

DIN EN 900:2014-09 (E)

Chemicals used for treatment of water intended for human consumption - Calcium hypochlorite

| Contents | | Page |
|--------------------|---|-------------|
| Foreword | | 4 |
| Introduction | | 5 |
| 1 | Scope | 6 |
| 2 | Normative references | 6 |
| 3 | Description | 6 |
| 3.1 | Identification | 6 |
| 3.1.1 | Chemical name | 6 |
| 3.1.2 | Synonym or common name | 6 |
| 3.1.3 | Relative molecular mass | 6 |
| 3.1.4 | Empirical formula | 6 |
| 3.1.5 | Chemical formula | 7 |
| 3.1.6 | CAS Registry Number) | 7 |
| 3.1.7 | EINECS reference) | 7 |
| 3.2 | Commercial form | 7 |
| 3.3 | Physical properties | 7 |
| 3.3.1 | Appearance | 7 |
| 3.3.2 | Density | 7 |
| 3.3.3 | Solubility in water | 7 |
| 3.3.4 | Vapour pressure | 7 |
| 3.3.5 | Boiling point at 100 kPa) | 7 |
| 3.3.6 | Melting point | 7 |
| 3.3.7 | Specific heat | 7 |
| 3.3.8 | Viscosity, dynamic | 8 |
| 3.3.9 | Critical temperature | 8 |
| 3.3.10 | Critical pressure | 8 |
| 3.3.11 | Physical hardness | 8 |
| 3.4 | Chemical properties | 8 |
| 4 | Purity criteria | 8 |
| 4.1 | General | 8 |
| 4.2 | Composition of commercial product | 8 |
| 4.3 | Impurities and main by-products | 9 |
| 4.4 | Chemical parameters | 9 |
| 5 | Test methods | 9 |
| 5.1 | Sampling | 9 |
| 5.2 | Analysis | 10 |
| 5.2.1 | Determination of calcium hypochlorite content (main product) | 10 |
| 5.2.2 | Dissolution quality (available chlorine after 1 min) | 12 |
| 5.2.3 | Impurities | 13 |
| 5.2.4 | Chemical parameters | 14 |
| 6 | Labelling - Transportation - Storage | 16 |
| 6.1 | Means of delivery | 16 |
| 6.2 | Labelling according to the EU legislation) | 17 |
| 6.3 | Transportation regulations and labelling | 17 |
| 6.4 | Marking | 18 |

| | | |
|---|--|-----------|
| 6.5 | Storage | 18 |
| 6.5.1 | General | 18 |
| 6.5.2 | Long term stability | 18 |
| 6.5.3 | Storage incompatibilities | 19 |
| Annex A (informative) General information on calcium hypochlorite | | 20 |
| A.1 | Origin | 20 |
| A.1.1 | Raw materials | 20 |
| A.1.2 | Manufacturing process | 20 |
| A.2 | Use | 20 |
| A.2.1 | Function | 20 |
| A.2.2 | Form in which it is used | 20 |
| A.2.3 | Treatment dose | 20 |
| A.2.4 | Means of application | 20 |
| A.2.5 | Secondary effects | 20 |
| A.2.6 | Removal of excess product | 21 |
| Annex B (normative) General rules relating to safety | | 22 |
| B.1 | Rules for safe handling and use | 22 |
| B.2 | Emergency procedures | 22 |
| B.2.1 | First aid | 22 |
| B.2.2 | Spillage | 22 |
| B.2.3 | Fire | 22 |
| Annex C (normative) Determination of arsenic, antimony and selenium (atomic absorption spectrometry hydride technique) | | 23 |
| C.1 | General principle | 23 |
| C.2 | Interferences | 23 |
| C.3 | Reagents | 23 |
| C.4 | Apparatus | 25 |
| C.4.1 | General | 25 |
| C.5 | Procedure | 27 |
| C.5.1 | Preparation of the apparatus | 27 |
| C.5.2 | Preparation of calibration solutions | 27 |
| C.5.3 | Preparation of test solutions and standard solutions | 27 |
| C.5.4 | Determination of arsenic with sodium borohydride | 27 |
| C.5.5 | Determination of selenium with sodium borohydride | 28 |
| C.5.6 | Determination of antimony with sodium borohydride | 28 |
| C.6 | Calculation | 28 |
| C.7 | Repeatability limit | 28 |
| Annex D (informative) Environmental, health and safety precautions within chemical laboratory | | 29 |
| Bibliography | | 30 |