

DIN 19643-2:2012-11 (E)

Treatment of water of swimming pools and baths - Part 2: Combinations of process with fixed bed filters and precoat filters

| Contents | | Page |
|-----------------|--|-------------|
| Foreword | | 3 |
| 1 | Scope | 5 |
| 2 | Normative references | 5 |
| 3 | Principle of the respective process combinations | 6 |
| 3.1 | Flocculation - filtration - chlorination | 6 |
| 3.2 | Adsorption by powdered activated carbon - flocculation - filtration - chlorination | 6 |
| 3.3 | Flocculation - multi-layer filtration using adsorptive carbon - chlorination | 6 |
| 3.4 | Flocculation - filtration - adsorption by granular activated carbon - chlorination | 7 |
| 3.5 | Flocculation - filtration - ultraviolet radiation - chlorination | 7 |
| 3.6 | Adsorption by powdered activated carbon - filtration using precoat filter - chlorination | 7 |
| 4 | Process stages | 7 |
| 4.1 | Acid neutralizing capacity adjustment | 7 |
| 4.1.1 | General | 7 |
| 4.1.2 | Compounds used to adjust acid neutralizing capacity | 7 |
| 4.1.3 | Acid neutralizing capacity values | 8 |
| 4.1.4 | Checking the acid neutralizing capacity | 8 |
| 4.2 | pH value adjustment | 8 |
| 4.3 | Flocculation | 8 |
| 4.3.1 | General | 8 |
| 4.3.2 | Flocculants | 8 |
| 4.3.3 | Minimum quantity of flocculant to be added | 9 |
| 4.3.4 | Checking the flocculation | 9 |
| 4.4 | Filtration | 9 |
| 4.4.1 | General | 9 |
| 4.5 | Eliminating disinfection by-products | 14 |
| 4.5.1 | General | 14 |
| 4.5.2 | Adsorption by multi-layer filtration | 14 |
| 4.5.3 | Adsorption by powdered activated carbon | 14 |
| 4.5.4 | Adsorption by granular activated carbon | 15 |
| 4.5.5 | Ultraviolet radiation | 17 |
| 4.6 | Testing the flocculation filtration and sorption filtration systems | 18 |
| 4.7 | Chlorination | 20 |
| 5 | Load capacity factor, k | 20 |