Duozon 100 L

liquid oxidation product

1. General information

Oxidation is the accumulation of oxygen, electron transaction and combustion. DUOZON 100 L works by oxygen separation and thus by pure oxidation.

2. Characteristics

DUOZON 100 L is a liquid chlorine oxygen compound, inorganic, to be mixed easily with water, residue-free, and it is storable. DUOZON 100 L is suited for application in a sour, neutral and alkaline milieu (pH from 5 to 9) and for special tasks.

a) Killing of microorganisms
Duozon 100 L kills bacteria, yeast, fungi, spores, and algae by oxidation. Virus will be inactivated.

b) Odor removal
By oxidation of odor-forming compounds, e.g. aminos and hydrogen sulfides, etc.

c) Taste improvement
By oxidation of aminos (chloramines) and phenols.

d) Reduction of organic compounds
By oxidation of organic substances, as e.g. halogenated hydrocarbons.

e) CSB/TOC/BSB – reduction
By oxidation of water-loading material and by enriching of oxygen.

f) Elimination or fecal substances
By oxidation of nitrogenous compounds (ammonia, urea, etc.).

g) Fat splitting
By oxidation into short-chainet carboxylic acids.

h) Decontamination
By oxidation of e.g.cyanides into cyanates. Nitrite will be oxidized into nitrate.

i) Desulfurization
By oxidation of sulfuric compounds (sulfides, sulfites) into sulfates.

j) Elimination of iron, manganese and other metals
By oxidation metal cations will be converted into the maximum valence, whereas the metal cations will be precipitated-depending on the pH-value- as insoluble oxides or hydroxides resp. they can be filtered.

k) Reduction of potassium permanganate consumption
By oxidation of water loading materials. Increase of redox-potential.

l) Increase of redox-potential
By introduction of a high oxidation potential.

3. Oxidative and biocidal effect

During the several reactions of DUOZON 100 L the oxygen agglomerates to the reaction partner. Anions like sulfites are, converted directly into the maximum valence. Organic compounds can be converted – depending on their structureither into oxygen derivatives or into carboxylic acids, which further hydrolizes into carbon dioxide and water, depending on pH-value.

please, turn!

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The biocidal effect results from the displacement of the redox potential of the water, treated with DUOZON 100 L and from the oxidative interruption of the protein-structure-synthesis. The algicidale effect results from the oxidation of the chlorophyll. DUOZON 100 L is effective against pathogenic and non-pathogenic bacteria, yeasts, spore-formers, algae, and virus.

4. Physical and chemical properties

Apperance:	liquid green-yellow solution with typical own odor
Freezing point:	-25°C
"Hazen"colour-value (APHA):	37
Density at 20°C:	1.2 g/ml
Solubility in water at 20°C:	unlimited
pH-value (at 10 g/l, 25°C):	10.8
Conductivity (undiluted):	app. 295,000 µS/cm
Normal potential E0/25°C:	+ 1460 mV

5. Application

Data of optimal application vary greatly rgarding the various areas of application. Practical results have shown that the dosage can wawer from

- **1 - 10 ml / m³** in drinking water
- **3 - 25 ml / m³** in swimming-pool-water
- **1 - 50 ml / m³** in cooling water
- **1 - 20 l per filter** for desinfection

depending on conditions of operation and water pollution.

6. Concentration control

Lab-independent, for continous control:
Colour comparison determination with DPD - reagents.

Attention: Due to the enormous oxidation potential the measurement has to be made bei using the chlorine DPD-reagent D (Glycine).

7. Special application hints

DUOZON 100 L allows direct dosage from the supplier by a dosing pump but also manual. A pre-dilution is not necessary. If diluted solutions will be applicated it is to be stated, that they are stable for only maximal 48 hours. When prediluted there will be moreover a reduction in active component (oxygen-splitting-off).

8. Handling and storage:

DUOZON 100 L should be stored in closed containers and be protected againts warmth. Duozon 100 L itself is not combustible, having been leaked and dried it may flash combustible materials. Duozon 100 L is storable appr. 1/2 year at a range of temperature of 0° to +35°C. After this time there will be a reduction in active components.

9. Packing units:

25/60-kgs-one-way-staple-container, 220-kgs-plastic-barrel, 1000-kgs-Container;