Hydrogen Peroxide 50%

ARCCL

Material Safety Data Sheet	According to regulation : ISO 11014-1
	Version 2.0 Revision Date : 12.02.2023
	Date of compilation : 11.01.2021

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 Identification of the product

Product name:	HYDROGEN PEROXIDE 50%
Product Number:	H1001
Molecular formula:	H2O2
Chemical family:	Peroxides
CAS-No:	7722-84-1
Product use:	Bleaching agent, Oxidizing agent, Cosmetics, Water treatment

1.2 Name,address and telephone number

Al-Razi Chemical complex ltd

Corpotate office: 1206/A, Nasirabad I/A,Bayzid Thana Road, Bayzid, Chittagong-4210, Bangladesh.

Tel: +88-031-2580851-5

Fax: +88-031-2580858

Factory: Thandachori, Fateyabad city corporation college Road, Jungle South Pahartali,Hathazari, Chattogram, Bangladesh.

1.3 Emergency telephone number

Emergency Phone : +8801704103235

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to regulation (EC) No 1272/2008

Acute toxicity (oral) (Category 4) H302

Skin Irritation (Category 2) - H315

Serious Eye Damage (Category 1), H318

Respiratory irritation (Category 3), H335

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Pictogram

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2.3 GHS Hazard Statements:

H302 : Harmful if swallowed
H315 : Causes skin irritation
H318 : Causes serious eye damage
H335 : May cause respiratory irritation.

2.4 Precautionary Statements - Prevention

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P264: Wash thoroughly after handling
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

2.5 Precautionary Statements – Response

P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352: IF ON SKIN: Wash with soap and water.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P330: Rinse mouth.
P321: Specific treatment reference to supplement first air instruction
P305+P351+P338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P362: Take off contaminated clothing.
P403+P233: Store in a well ventilated place. Keep container tightly closed.
P405: Store locked up.
P501: Dispose of contents/ container to an approved waste disposal plant.

2.6 Hazards not otherwise classified (HNOC)

No hazards not otherwise classified were identified.

2.7 Other Information

Keep container in a cool place out of direct sunlight. Store only in vented containers. Do not store on wooden pallets. Do not return unused material to its original container. Avoid contamination - Contamination could cause decomposition and generation of oxygen which may result in high pressure and possible container rupture. Empty drums should be triple rinsed with water before discarding.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures

Formula : H_2O_2

Molecular Weight : 34.01 g/mol

Component	Classification	Concentration
Hydrogen Peroxide		
CAS-NO : 7722-84-1 EC-NO : 231-765-0 Index-no: 008-003-00-9	Ox. Liq. 1; Acute Tox. 4;Skin Corr. 1A; Eye Dam.1; STOT SE 3; Aquatic Chronic 3; H271, H302,H332, H314, H318, H335,H412 Concentration limits:>= 70 %: Ox. Liq. 1, H271; 50 - < 70 %: Ox.Liq. 2, H272; >= 70 %: Skin Corr. 1A, H314; 50 -< 70 %: Skin Corr. 1B, H314; 35 - < 50 %: Skin Irrit. 2, H315; 8 - < 50 %: Eye Dam. 1, H318; 5 - < 8 %: Eye Irrit. 2, H319; >= 35 %: STOT SE 3, H335;	>= 45 - < 50 %

For the full text of the H-statements mentioned in this section, see Section 16

SECTION4: FIRST AID MEASURES

4.1 Description of first-aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. Seek immediate medical attention/advice.

Skin Contact

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

Inhalation

Move to fresh air. If the person is not breathing, contact emergency medical services, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice. Ingestion Rinse mouth. Do not induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Hydrogen Peroxide irritates the respiratory system and, if inhaled, may cause inflammation and pulmonary edema. The effects may not be immediate. Overexposure symptoms are coughing, giddiness, and sore throat. In case of accidental ingestion, necrosis may result from mucous membrane burns (mouth, esophagus, and stomach). Oxygen rapid release may cause stomach swelling and hemorrhaging, which may produce major, or even fatal, injury to organs if a large amount has been ingested. In case of skin contact, may cause burns, erythema, blisters, or even necrosis.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered. Because of the likelihood of corrosive effects on the gastrointestinal tract after ingestion, and the unlikelihood of systemic effects, attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided. There is a remote possibility, however, that a nasogastric or or gastric tube may be required for the reduction of severe distension due to gas formation.

