

Hydrogen Peroxide 35%

SDS Revision Date (mm/dd/yyyy): 09/14/2023

Page 1 of 11

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label

: Hydrogen Peroxide 35%

Other means of identification: Not available.

Recommended use of the chemical and restrictions on use

: Reagent; Chemical intermediate. Use pattern: Professional Use Only Restriction on use: None known

Chemical family : Inorganic peroxide solution.

Name, address, and telephone number

Comet Chemical Company Ltd.

of the supplier:

Name, address, and telephone number of

the manufacturer:

Refer to supplier

3463 Thomas Street Innisfill, ON, Canada

L9S 3W4

Supplier's Telephone # : 705-436-5580

24 Hr. Emergency Tel #: GFL Environmental - 1-888-772-2543

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear colourless liquid. Irritating odour.

Most important hazards: May intensify fire; oxidizer., Corrosive to metals, Causes serious eye damage.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification
Oxidizing liquid -Category 2
Corrosive to Metals - Category 1
Skin Irritation - Category 2
Eye Damage - Category 1

Specific target organ toxicity, single exposure - Category 3 (respiratory)

Label elements

Hazard pictogram(s)



Signal Word

DANGER!

Hazard statement(s)

May be corrosive to metals. May intensify fire; oxidizer. Causes skin irritation. Causes serious eye damage. May cause respiratory irritation.



Hydrogen Peroxide 35%

SDS Revision Date (mm/dd/yyyy): 09/14/2023

Page 2 of 11

SAFETY DATA SHEET

Precautionary statement(s)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking.

Keep away from clothing and other combustible materials.

Avoid breathing mist or vapor.

Keep only in original packaging.

Wash thoroughly after handling.

Wear protective gloves and eye/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a poison center/doctor.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN: Wash with plenty of water.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Absorb spillage to prevent material damage.

In case of fire: Use water spray or fog to extinguish.

Store in corrosive resistant container with a resistant inner liner.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

Other hazards which do not result in classification: Ingestion can cause irritation and corrosive action in the mouth, stomach and digestive tract.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Solution

Chemical name	Common name and synonyms	CAS#	Concentration (% by weight)
Hydrogen peroxide	Dihydrogen dioxide	7722-84-1	35.0 - 36.0

The % concentrations for the above listed chemicals will vary from batch to batch. Concentrations listed represent the actual concentration range for each chemical.

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

Ingestion : Seek immediate medical attention/advice. Do not induce vomiting. Have victim rinse

mouth with water, then give one to two glasses of water to drink. Never give anything

by mouth to an unconscious person.

Inhalation: Immediately remove person to fresh air. If breathing has stopped, give artificial

respiration. If breathing is difficult, give oxygen by qualified medical personnel only.

Seek immediate medical attention/advice.

Skin contact: Remove/Take off immediately all contaminated clothing. Flush affected skin with gently

flowing lukewarm water for at least 30 minutes. Do not rub area of contact. Seek immediate medical attention/advice. Wash contaminated clothing before reuse. Leather and shoes that have been contaminated with the solution may need to be

destroyed.

Eye contact : Immediately flush eyes thoroughly with running water for at least 20 to 30 minutes.

Seek immediate medical attention/advice.



Comet Chemical Company Ltd. 3463 Thomas Street Innisfill, ON, Canada, L9S 3W4

Telephone: (705) 436 5580

Hydrogen Peroxide 35%

SDS Revision Date (mm/dd/yyyy): 09/14/2023

Page 3 of 11

SAFETY DATA SHEET

Most important symptoms and effects, both acute and delayed

: May cause severe eye irritation. Permanent eye damage including blindness could result. Symptoms may include redness, pain, tearing and conjunctivitis. May cause respiratory irritation. Symptoms include coughing, shortness of breath and wheezing. Ingestion can cause irritation and corrosive action in the mouth, stomach and digestive tract. Causes skin irritation. Symptoms may include redness, edema, drying defatting and cracking of the skin.

Indication of any immediate medical attention and special treatment needed

: Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

Fires should be flooded with large amounts of water. Avoiding using other types of extinguishing materials, such as foam or dry chemicals.

Unsuitable extinguishing media

: Avoid using Carbon dioxide or other similar extinguishing agents as they are not effective in fires involving oxidizers.

Special hazards arising from the substance or mixture / Conditions of flammability

: May intensify fire; oxidizer. Substance releases oxygen when heated, which may increase the severity of an existing fire.

Flammability classification (OSHA 29 CFR 1910.106)

: Not flammable.

