

# TECHNICAL BULLETIN



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## HYDROGEN PEROXIDE 50% Technical solution

### PROPERTIES

HYDROGEN PEROXIDE is a clear, odourless, water-like liquid. It is non-flammable and miscible in all proportions with water. HYDROGEN PEROXIDE is stable for long periods and is an extremely powerful bactericide.

### TYPICAL PROPERTIES OF HYDROGEN PEROXIDE SOLUTIONS

#### Technical Data

Appearance	clear, colourless liquid		
Peroxide content (w/w)	27.5%	35%	50%
Peroxide content (w/v at 20°C)	30.3	39.6	59.8
Oxygen liberated (v/v)	100	130	197
Density (kg/l at 25°C)	1.10	1.13	1.20
Freezing Point (°C)	-23	-33	-52
Boiling Point (°C)	106	107	114

### TRANSFER

Where possible hydrogen peroxide solutions should be dosed directly from the supply container. Alternatively, scrupulously clean plastic, glass or stainless steel pourers may be used. The equipment must be used for this purpose only and should be clearly marked to this effect. Any equipment used for storage, transfer or dosing of hydrogen peroxide solutions must be constructed so as to provide adequate venting and preclude the possibility of "locked-in" sections of pipework or valves. Detailed guidelines are available from Solvay Interox.

### MIXING

It is essential that undiluted hydrogen peroxide solutions are not mixed with incompatible materials or violent decomposition and or an explosion may occur.

### DISPOSAL

Residues of hydrogen peroxide solutions must never be returned to the storage container. Any residues or spillages should be disposed of to waste with adequate dilution. Hydrogen peroxide carboys and drums should be thoroughly washed out with water, have the labels removed and be punctured prior to disposal to waste.

### APPLICATIONS

#### LAUNDRY APPLICATION

## ADVANTAGES

1. Reduction in processing time - no separate bleach cycle required.
2. The most cost effective bleach available.
3. Safe and effective for all fabric types.
4. Reduces sorting time as coloureds can be processed with whites.
5. Minimal effect on tensile strength of fabrics.
6. Reduction in rewash.
7. Non-polluting - simplifies waste water control

HYDROGEN PEROXIDE applied in laundries oxidizes medicinal stains on clothing more effectively than chlorine bleaches and removes many hard-to-remove stains, e.g. Hibitane, which are otherwise set by Chlorine bleaches. HYDROGEN PEROXIDE bleaching has proved to be less than half the cost of organic chlorine bleaches.

**Batch Process** - Best results are achieved by adding HYDROGEN PEROXIDE to the main detergent wash. The temperature of the wash solution should be as hot as possible to eliminate a separate bleach stage - minimum temperature 80°C.

**Continuous Process** - HYDROGEN PEROXIDE should be metered into the machine prior to the some of highest temperature and alkalinity for optimum results.

**Usage Rate:** For normally soiled work, it is suggested that a dose rate of 35 mL per 45kg dry weight of linen (80 mls per 100kg) be used.

**Stock Solution Addition:** Most operators find the preferred method of addition is to prepare a stock solution of HYDROGEN PEROXIDE by diluting the 50% concentrate with water. e.g. 1.5 litres H<sub>2</sub>O<sub>2</sub> 50% to 50 litres water.

Dosage: 2 litres solution per 45kg dry load linen. Stronger solutions can be prepared to suit individual plants.

## REPRESENTATIVE WASH CYCLE

45kg dry weight. Sheets, pillow cases, towels, table-cloths, abattoir overalls.

Operation	Level	Temp.	Time	Additives	Qty
Flush	High	Cold	4 mins		
Dump			1 mins		
Breakwash		Low	Hot	7 mins *Hydrogen Peroxide	35ml
Dump			1 mins		
Hot wash	High	Hot	7 mins	*Hydrogen Peroxide	35ml
Dump			1 mins		
Rinse	High	Hot	3 mins		
Dump			1 mins		
Rinse	High	Cold	3 mins		
Dump			1 mins		
Rinse	High	Warm	3 mins		
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		Total	32 mins		
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\*Addition of HYDROGEN PEROXIDE to the breakwash is optional and depends on the degree of staining of soil to be removed.

HYDROGEN PEROXIDE bleaching is revolutionising traditional attitudes to laundering, and the Hospital, Institutional and Commercial laundries who have adopted Peroxide as their major bleach add testimony to its superior performance. A trial wash in your plant will determine its suitability for your operation.

#### **PACKAGING**

25 kg & 225 kg & 1000 Litre containers.

#### **IMPORTANT NOTICE TO CUSTOMER**

*Since the use of this product is beyond the control of either seller or manufacturer, their only obligation shall be to replace any quantity of product which is proven defective. They cannot assume any risk or liability in excess of the purchase price of the product itself, which does not include labour or any consequential damages resulting from the use of this product. Determining the suitability of this product for any intended use shall be solely the responsibility of the user. **ALWAYS TEST FIRST.***