

Material Safety Data Sheet

Date Printed: 17/AUG/2009
Date Updated: 03/AUG/2007
Version 1.6
Regulation (EC) No 1907/2006

1 - Product and Company Information

Product Name HYDROGEN PEROXIDE, 30-32 WT. % SOLUTION
IN WATER, SEMICONDUCTOR GRADE, 99.999%
METALS BASIS
Product Number 316989
Company Sigma-Aldrich Korea Ltd.,
698-84 Maeng-ri, Wonsam-myun,
449-871 Yongin-city, Kyunggi-do,
Technical Phone # +82-31-329-9000
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2 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Harmful if swallowed. Risk of serious damage to eyes.

3 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
HYDROGEN PEROXIDE, 30% SOLUTION	7722-84-1	231-765-0	008-003-00-9

Ingredient Name	Percent	CAS #	EC no	Annex I Index Number
HYDROGEN PEROXIDE	30	7722-84-1	231-765-0	008-003-00-9

Symbols: O-C

R-Phrases: 5-8-20/22-35

Heating may cause an explosion. Contact with combustible material
may cause fire. Harmful by inhalation and if swallowed. Causes
severe burns.

WATER	70	7732-18-5	231-791-2	None
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Formula
Synonyms

H2O2
Albone 35 * Albone 50 * Albone 70 * Albone 35CG
* Albone 50CG * Albone 70CG * Hydrogen peroxide,
solution, 30% * Interlox * Kastone * Perone 30 *
Perone 35 * Perone 50

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If breathing becomes difficult,
call a physician.

AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious
amounts of water.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.
Store at 2-8°C

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole

means of protection, use a full-face supplied air respirator.
Hand Protection: Compatible chemical-resistant gloves.
Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Physical State: Clear liquid Color: Colorless	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Flash Point	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	1.11 g/cm ³	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: .

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: MX0899000

ACUTE TOXICITY

LDLO

Oral

Woman

2.626 mg/kg

Remarks: Gastrointestinal:Nausea or vomiting. Lungs, Thorax, or
Respiration:Cyanosis. Behavioral:Coma.

LDLO

Oral
Man
1429 mg/kg
Remarks: Behavioral:Coma. Gastrointestinal:Changes in structure or function of esophagus. Gastrointestinal:Nausea or vomiting.

LD50
Skin
Rat
3000 mg/kg

LD50
Intravenous
Mouse
>50 GM/KG

LD50
Oral
Rabbit
820 mg/kg
Remarks: Gastrointestinal:Peritonitis. Blood:Pigmented or nucleated red blood cells. Blood:Changes in leukocyte (WBC) count.

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: Causes severe eye irritation.
Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
Ingestion: Harmful if swallowed.

TARGET ORGAN INFORMATION

Eyes. Respiratory system. Skin.

CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Mouse
Route of Application: Oral
Exposure Time: 2Y
Result: Tumorigenic:Carcinogenic by RTECS criteria.
Gastrointestinal:Tumors.

Mouse
Route of Application: Oral
Exposure Time: 2Y
Result: Gastrointestinal:Tumors. Tumorigenic:Carcinogenic by RTECS criteria.

IARC CARCINOGEN LIST

Rating: Group 3

CHRONIC EXPOSURE - MUTAGEN

Human
9 UMOL/L
Cell Type: lymphocyte
DNA damage

Human
50 UMOL/L
Cell Type: Embryo
Other mutation test systems

Human
20 UMOL/L
Cell Type: Embryo
Cytogenetic analysis

Rat
50 UMOL/L
Cell Type: lymphocyte
DNA damage

Hamster
250 UMOL/L
Cell Type: ovary
DNA inhibition

Hamster
60 UMOL/L
Cell Type: ovary
Cytogenetic analysis

Hamster
40 UMOL/L
Cell Type: ovary
Sister chromatid exchange

Hamster
1 MMOL/L
Cell Type: lung
Mutation in mammalian somatic cells.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2014
Class: 5.1
PG: II
Subrisk: 8
Proper Shipping Name: Hydrogen peroxide, aqueous solution

IMDG

UN#: 2014
Class: 5.1
PG: II
Subrisk: 8
Proper Shipping Name: Hydrogen peroxide, aqueous
solution
Marine Pollutant: No
Severe Marine Pollutant: No

IATA

UN#: 2014
Class: 5.1
PG: II
Subrisk: 8
Proper Shipping Name: Hydrogen peroxide, aqueous
solution
Inhalation Packing Group I: No

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 008-003-00-9

INDICATION OF DANGER: Xn

Harmful.

R-PHRASES: 22-41

Harmful if swallowed. Risk of serious damage to eyes.

S-PHRASES: 26-39

In case of contact with eyes, rinse immediately with plenty of
water and seek medical advice. Wear eye/face protection.

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 1

Self-Classification

NORWAY

Declaration Number: 68197

16 - Other Information

WARRANTY

The above information is believed to be correct but does not
purport to be all inclusive and shall be used only as a guide. The
information in this document is based on the present state of our
knowledge and is applicable to the product with regard to
appropriate safety precautions. It does not represent any
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