

## 35% Peracetic acid Safety Data Sheet According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of compilation	:	March 3, 2017
File Name	:	0812Gj Ghs04 Div.3 sds 35% Peracetic acid
Revision Number	:	04
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Supersedes version	:	0812Gj Ghs02 Div.3 sds 35% Peracetic acid



According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

## SECTION 1: PRODUCT IDENTIFICATION





• It is used as an oxidizing agent for a variety of organic reactions.

### 1.3. Details of the supplier of the safety data sheet

#### Jubilant Ingrevia Limited

FACTORY & REGISTERED OFFICE: Jubilant Ingrevia Limited., Bhartiagram, Gajraula, District: Amroha, Uttar Pradesh-244223, India T +91-5924-267437& +91-5924-267438

HEAD OFFICE: Jubilant Ingrevia Limited Plot 1-A, Sector 16-A, Institutional Area, Noida, Uttar Pradesh, 201301 - India T +91-120-4361000 - F +91-120-4234881 / 84 / 85 / 87 / 95 / 96 <u>support@jubl.com</u> - <u>www.jubilantingrevia.com</u>

#### 1.4. Emergency telephone number

For Chemical Emergency ONLY (in the case of fire, leak, spill, exposure or accident) Call Chemtrec: 1-800-424-9300 (US), 1-703-527-3887 (Outside U.S.) Chemtrec (India) : 000-800-100-7141

For ALL other emergencies call Emergency Control Room Gajraula at 99970 22412

SECTION 2: HAZARD(S) IDENTIFICATION

#### 2.1. Classification of the substance or mixture

GHS-US classification		
Acute Tox. 4	H302	Harmful if swallowed.
Acute Tox. 4	H312	Harmful in contact with skin.
Acute Tox. 4	H332	Harmful if inhaled.
Aquatic Acute 2	H401	Toxic to aquatic life.
Flam. Liq. 3	H226	Flammable liquid and vapour.
Org. Perox. F	H242	Heating may cause a fire.
Skin Corr. 1A	H314	Causes severe skin burns and eye damage.

2.2. Label Elements

**GHS-US** labeling

Hazard Pictogram (GHS-US)



Signal Word: Danger!

## HAZARD AND PRECAUTIONARY STATEMENTS

HAZARD STATEMENTS: Jubilant Ingrevia Limited



According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

- H302: Harmful if swallowed.
- H312: Harmful in contact with skin.
- H332: Harmful if inhaled.
- H401: Toxic to aquatic life.
- H226: Flammable liquid and vapour.
- H242: Heating may cause a fire.
- H314: Causes severe skin burns and eye damage.

### **PRECAUTIONARY STATEMENTS:**

- P210: keep away from heat/spark/open flames/hot surfaces.-No smoking.
- P233: Keep container tightly closed.
- P234: Keep only in original container.
- P242: Use only non-sparkling tools.
- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264: Wash hands thoroughly after handling.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P270: Do not eat, drink or smoke when using this product.
- P273: Avoid release to the environment.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P311: Call a POISON CENTER or doctor/physician.
- P330: Rinse mouth.
- P405: Store locked up.
- P410: Protect from sunlight.
- P420: Store away from other materials
- P501: Dispose of contents/container to local/regional/national/international regulations.

### 2.3. Other hazards

No additional information available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Sr.No.	Chemical	CAS #	EC No.	Purity
1	Peracetic acid	79-21-0	201-186-8	30-40%
2	Hydrogen Peroxide	7722-84-1	231-765-0	10%
3	Acetic Acid	64-19-7	200-580-7	35%
4	Water	7732-18-5	-	39%

## SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures	
First-aid measures general	: Liquid and mist are corrosive and can cause burns, direct contact could cause irreversible damage to eyes including blindness and/or irreversible destruction of skin tissue. Vapor/mist will irritate the nose, throat and lungs, but will usually subside when exposure ceases. The severity of the effects depends in the concentration and dose.
First-aid measures after inhalation	: Allow breathing of fresh air. Allow the victim to rest. If you feel unwell, seek medical attention. In case of irregular breathing or respiratory arrest provide artificial respiration. Do not apply mouth-to-mouth resuscitation. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Immediately flush skin with plenty of water for at least 15 minutes. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.
4.2. Most important symptoms and effe	cts, both acute and delayed
Symptoms/injuries	: Not expected to present a significant hazard under anticipated conditions of normal use.



