo(g,h,i)perylene, Benzo(k)fluoranthrene, Chrysene, Fluoroanthrene, Indenol(1,2,3-c,d)pyrene, Naphtalene, Phenanthrene.
3. Chlorobenzenes are the total of all chlorobenzenes (mono-, di-, tri-, tetra-, penta- and hexachlorobenzene).
4. Chlorophenols are the total of all chlorophenols (mono-, di-, tri-, tetra-, pentachlorophenols).
5. The action value for PCB's (Polychlorinatedbiphenyls) is the total of PCB's 28,52,101, 118, 153, 180. The target value refers to the total excluding PCB 118.
6. DDT/DDD/DDE is the total of DDT, DDD, DDE.
7. Drins is the total of Aldrin + Dieldrin + Endrin.
8. HCH combined is the total of alpha, beta, gamma and delta HCH.
9. Mineral Oil is the sum of all alkanes (both straight and branch-chain) When contamination is due to mixtures (eg petrol or heating oil), then the content of aromatic and/or polycyclic aromatic hydrocarbons must also be determined.
10. The total values for PAH's, chlorophenols and chlorobenzenes in the soil/sediment apply to the total concentration of the compound belonging to the relevant category. If contamination is due to only one compound of a category, the value used is the intervention value of that compound. Where there are two or more compounds the value for the total of these compounds applies. For soil/sediment the effects are directly additive. In the case of groundwater effects are indirect and are expressed as a fraction of the individual values before being summed.

Source Document

This table is based on the publication Intervention values and target values - soil quality standards issued by:-

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