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ACETIC ACID 90% AR	MATERIAL SAFETY DATA SHEET SDS/MSDS

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Acetic Acid 90% AR

Product code : 800334

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet

Company : Central Drug House (P) Ltd
DGL 128-129, DLF The Galleria,
Mayur Vihar Phase 1 Extension,
New Delhi-110091
INDIA

Telephone : +91 11 49404040
Email : care@cdhfinechemical.com

1.4 Emergency telephone number

Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 3	H226
Skin corrosion/irritation, Category 1, Sub-Category 1A	H314

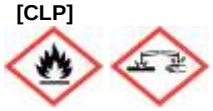
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 : **[CLP]**

Hazard pictograms (CLP)



GHS02 GHS05

Signal word (CLP) : Danger

Contains : ACETIC ACID GLACIAL

Hazard statements (CLP) : H226 - Flammable liquid and vapour.
H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP) : P280 - Wear protective clothing, eye protection, face protection, protective gloves.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a doctor.

2.3. Other hazards

Flammable liquid and vapour. Causes severe skin burns and eye damage.
Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ACETIC ACID GLACIAL	CAS-No.: 64-19-7 EC-No.: 200-580-7 EC Index-No.: 607-002-00-6	89 – 91	Flam. Liq. 3, H226 Skin Corr. 1A, H314
WATER DEIONIZED	CAS-No.: 7732-18-5	9 – 11	Not classified

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention.

First-aid measures after skin contact : Gently wash with plenty of soap and water. Immediately call a POISON CENTER/doctor. Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately. Wash skin with plenty of water.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth out with water. Get medical advice/attention. Rinse mouth. Do not induce vomiting. Call a physician immediately. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Causes severe skin burns and eye damage.

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after ingestion : Burns.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Carbon dioxide. Foam. Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Do not breathe dust, fume, gas, mist, spray, vapours.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Do not breathe dust, fume, gas, mist, vapours, spray.

Hygiene measures	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Ground/bond container and receiving equipment.
Storage conditions	: Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store in a wellventilated place. Keep cool. Store locked up.
Incompatible products	: Oxidizing agent. Strong bases. Strong acids.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:
Chemical goggles or safety glasses. Safety glasses

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing
Hand protection: protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

Wear appropriate mask

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear liquid.
Colour	:	Colourless.
Odour	:	strong, vinegar-like.
Odour threshold	:	No data available
pH	:	2.4 (1.0 M Solution)
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	16.6 °C
Freezing point	:	No data available
Boiling point	:	116 – 118 °C
Flash point	:	43 °C
Auto-ignition temperature	:	463 °C
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Not applicable
Vapour pressure	:	20.79 hPa at 25°C
Relative vapour density at 20 °C	:	2.07
Relative density	:	No data available
Density	:	1.04 – 1.05 g/cm³ at 25 °C
Solubility	:	Water: Miscible in water
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Viscosity, kinematic	:	1.17 mm²/s at 20°C
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	5.4 – 16 vol %
Lower explosive limit (LEL)	:	4 vol %
Upper explosive limit (UEL)	:	19.9 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable liquid and vapour. Flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Open flame. Heat. Sparks. Avoid contact with hot surfaces. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified
Skin corrosion/irritation	:	Causes severe skin burns. pH: 2.4 (1.0 M Solution)

ACETIC ACID GLACIAL (64-19-7)

pH	2.4 (1.0 M solution)

WATER DEIONIZED (7732-18-5)

pH	6 – 8 at 25°C

Serious eye damage/irritation	:	Assumed to cause serious eye damage pH: 2.4 (1.0 M Solution)

ACETIC ACID GLACIAL (64-19-7)

pH	2.4 (1.0 M solution)

WATER DEIONIZED (7732-18-5)

pH	6 – 8 at 25°C

Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	Not classified
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified

ACETIC ACID 90% SOLUTION AR (64-19-7)

Viscosity, kinematic	1.17 mm²/s at 20°C

ACETIC ACID GLACIAL (64-19-7)

Viscosity, kinematic	1.163 mm²/s

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	:	Before neutralisation, the product may represent a danger to aquatic organisms.
Hazardous to the aquatic environment, short–term (acute)	:	Not classified
Hazardous to the aquatic environment, long–term (chronic)	:	Not classified

12.2. Persistence and degradability

ACETIC ACID GLACIAL (64-19-7)

Persistence and degradability	Not established.