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Symptoms/injuries after inhalation Symptoms/injuries after skin contact Symptoms/injuries after eye contact Symptoms/injuries after ingestion

- : Inhalation may cause irritation, cough, and shortness of breath.
- : Causes skin burns.
- : Corneal lesions and irreversible damage if contact with the eyes.
- : May cause nausea, vomiting and diarrhea.

# **4.3.** Indication of any immediate medical attention and special treatment needed Treat symptomatically.

## SECTION 5: FIRE-FIGHTING MEASURES

## 5.1. Extinguishing media

Appropriate extinguishing media: Dry chemical powder, chemical foam, and alcohol resistant foam. Water may also be used. Water sprays can be effective in cooling down the fire-exposed containers and knocking down the vapors. Water jets may be used to flush spills away and dilute the same to non-flammable mixtures.

#### 5.2. Special Protective Equipment and Precautions for Fire Fighter

- This material is extremely hazardous to health, but fire fighters may enter areas with extreme care. Full protective clothing including a selfcontained breathing apparatus, coat, pants, gloves, boots and bands around legs, arms and waist should be provided. No skin surface should be exposed
- Evacuate the area and fight fires from a safe distance.
- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800
  meters (1/2 mile) in all directions or as per locally valid procedures.
- Fire fighters must wear Self Contained Breathing Apparatus (SCBA) and full protective clothing. The chemical is harmful in contact with skin.
- Report any run-off of fire waters contaminated with this chemical as per local and federal procedures applicable.

#### 5.3. Specific Hazards Arising from the Chemical

The product decomposes under fire conditions to release oxygen that intensifies the fire.

#### SECTION 6 : ACCIDENTAL RELEASE MEASURES

#### Minor Spills

- Clean up all spills immediately following relevant Standard Operating Procedures.
- Avoid breathing vapors and contact with skin and eyes.
- Shut off leak source if possible.
- Shut off all possible sources of ignition.
- Wear protective clothing, boots, impervious gloves and safety glasses.
- Wipe up.
- Decontaminate all equipment.

#### Major Spill

- Alert Emergency Responders and tell them location and nature of hazard.
- Shut off all possible sources of ignition and increase ventilation.
- Wear protective clothing, full boots, impervious gloves, safety glasses and Self-Contained Breathing Apparatus (SCBA), as may be deemed appropriate.
- Clear area of personnel and move upwind.
- Stop leaks if possible.
- Prevent, by any means available, spillage from entering drains or water and watercourses.
- Collect recoverable product into labeled containers for recycling, recovery or disposal.
- Contain spill with sand, earth or vermiculite.
- Spread area with lime or absorbent material, and leave for at least 1 hour before washing.
- Clean up all tools and equipment.
- Inform authorities in event of contamination of any public sewers, drains or water bodies.

### SECTION 7: HANDLING AND STORAGE

## 7.1. Precautions for safe handling

- Handle product only in closed system or provide appropriate exhaust ventilation.
- Use in a well-ventilated place/Use protective clothing commensurate with exposure levels.
- Wear protective gloves/clothing and eye/face protection.
- Use only non-sparking tools.
- IBC (Tote) IBC should be emptied as thoroughly as possible and recycled without rinsing.
- Avoid contamination; impurities accelerate decomposition.
- Never return product to original container.

## 7.2. Conditions for safe storage, including any incompatibilities

- Store in a cool, dry and well ventilated place.
- Higher temperatures will accelerate decomposition resulting in loss of assay.