Hazardous combustion products

: Oxygen.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Do not enter without wearing specialized protective equipment suitable for the situation. Firefighter's normal protective clothing (Bunker Gear) will not provide adequate protection. A full-body encapsulating chemical protective suit with positive pressure self-contained breathing apparatus (NIOSH approved or equivalent) may be necessary.

Special fire-fighting procedures

Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

Environmental precautions :

Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.

Methods and material for containment and cleaning up

Ventilate area of release. Remove all sources of ignition. Stop leak if you can do so without risk. Dike for water control. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Contact the proper local authorities.

Special spill response procedures

In Canada: For 24-hour emergency assistance, call: 1-613-996-6666 (CANUTEC). US CERCLA Reportable quantity (RQ): See section 15.



Hydrogen Peroxide 35%

SDS Revision Date (mm/dd/yyyy): 09/14/2023

Page 4 of 11

SAFETY DATA SHEET

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

: Use in a well-ventilated area. Wear chemically resistant protective equipment during handling. Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Keep away from combustible material. Ground all equipment during handling. 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 Perroxide 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 a fire. Never return contaminated material to its original container. Label containers appropriately. Wash thoroughly after handling. Keep containers closed when not in use.

Conditions for safe storage :

Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area. Store in corrosion-resistant containers. Store in vented containers. Do not store on wooden pallets. Protect from sunlight. Unsuitable materials for containers: Steel; Iron; Nickel; Copper.

Incompatible materials

Combustible materials.: Nitric acid: Organic materials: Metals: Reducing agents: Potassium Pentaborate Tetrahydrate.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:					
Chemical Name	ACGIH TLV		OSHA PEL		
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>	
Hydrogen peroxide	1 ppm	N/Av	1 ppm ; 1.4 mg/m³	N/Av	

Exposure controls

Ventilation and engineering measures

: Provide exhaust ventilation or other engineering controls to keep the airborne concentration of vapours below their respective threshold limit value. Use explosion-proof equipment.

: Respiratory protection is required if the concentrations exceed the TLV. Wear a Respiratory protection

positive-pressure supplied-air respirator. Advice should be sought from respiratory protection specialists. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR

1910.134) or CSA Z94.4-02.

Impervious gloves must be worn when using this product. Wear impervious gloves, Skin protection

such as butyl rubber. The suitability for a specific workplace should be discussed with

the producers of the protective gloves.

Eye / face protection

: Chemical splash goggles are recommended. A full face shield may also be necessary.

Other protective equipment : Full protective flameproof clothing. Wear chemically protective gloves (impervious),

> boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. An eyewash station and safety shower should be made available in the immediate working area. Other equipment may be required depending on workplace standards.

General hygiene considerations



Hydrogen Peroxide 35%

SDS Revision Date (mm/dd/yyyy): 09/14/2023

Page 5 of 11

SAFETY DATA SHEET

: Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State : Liquid
Colour : colourless
Odour : Irritating odour.

Odour threshold : N/Av pH : 1.8

Melting Point/Freezing point : - 33°C (- 27°F) (35%)

Initial boiling point and boiling range

: 108°C (226°F) (35%)

Flash point : N/Ap Flashpoint (Method) : N/Ap Evaporation rate (BuAe = 1) : > 1

Flammability : Not applicable.

Lower explosion or flammability limit (% by vol.)

: N/Ap

Upper explosion or flammability limit (% by vol.)

: N/Ap

Oxidizing properties : Strong oxidizer which will promote combustion. Will accelerate combustion and

increase the risk of fire and explosion in combustible or flammable materials.

Explosive properties: May be reactive and decompose violently.

Vapour pressure : 24 mmHg Relative vapour density : (Air = 1) 1.2

Relative density / Specific gravity

: 1.13

Solubility in water : Soluble.

Other solubility(ies) : Soluble in all proportions in many polar solvents, e.g. low molecular weight alcohols,

glycols and ketones; soluble in diethyl ether and carboxylic esters (greater 65%);

insoluble in petroleum ether.

Partition coefficient: n-octanol/water or Coefficient of water/oil distribution

: N/Av

Auto-ignition temperature : N/Av

Decomposition temperature : 150-152°C

Viscosity : 1.11 mPa.s (35%)

Particle characteristics : Not applicable.

Volatiles (% by weight) : N/Av
Volatile organic Compounds (VOC's)

: N/Av

Absolute pressure of container

: N/Ap

Flame projection length : N/Ap Other physical/chemical comments

: None known or reported by the manufacturer.

SECTION 10. STABILITY AND REACTIVITY

Reactivity: Not normally reactive. May be corrosive to metals.