SECTION5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Specific Hazards Arising from the Chemical

In closed unventilated containers, risk of rupture due to the increased pressure from decomposition. Contact with combustible material may cause a fire.

5.3 Protective equipment and precautions for firefighters

Use water spray to cool fire exposed surfaces and protect personnel. Move containers from the fire area if you can do it without risk. As in any fire, wear self-contained breathing apparatus and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Avoid contact with skin, eyes, and clothing. Wear personal protective equipment. Isolate and post-spill area. Keep people away from and upwind of spill/leak. Eliminate all sources of ignition and remove combustible materials. For personal protection see section 8.

6.2 Other

Combustible materials exposed to Hydrogen Peroxide should be immediately submerged in or rinsed with large amounts of water to ensure that all Hydrogen Peroxide is removed. Residual Hydrogen Peroxide that is allowed to dry (upon evaporation Hydrogen Peroxide can concentrate) on organic materials such as paper, fabrics, cotton, leather, wood or other combustibles can cause the material to ignite and result in fire.

6.3 Methods for Containment

Dike to collect large liquid spills. Stop leak and contain spill if this can be done safely. Small spillage: Dilute with large quantities of water.

6.4 Methods for cleaning up

Flush area with flooding quantities of water. Hydrogen Peroxide may be decomposed by adding sodium met bisulfite or sodium sulfite after diluting to about 5%.

SECTION7: HANDLING AND STORAGE

7.1Handling

- Use only in well-ventilated areas. Keep/Store away from clothing/ combustible materials.
- Wear personal protective equipment.
- Never return unused product to the original container.
- Contamination may cause decomposition and generation of oxygen gas which could result in high pressures and possible container rupture.
- Empty drums should be triple rinsed with water before discarding.
- Utensils used for handling product should only be made of glass, stainless steel, aluminum, or plastic.
- Pipes and equipment should be passivated before first use.

7.2 Storage

- Keep containers in cool areas out of direct sunlight and away from combustibles.
- Provide mechanical general and /or local exhaust ventilation to prevent the release Of vapor or mist into the work environment.
- Containers must be vented.
- Keep/store only in the original container.
- Storerooms or warehouses should be made of non-combustible materials

withimpermeable floors.

- In the case of release, spillage should flow to a safe area.
- Containers should be visually inspected regularly to detect any abnormalities (swollendrums, increases in temperature, etc.).

7.3 Incompatible products

Combustible materials. Copper alloys galvanized iron. Strong reducing agents. Heavy metals. Iron. Copper alloys. Contact with metals, metallic ions, alkalis, reducing agents, and organic matter (such as alcohols or terpenes) may produce self-accelerated thermal decomposition.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations ofvapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

8.2 Personal Protection:

Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves and boots.

Hygiene measures

Avoid breathing vapors, mist, or gas. Clean water should be available for washing in case of eye or skin contamination.

General information

Protective engineering solutions should be implemented and in use before personal protective equipment is considered.

8.3 Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

8.4 Exposure Limits:

TWA: 1 (ppm) from ACGIH (TLV) [United States] TWA: 1 (ppm) from OSHA (PEL) [United States] TWA: 1 STEL: 2 [Canada] TWA: 1.4 (mg/m3) from NIOSH TWA: 1.4 (mg/m3) from OSHA (PEL) [United States] TWA: 1 (ppm) [United Kingdom (UK)] TWA: 1.4 (mg/m3) [United Kingdom (UK)] Consult local authorities for acceptable exposure limits**.**

8.5 Individual protection measures, such as personal protective equipment

Eye/Face Protection

Use chemical splash-type mono goggles and a full-face shield made of polycarbonate, acetate,polycarbonate/acetate, PETG, or thermoplastic.use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and Body Protection