12.3. Bioaccumulative potential

ACETIC ACID GLACIAL (64-19-7)

Partition coefficient n-octanol/water (Log Pow)	-0.17 at 25°C - Bioaccumulation is not expected
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	:	Dispose of contents/container in accordance with licensed collector’s sorting instructions.
Additional information	:	Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1 UN number

UN-No. (ADR)	:	UN 2789
UN-No. (IMDG)	:	UN 2789
UN-No. (IATA)	:	UN 2789
UN-No. (ADN)	:	UN 2789
UN-No. (RID)	:	UN 2789

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	ACETIC ACID SOLUTION
Proper Shipping Name (IMDG)	:	ACETIC ACID SOLUTION
Proper Shipping Name (IATA)	:	Acetic acid solution
Proper Shipping Name (ADN)	:	ACETIC ACID SOLUTION
Proper Shipping Name (RID)	:	ACETIC ACID SOLUTION
Transport document description (ADR)	:	UN 2789 ACETIC ACID SOLUTION, 8 (3), II, (D/E)
Transport document description (IMDG)	:	UN 2789 ACETIC ACID SOLUTION, 8 (3), II
Transport document description (IATA)	:	UN 2789 Acetic acid solution, 8 (3), II
Transport document description (ADN)	:	UN 2789 ACETIC ACID SOLUTION, 8 (3), II
Transport document description (RID)	:	UN 2789 ACETIC ACID SOLUTION, 8 (3), II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 8 (3)

Danger labels (ADR) : 8, 3

:



IMDG

Transport hazard class(es) (IMDG) 8 (3)

Danger labels (IMDG) : 8, 3

:



IATA

Transport hazard class(es) (IATA) : 8 (3)

Danger labels (IATA) : 8, 3

:



ADN

Transport hazard class(es) (ADN) : 8 (3)

Danger labels (ADN) : 8, 3

:



RID

Transport hazard class(es) (RID) : 8 (3)

Danger labels (RID) : 8, 3

:



14.4. Packing group

Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : II
Packing group (RID) : II

14.5. Environmental hazards

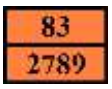
Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : CF1
Limited quantities (ADR) : 1l
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001, IBC02
Mixed packing provisions (ADR) : MP15
Portable tank and bulk container instructions (ADR) : T7
Portable tank and bulk container special provisions (ADR) : TP2
Tank code (ADR) : L4BN
Vehicle for tank carriage : FL
Transport category (ADR) : 2
Special provisions for carriage - Operation (ADR) : S2
Hazard identification number (Kemler No.) : 83

Orange plates :



Tunnel restriction code (ADR) : D/E
EAC code : •2P
APP code : A(fl)

Transport by sea

Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T7
Tank special provisions (IMDG) : TP2
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-C
Stowage category (IMDG) : A
Segregation (IMDG) : SGG1, SG36, SG49

Properties and observations (IMDG)	:	Colourless flammable liquid with a pungent odour. When pure, crystallizes below 16°C. Flashpoint: 40°C c.c. (pure product) 60°C c.c. (80% solution) Explosive limits: 4% to 17% Miscible with water. Corrosive to lead and most other metals. Corrosive to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y840
PCA limited quantity max net quantity (IATA)	:	0.5L
PCA packing instructions (IATA)	:	851
PCA max net quantity (IATA)	:	1L
CAO packing instructions (IATA)	:	855
CAO max net quantity (IATA)	:	30L
ERG code (IATA)	:	8F

Inland waterway transport

Classification code (ADN)	:	CF1
Limited quantities (ADN)	:	1 L
Excepted quantities (ADN)	:	E2
Carriage permitted (ADN)	:	T
Equipment required (ADN)	:	PP, EP, EX, A
Ventilation (ADN)	:	VE01
Number of blue cones/lights (ADN)	:	1

Rail transport

Classification code (RID)	:	CF1
Limited quantities (RID)	:	1L
Excepted quantities (RID)	:	E2
Packing instructions (RID)	:	P001, IBC02
Mixed packing provisions (RID)	:	MP15
Portable tank and bulk container instructions (RID)	:	T7
Portable tank and bulk container special provisions (RID)	:	TP2
Tank codes for RID tanks (RID)	:	L4BN
Transport category (RID)	:	2
Colis express (express parcels) (RID)	:	CE6
Hazard identification number (RID)	:	83

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	**Applicable on**
3(a)	ACETIC ACID 90% SOLUTION AR
3(b)	ACETIC ACID 90% SOLUTION AR

REACH Annex XIV (Authorisation List)

Contains no REACH Annex XIV substances

REACH Candidate List (SVHC)

Contains no substance on the REACH candidate list

PIC Regulation (Prior Informed Consent)

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors) **15.1.2.**

National regulations

Germany

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road

Water hazard class (WGK)	: WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen	: None of the components are listed
SZW-lijst van mutagene stoffen	: None of the components are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	: None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	: None of the components are listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	: None of the components are listed

Denmark

Class for fire hazard	: Class II-1
Store unit	: 5 liter
Classification remarks	: R10 <H226;H314>; Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations	: Young people below the age of 18 years are not allowed to use the product

Switzerland

Storage class (LK)	: LK 3 - Flammable liquids

ATE	Acute Toxicity Estimate

BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Flam. Liq. 3	Flammable liquids, Category 3
H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A

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 guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.