Hydrogen Peroxide 35%

SDS Revision Date (mm/dd/yyyy): 09/14/2023

Page 6 of 11

SAFETY DATA SHEET

Chemical stability : Dangerously reactive material. Stability depends upon many factors including

temperature, pH, and the presence of impurities. Solutions that are completely free of contamination are relatively stable. May decompose violently if impurities are present.

Possibility of hazardous reactions

: No dangerous reaction known under conditions of normal use.

Conditions to avoid: Avoid heat and open flame. Ensure adequate ventilation, especially in confined areas.

Avoid contact with incompatible materials. Do not keep container sealed. Keep out of

direct sunlight. Keep away from combustible material.

Incompatible materials: Incompatible materials (see Section 7).

Hazardous decomposition products

: None known, refer to hazardous combustion products in Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES
Routes of entry skin & eye : YES
Routes of entry Ingestion : YES
Routes of exposure skin absorption

: NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract. Symptoms may include coughing, choking and wheezing. Inhalation of extremely high concentrations could cause pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.

Sign and symptoms ingestion

May cause severe irritation and corrosive damage in the mouth, throat and stomach.
 Symptoms may include abdominal pain, nausea, vomiting, diarrhea and collapse.
 Causes skin irritation. Symptoms may include redness, edema, drying defatting and

Sign and symptoms skin : Causes skin irritation cracking of the skin

cracking of the skin.

Sign and symptoms eyes : Causes serious eye damage. Permanent eye damage including blindness could result.

Symptoms may include severe pain, tearing, redness, swelling and blurred vision.

Potential Chronic Health Effects

: None known or reported by the manufacturer.

Mutagenicity: Not expected to be mutagenic in humans.Carcinogenicity: Not expected to have carcinogenic effects.

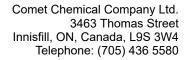
Contains: Hydrogen peroxide ACGIH: A3 - Animal Carcinogen

OSHA: Not Present NTP: Not listed

Reproductive effects & Teratogenicity

: Not expected to have other reproductive effects.

Sensitization to material: Not expected to be a skin or respiratory sensitizer.





Hydrogen Peroxide 35%

SDS Revision Date (mm/dd/yyyy): 09/14/2023

Page 7 of 11

SAFETY DATA SHEET

Specific target organ effects: Eyes, skin, respiratory system and digestive system.

Specific target organ toxicity, single exposure - Category 3 (respiratory)

May cause respiratory irritation.

Not classified as specific target organ toxicity-repeated exposure.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Synergistic materials

Toxicological data : There is no available data for the product itself, only for the ingredients. See below for

individual ingredient acute toxicity data.

ATE oral = 3408.57 mg/kg

	LCso(4hr)	LDs	0	
Chemical name	inh, rat	(Oral, rat)	(Rabbit, dermal)	
Hydrogen peroxide	0.17 mg/L 4 h (no deaths)	1193 mg/kg	>2000 mg/kg	

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

: Not expected to be harmful to aquatic organisms. See the following tables for the substance's ecotoxicity data. Do not allow material to contaminate ground water system.

Ecotoxicity data:

<u>Ingredients</u>	040#	Toxicity to Fish				
	CAS#	LC50 / 96h	NOEC / 21 day	M Factor		
Hydrogen peroxide	7722-84-1	16.4mg/L (Fathead minnow)	N/Av	None.		

<u>Ingredients</u>	CAS#	Toxicity to Daphnia					
		EC50 / 48h	NOEC / 21 day	M Factor			
Hydrogen peroxide	7722-84-1	2.4mg/L Water flea	N/Av	None.			

<u>Ingredients</u>	CAS#	То	xicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor	
Hydrogen peroxide	7722-84-1	N/Av	0.63 mg/L (Green algae)	None.	

Persistence and degradability

Biodegradation is not applicable to inorganic materials.

Bioaccumulation potential : No data is available on the product itself.



Hydrogen Peroxide 35%

SDS Revision Date (mm/dd/yyyy): 09/14/2023

Page 8 of 11

SAFETY DATA SHEET

<u>Components</u>	Partition coefficient n-octanol/water (log Kow)	Bioconcentration factor (BCF)
Hydrogen peroxide (CAS 7722-84-1)	1.50	no bioaccumulation

Mobility in soil

: No data is available on the product itself.

Other Adverse Environmental effects

: No data is available on the product itself.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal

: Handle waste according to recommendations in Section 7. Empty containers retain residue (liquid and/or vapour) and can be dangerous. Do not cut, weld, drill or grind on or near this container.

Methods of Disposal

Dispose in accordance with all applicable federal, state, provincial and local

regulations.