For the body, protection wears impervious clothing such as an approved splash protective suit made of SBR rubber, PVC (PVC Outer shell w/Polyester Substrate), Gore-Tex (Polyester trilaminate w/Gore-Tex), or a specialized HAZMAT Splash or Protective Suite (Level A, B, or C). For foot protection, wear approved boots made of NBR, PVC, Polyurethane, or neoprene.Over boots made of Latex or PVC, as well as firefighter boots or specialized HAZMAT boots, are also permitted. DO NOT wear any form of boot or overbook made of nylon or nylon blends. DO NOT USE cotton, wool, or leather as these materials react rapidly with higher concentrations Hydrogen Peroxide. Completely submerge hydrogen peroxide contaminated clothing or other materials in water before drying. Residual Hydrogen Peroxide, if allowed to dry on materials such as paper, fabrics, cotton, leather, wood, or other combustibles, can cause the material to ignite and result in a fire.

Hand Protection

For hand protection, wear approved gloves made of nitrile, PVC, or neoprene. DO NOT use cotton, wool, or leather for these materials react RAPIDLY with higher concentrations.Thoroughly rinse the outside of gloves with water before removal. Inspect regularly for leaks.

Respiratory Protection

If concentrations above 10 ppm are expected, use NIOSH/DHHS approved self-contained breathing apparatus (SCBA) or other approved air-supplied respirator (ASR) equipment (e.g., a full-face airline respirator (ALR)). DO NOT use any form of air-purifying respirator (APR) or filtering face piece (dust mask), especially those containing

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

(a) Appearance: Clear, colorless liquid
(b) Color: Colorless
(c)Odor: Slight irritation
(d) Odor threshold: Not applicable
(e) pH: <= 3.5 (35-60%)
(f) Melting point/freezing point: -55 °C
(g) Boiling Point/Range: 119 °C
(h) Flash point: Not flammable

(i) Evaporation Rate: > 1 (n-butyl acetate=1)
(j) Flammability (solid, gas): Not flammable
(k) Vapor pressure: 15 mm Hg @ 30 °C
(l) Density: 1.195 @ 20 °C
(m) Specific gravity: 1.195
(n) Water solubility: completely soluble
(o)Solubility in other solvents: No information available
(p) Auto ignition temperature: Not combustible
(q)**Decomposition temperature:** 100 °C (adiabatic)
(r)Viscosity: No information available
(s) Explosive properties: No information available
(t) Oxidizing properties: Strong oxidizer
(u) Molecular weight: 34.01
(v) Bulk density: Not applicable

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Reactive and oxidizing agent.

10.2 Chemical Stability

Stable under normal conditions. Decomposes on heating. Stable under recommended storageconditions.

10.3 Possibility of Hazardous Reactions

Contact with organic substances may cause fire or explosion. Contact with metals, metallic ions, alkalis, reducing agents, and organic matter (such as alcohols or terpenes) may produce self- accelerated thermal decomposition.

10.4 Hazardous polymerization

Hazardous polymerization does not occur.

10.5 Conditions to avoid

Excessive heat; Contamination; Exposure to UV-rays; pH variations.

10.6 Incompatible materials

Combustible materials. Copper alloys galvanized iron. Strong reducing agents. Heavy metals. Iron. Copper alloys. Contact with metals, metallic ions, alkalis, reducing agents, and organic matter (such as alcohols or terpenes) may produce self-accelerated thermal decomposition.

10.7 Hazardous Decomposition Products

Oxygen supports combustion. Liable to produce overpressure in container. In the event on fire: See section 5.

10.8 Special Remarks on Reactivity:

Light sensitive. Incompatible with reducing materials, ethers (dioxin, furfuran, tetrahydrofuran), oxidizing materials, Metals (e.g. potassium, sodium lithium, iron, copper, brass, bronze, chromium, zinc, lead, silver, nickel), metal oxides (e.g. cobalt oxide, iron oxide, lead oxide, lead hydroxide, manganese oxide), metal salts (e.g. calcium permanganate, salts of iron), manganese, asbestos, vanadium, platinum, tungsten, molybdenum, trimethylamine, palladium, sodium pyrophosphate, carboxylic acids, cyclopentadienyl, formic acid, rust, ketones, sodium carbonate, alcohols, sodium borate, aniline, mercuries chloride, rust, nitric acid, sodium pyrophosphate, hexavalent chromium compounds, tetrahydrofuran, sodium fluoride organic matter, potassium permanganate, urea, chlorosulfonic acid, manganese dioxide, hydrogen selenite, charcoal, coal, sodium borate, alkalis, cyclopentadienyl, glycerin, cyanides (potassium, cyanide, sodium cyanide), nitrogen compounds. Caused to decompose catalytically by metals (inorder of decreasing effectiveness): Osmium, Palladium, Platinum, Iridium, Gold, Silver,Manganese, Cobalt, Copper, and Lead. It may decompose violently or explosively in contact with iron, copper, chromium, and most other metals and their salts,and dust.