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- Keep away from direct sunlight. Keep away from heat and sources of ignition i.e., steam pipes, radiant heaters, hot air vents or
- Do not store near reducing agents, fuels and sparks.
- Keep securely closed when not in use.
- Do not double-stack.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure Limits Values

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Acetic Acid 64-19-7	STEL 15 ppm TWA: 10 ppm	TWA: 10 ppm TWA: 25 mg/m3	IDLH: 50 ppm TWA: 10 ppm TWA: 25 mg/m3 STEL: 15 ppm STEL: 37 mg/m3	Mexico: TWA 10 ppm Mexico: TWA 25 mg/m3 Mexico: STEL 15 ppm Mexico: STEL 37 mg/m3
Peracetic Acid 79-21-0	STEL 0.4 ppm	-	-	-
Hydrogen Peroxide 7722-84-1	TWA: 1 ppm	TWA: 1 ppm TWA: 1.4 mg/m3	IDLH: 75 ppm TWA: 1 ppm TWA: 1.4 mg/m3	Mexico: TWA 1 ppm Mexico: TWA 1.5 mg/m3 Mexico: STEL 2 ppm Mexico: STEL 3 mg/m3

Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Acetic Acid	TWA: 10 ppm	TWA: 10 ppm	TWA: 10 ppm	TWA: 10 ppm
64-19-7	STEL: 15 ppm	TWA: 25 mg/m₃		TWA: 25 mg/m₃
		STEL: 15 ppm		STEL: 15 ppm
Hydrogen Peroxide	TWA: 1 ppm	TWA: 1 ppm	TWA: 1 ppm	TWA: 1 ppm
7722-84-1		TWA: 1.4 mg/m₃		TWA: 1.4 mg/m₃

#### 8.2. Exposure controls

 Appropriate Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. Local ventilation is usually preferred. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal Protection:

- Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.
- Hands: Rubber or neoprene gloves and additional protection including impervious boots, apron. or coveralls as needed in areas of unusual exposure to prevent skin contact.
- Eyes: Safety goggles/ Chemical Safety glasses and Face shield.
- **Clothing**: Boots and clothing to prevent contact.

 Respirator: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

For emergency situations, wear a positive pressure, pressure-demand, full face piece self- contained breathing apparatus (SCBA) or pressure- demand supplied air respirator with escape SCBA and a fully-encapsulating, chemical resistant suit. (EPA 1998).

#### General Hygiene and general comments:

- Wash hands and face after working with substance.
- Immediately change contaminated clothing.
- Apply skin protective barrier cream.
- Wash skin prior to eating and drinking.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties.

Sr.No.	Parameter	Typical value
1.	Appearance	Clear colourless liquid
2.	Molecular weight	76.05 g/mol
3.	Odor	Stinging,Pungent vinegar-like

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4.	Odor Threshold	Not available
5.	pН	1-2
6.	Melting point/Freezing point	-44 °C (-47.2 °F)
7.	Boiling Point	107.22°C (225°F)
8.	Flash point	46°C (114.8°F)
9.	Evaporation rate (n-BuAc=1)	< 1
10.	Flammability (Liquid)	Flammable liquid
11.	Upper/lower flammability or Explosive limits	Not available
12.	Specific gravity @20°C	1.13 g/mL @ 20 °C
13.	Vapor density (air=1)	
14.	Vapour pressure	2.7 kPa (@ 25°C)
15.	Solubility	Easily soluble in cold water, hot water. Partially soluble in methanol, n-octanol, acetone
16.	Auto-ignition temperature	218 °C
17.	Decomposition temperature	> 55 °C (SADT) (55-gal. drum)
18.	Viscosity	No information available
19.	Explosive property	No information available
20.	Oxidizing property	Strong oxidizer

## SECTION 10: STABILITY AND REACTIVITY

- **Reactivity:** Reactive and oxidizing agent. Organic peroxide.
- Stability: The product is stable under normal conditions. Contamination or heat can initiate decomposition.
- Conditions to avoid: Keep away from heat, sparks, open flame, high temperature and incompatible chemicals. Temperatures above 30°C. Higher temperatures will accelerate decomposition resulting in loss of assay.
- Incompatible materials: Oxidizing agents; Strong reducing agents; Combustible materials; Heavy metals such as iron, copper, chromium, nickel, aluminum and cobalt.
- Hazardous decomposition products: Thermal decomposition may produce toxic and corrosive fumes. It is liable to produce overpressure in container.
- Possibility of hazardous reactions: May produce explosive reactions with Acetic Anhydride. Contact with metals, metallic ions,
- alkalis, reducing agents and organic matter (such as alcohols or terpenes) may produce
- self-accelerated thermal decomposition.
- Hazardous Polymerization: Not reported.