RCRA

It is the responsibility of the waste generator to determine the proper waste identification and disposal method.

For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
TDG	UN2014	HYDROGEN PEROXIDE, AQUEOUS SOLUTION	5.1(8)	II	51
TDG Additional information		rted as LIMITED QUANTITY in containers no larger than the standard the TDGR, refer to Section 1.17 for additional exemptions.			
49CFR/DOT	UN2014	Hydrogen peroxide, aqueous solutions	5.1(8)	II	51 8
19CFR/DOT Additional information	Cannot be ship	ped as LIMITED QUANTITY.			V
ICAO/IATA	UN2014	Hydrogen peroxide, aqueous solution	5.1(8)	II	51
ICAO/IATA Additional information	Refer to ICAO/	ATA Packing Instruction .			
IMDG	UN2014	HYDROGEN PEROXIDE, AQUEOUS SOLUTION	5.1(8)	II	51 8
IMDG Additional information	Consult the IMI	DG regulations for exceptions.	!		▼ • V

Special precautions for user : Keep away from flames and hot surfaces. - No smoking.

Environmental hazards

: This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.



Hydrogen Peroxide 35%

SDS Revision Date (mm/dd/yyyy): 09/14/2023

Page 9 of 11

SAFETY DATA SHEET

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	TSCA		CERCLA Reportable	SARA TITLE III: Sec. 302, Extremely	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical		
	CAS#	CAS # Inventory	Quantity(RQ) (40 CFR 117.302):	Hazardous Substance, 40 CFR 355:	Toxic Chemical	de Minimis Concentration	
Hydrogen peroxide	7722-84-1	Yes	N/Ap	1000 lb TPQ (concentration >52%)	No	No	

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute) health hazard; Oxidizing liquid; Reactive hazard.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS#	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Hydrogen peroxide	7722-84-1	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes

Canadian Information:

All ingredients are present on the DSL.

International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	CAS#	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Hydrogen peroxide	7722-84-1	231-765-0	Present	Present	(1)-419	KE-20204	Present	HSR001326, HSR001449, HSR001450 (dilution)

SECTION 16. OTHER INFORMATION

Legend

: ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstract Services

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act

of 1980

CFR: Code of Federal Regulations CSA: Canadian Standards Association DOT: Department of Transportation

HMIS: Hazardous Materials Identification System

HSDB: Hazardous Substances Data Bank IARC: International Agency for Research on Cancer

Inh: Inhalation

LC: Lethal Concentration



Hydrogen Peroxide 35%

SDS Revision Date (mm/dd/yyyy): 09/14/2023

Page 10 of 11

SAFETY DATA SHEET

LD: Lethal Dose N/Ap: Not Applicable N/Av: Not Available

NFPA: National Fire Protection Association

NIOSH: National Institute of Occupational Safety and Health

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PEL: Permissible exposure limit

RCRA: Resource Conservation and Recovery Act

RTECS: Registry of Toxic Effects of Chemical Substances SARA: Superfund Amendments and Reauthorization Act

STEL: Short Term Exposure Limit

TDG: Canadian Transportation of Dangerous Goods Act & Regulations

TLV: Threshold Limit Values TWA: Time Weighted Average

WHMIS: Workplace Hazardous Materials Identification System

References : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents &

Biological Exposure Indices

2. ECHA - European Chemical Agency

3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases

4. Safety Data Sheets from manufacturer.

5. US EPA Title III List of Lists6. California Proposition 65 List

7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal

Preparation Date (mm/dd/yyyy)

: 05/18/2017

Reviewed Date SDS (dd/mm/yyyy)

: 14/09/2023

Revision No. : 2
Revision Information :

Other special considerations for handling

: Provide adequate information, instruction and training for operators.

Prepared for:

Comet Chemical Company Ltd. 3463 Thomas Street

Innisfill, ON L9S 3W4

Information (M-F 8:00-5:00): 705-436-5580

www.cometchemical.com



Prepared by:

ICC The Compliance Center Inc.

Telephone: (888) 442-9628 (U.S.): (888) 977-4834 (Canada)

http://www.thecompliancecenter.com



DISCLAIMER

This Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by / obtained from Comet Chemical Company Ltd. and CCOHS' Web Information Service. The information in the Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and Comet Chemical Company Ltd. expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of



Hydrogen Peroxide 35%

SDS Revision Date (mm/dd/yyyy): 09/14/2023

Page 11 of 11

SAFETY DATA SHEET

ICC The Compliance Center Inc. and Comet Chemical Company Ltd.

END OF DOCUMENT