SECTION11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

LD 50 Oral-Acute toxicity estimate: < 2000 mg/kg (Calculation method)

LC 50 Inhalation -Acute toxicity estimate: No data available

Skin corrosion/irritation

Causes severe burns. Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Eye Damage/irritation

Risk of serious damage to eyes. Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure
No data available
Specific target organ toxicity - repeated exposure
No data available
Reproductive toxicity
No data available

SECTION 12: ECOLOGICAL INFORMATION

Products of Biodegradation:
Possibly hazardous short/long term degradation products are to be expected.
Toxicity of the Products and Biodegradation:
The products of biodegradation are less toxic than the product itself.
Biodegradability of product: > 90%
LC50: =10-100mg/L, based on Echa
EC50: =10-100mg/L,based on Echa
Bioaccumulation:
Material may have some potential to bioaccumulation but will likely degrade in most environments before accumulation can occur.
Mobility
Will likely be mobile in the environment due to its water solubility but will likely degrade overtime.
Other Adverse Effects
Decomposes into oxygen and water. No adverse effects.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal:
Waste must be disposed of in accordance with federal, state, and local environmental control regulations.
Contaminated Packaging:
Dispose of in accordance with local regulations. Drums - Empty as thoroughly as possible. Triple rinse drums before disposal. Avoid contamination; impurities accelerate decomposition. Never return the product to the original container.

SECTION 14: TRANSPORT INFORMATION

14.1 US Department of Transportation (DOT)
UN Number : 2014
Proper shipping name : Hydrogen peroxide, aqueous solutions
Class : 5.1

Subsidiary hazard class : (8)
Packaging group : II
Marine pollutant : no

14.2 International Maritime Dangerous Goods Code (IMDG)

UN Number : 2014
Proper shipping name : Hydrogen peroxide, aqueous solution
Class : 5.1
Subsidiary hazard class : (8)
Packaging group : II
Marine pollutant : no

14.3 ICAO/IATA:

(>40%) is forbidden on Passenger and Cargo Aircraft. Air regulation permits shipment of (<=40%) in non-vented containers for Air Cargo Only aircraft, as well as for Passenger and Cargo aircraft. HOWEVER, all containers are vented and therefore, air shipments of are not permitted. IATA air regulations state that venting of packages containing oxidizing substances is not permitted for air transport.

14.4 Other Information:

Protect from physical damage. Keep drums in an upright position. Drums should not be stacked in transit. Do not store drums on wooden pallets.

14.5 Protective Equipment:

Gloves, Full suit, Vapor respirator. Be sure to use an approved/certified respirator or equivalent.Wear appropriate respirator when ventilation is an inadequate Face shield.

SECTION 15: REGULATORY INFORMATION

15.1 **Safety, health and environmental regulations/legislation specific for the substance or mixture:** This safety datasheet complies with the requirements of regulation ISO 14014-1

15.2 **National/Regional Inventories**

Australia (AICS)	: Listed
Canada (DSL)	: Listed
Europe (EINECS)	: Not Determined
Europe (REACh)	: Not Determined
Japan (ENCS/METI)	: Not Determined

Korea (KECI) : Listed

Malaysia (EHS Regi) : Not Determined

New Zealand (NZIoC) : Listed

Philippines (PICCS) : Listed

Switzerland (Giftliste 1): Not Determined

Switzerland (Inventory of Notified Substances) : Not Determined

Taiwan (NCSR) : Not Determined

USA (TSCA) : Listed

SECTION 16 : OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.
H271 May cause fire or explosion; strong oxidizer.
H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Disclaimer:
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