## SECTION 11: TOXICOLOGICAL INFORMATION

## 11.1. Information on toxicological effects

Acute toxicity: It is harmful if swallowed, inhaled and in contact with skin. If small quantities are ingested, vomiting will normally occure. It causes skin burns and eye damage.

Organism	Test Type	Route	Reported Dose	Source
mouse	LD50	oral	210mg/kg	Gigiena i Sanitariya. For English translation, see HYSAAV. Vol. 48(6), Pg. 28, 1983.
Rat	LD50	Oral	271mg/kg bw	-
rabbit	LD50	skin	1410uL/kg (1.41mL/kg)	Union Carbide Data Sheet. Vol. 12/12/1968,
Se Sk Ge Ca	erious eye o kin corrosio erm cell Mu arcinogenic	damage/eye i n/irritation ıtagenicity ity	rritation : : :	Corneal lesions and irreversible damage if contact with the eyes. Corrosive to skin. No data available Did not show carcinogenic effects in animal experiments. Topical
М	utagenicity		:	applications do not produce skin tumors. Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH). No data available
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Reproductive toxicity	:	No data available
STOT - single exposure	:	May cause respiratory irritation.
STOT - repeated exposure	:	Repeated inhalation of the mist may cause inflammation of the upper respiratory tract, chronic bronchitis and etching of the dental enamel.
Aspiration hazard	:	No data available

## SECTION 12: ECOLOGICAL INFORMATION

## 12.1. Toxicity

Ecotoxicity:

 LC<sub>50</sub>; Species: Oncorhynchus mykiss (Rainbow trout); Concentration: 2.0 mg/L for 96 hr Ref.: Organization for Economic Cooperation and Development; SIDS Initial Assessment Profile (SIAP) for Peracetic acid (79-21-0), p.26 (SIAM 26, April 2008).

#### 12.2. Persistence and degradability

- Peracetic acid is completely miscible with water. Aqueous solutions of peracetic acid hydrolyze to acetic acid and hydrogen peroxide.
- Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself. Due to rapid degradation from sunlight, its presence in the environment is very short lived.

## 12.3. Bioaccumulative potential

Peracetic acid (79-21-0)			
Bio concentration factor	3.162		
Log Kow	-1.07		

Based on its low octanol-water partition coefficient and its rapid degradation in the environment, this product is not bio accumulative.

#### 12.4. Mobility in soil

Peracetic acid (79-21-0)				
Log Koc	0.631. Low absorption in soil			
Henry's Law constant	1.39X10 <sup>-6</sup> atm-m <sup>3</sup> /mole			
Log Kow	-1.07. Low potential to bio accumulate.			

Peracetic acid released in the environment will partition almost exclusively (>99%) to the water compartment. Only a minor part (<1%) will remain in the atmosphere, where it is expected to undergo rapid decomposition with a half-life of 22 minutes. The fate of peracetic acid in the environment is mainly determined by its degradation.

### 12.5. Other adverse effects

### Environment Fate:

Based on the environmental modeling, this material has a low potential to get absorbed in the organic matter of soil and is expected to be volatile from aqueous bodies. Since this is an estimated result it is recommended that the material should not be disposed into the environment. The material should never be disposed into the sewage.

## SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

- Burn in a chemical incinerator equipped with an afterburner and scrubber.
- This product must undergo special treatment. Dispose of this material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable federal, state or local laws. Note that disposal regulations may also apply to empty containers and equipment rinsates.
- Non-returnable containers that held this material should be cleaned by triple-rinsing prior to recycle or disposal. Empty containers should be taken to an approved waste handling site for recycling or disposal.



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## SECTION 14: TRANSPORT INFORMATION

DOT			
L F S F	JN/ID no Proper Shipping Name Hazard class Subsidiary class Packing Group	UN 3109 ORGANIC PEROXIDE TYPE F, LIQUID 5.2 8 and 3 II	
TDG			5.2
ີ່ເ	JN/ID no	UN 3109	
F	Proper Shipping Name	ORGANIC PEROXIDE TYPE F, LIQUID	
F	lazard class	5.2	
S	Subsidiary class	8 and 3	
F	Packing Group	II	
ICAO/IA	ATA	FORBIDDEN FOR IATA TRANSPORT	
IMDG/II	MO		
<u></u>	JN/ID no	UN 3109	
F	Proper Shipping Name	ORGANIC PEROXIDE TYPE F, LIQUID	
H	lazard class	5.2	
S	Subsidiary Hazard Class	8 and 3	
F	Packing Group	II	
0	Dangerous for the environment	: No	
Ν	Marine pollutant	: No	

#### SECTION 15: REGULATORY INFORMATION

### **European Union Information**

### Classification as per CLP Regulation 1272/2008:

- Hazards Class and Category: Acute Tox. 4, Aquatic Acute 2, Flam. Liq. 3, Org. Perox. F, Skin Corr. 1A.
- Hazard Statements: H302; H312; H332; H401; H226; H242; H314

## US information

- Clean Air Act (CAA) Accidental Release Prevention
   Peracetic acid is listed as a Regulated Toxic Substance at 40 CFR 68.130
- Clean Water Act

This product contains acetic acid which is regulated pollutant pursuant to the Clean Water Act (40 CFR 122.21.

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	CAS no.	% weight	SARA 313 – Threshold values %
Peracetic Acid	79-21-0	15 - 17	1.0

### SARA 311/312 Hazard Categories

Acute nealth hazard	
Fire hazard	: Yes
Sudden release of pressure hazard Reactive Hazard	: No : Yes

#### California Prop 65

California No Significant Risk Level: This product is not listed.



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### Inventories

Chemical Inventory Lists:	79-21-0	7722-84-1	64-19-7
TSCA:	Listed	Listed	Listed
EINECS:	201-186-8	231-765-0	200-580-7
Canada(DSL/NDSL):	Listed (DSL)	Listed (DSL)	Listed (DSL)
Japan (ENCS)	Listed	Listed	Listed
Korea (KECL)	Listed	Listed	Listed
Australia (AICS)	Listed	Listed	Listed
Taiwan (TCSI)	Listed	Listed	Listed
New Zealand (NZIoC)	Listed	Listed	Listed
The Philippines (PICCS)	Listed	Listed	Listed
China (IECSC)	Listed	Listed	Listed

### SECTION 16: OTHER INFORMATION

a) Compilation information of safety data sheet

Date of compilation	: March 3, 2017
Chemical	: 35% Peracetic acid
CAS #	: 79-21-0
File Name	: 0812Gj Ghs03 Div.3 sds 35% Peracetic acid
Revision Number	: 03
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### b) A key or legend to aberrations and acronyms used in the safety data sheet

- PBT =Persistent Bio accumulative and Toxic.
- vPvB= Very Persistent and Very Bio accumulative.
- SCBA= Self Contained Breathing Apparatus.
- NIOSH REL= National Institute for Occupational Safety and Health Recommended Exposure Limit.
- OSHA PEL=Occupational Safety and Health Administration Permissible Exposure Limit.
- OELTWA= Occupational Exposure Limit Time Weighted Averages.
- RTECS= Registry of Toxic Effects of Chemical Substances.
- NTP=National Toxicology Program.
- IARC= International Agency for Research on Cancer.
- EPA=Environmental Protection Agency.
- TSCA= Toxic Substances Control Act.
- SARA= Superfund Amendments and Reauthorization Act.
- WHIMS= Workplace Hazardous Materials Information System.
- DSL/NDSL= Domestic/Non-Domestic Substances List.
- BCF = Bio Concentration Factor.
- TLV = Threshold Limit Value.
- ACGIH = American Conference of Governmental Industrial Hygienists.
- REACH = Registration, Evaluation .Authorization and Restriction of Chemicals.
- CLP = Classification, Labeling and Packaging.
- LD / LC = Lethal Doses / Lethal Concentration.
- GHS = Globally Harmonized System.
- ADR = Accord European relative au transport international de merchandises.
- IMDG-Code = International Maritime Code for Dangerous Goods.
- EmS = Emergency measures on Sea.
- ICAO = International Civil Aviation Organization.
- IATA/DGR= International Air Transport Association/Dangerous Goods Regulation.

## Biographical reference and data sources

c) Key Literature reference and sources for data

- Globally Harmonized System of Classification and Labelling of Chemicals.
- CLP REG (regulation) (EC) no. 1272/2008, last modification by regulation (EC) no. 830/2015.
- APCISS



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## SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.