

MATERIAL SAFETY DATA SHEET (SDS/MSDS)

ACRYLONITRILE 99% AR

CAS-No.: 107-13-1

Product Code: 00061

Molecular Formula: C₃H₃N

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Substance
Trade name : Acrylonitrile 99% AR
EC-No. : 203-466-5
CAS No : 107-13-1
Synonyms : Vinyl cyanide

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Industrial/Professional use spec: Industrial For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Company : Chemnovo Synthesis Pvt Ltd.
N-226 Near Kumbhavali Naka
Tarapur MIDC, Boisar-401 506
Palghar, Maharashtra
Telephone : +91 7400096089
Email: export@chemnovo.in

1.4. Emergency telephone number

Emergency number : + 91 7400096089 (9:00am - 6:00 pm)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

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

Flammable liquids,	H225
Category 2	
Carcinogenicity, Category 1B	H350
Acute toxicity (dermal), Category 3	H311
Acute toxicity (inhal.), Category 3	H331
Acute toxicity (oral), Category 3	H301
Serious eye damage/eye irritation, Category 1	H318
Skin corrosion/irritation, Category 2	H315
Specific target organ toxicity – Single exposure, Category 3	H335

Respiratory tract irritation

Skin sensitisation, H317

Category 1

Hazardous to the aquatic H411

environment – Chronic

Hazard, Category 2

Full text of H statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Carc.Cat.2; R45

F; R11

T; R23/24/25

Xi; R41

Xi; R37/38

R43

N; R51/53

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :



Signal word (CLP) :

GHS06

Hazard statements (CLP) :

GHS02

GHS05

GHS08

GHS09

H225 - Highly flammable liquid and vapour.

H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H335 - May cause respiratory irritation.

H350 - May cause cancer.

H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P201 - Obtain special instructions before use.

P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261 – Avoid breathing dust/fume/gas/mist/vapours/spray.

P273 – Avoid release to the environment.

P280 – Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 – IF SWALLOWED: Immediately call a POISON CENTER/doctor

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients**3.1. Substance**

Name : Acrylonitrile 99% AR
CAS No : 107-13-1
EC no : 203-466-5

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

3.2. Mixture

Not applicable

SECTION 4: First aid measures**4.1. Description of first aid measures**

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Take off contaminated clothing. Gently wash with plenty of soap and water. Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation or rash occurs: Get medical advice/attention.

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

First-aid measures after ingestion : Rinse mouth out with water. If you feel unwell, seek medical advice.

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

Symptoms/effects after inhalation : Toxic if inhaled. May cause respiratory irritation.

Symptoms/effects after skin contact : Toxic in contact with skin. Causes skin irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : Toxic if swallowed.

Chronic symptoms : May cause cancer.

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 : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂), earth, sand, dry chemical powder or foam. Water spray.

Unsuitable extinguishing media : Do not use a heavy water stream. dry chemical powder.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour

Explosion hazard : May form flammable/explosive vapour-air mixture.

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

5.3. Advice for firefighter

Protection during firefighting : Do not enter fire area without proper protective equipment,

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Toxic to aquatic life with long lasting effects.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : 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.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : No open flames. No smoking. Use only non-sparking tools. Avoid breathing dust/fume/gas/mist/vapours/spray. Obtain special instructions before use. Do not handle until all safety precautions

have been read and understood. Use only outdoors or in a well-ventilated area.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment.

Storage conditions : Keep in fireproof place. Keep container tightly closed.

Incompatible materials : Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection : Protective gloves

Eye protection : Chemical goggles or safety glasses

Skin and body protection : Wear suitable protective clothing

Respiratory protection : Wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Molecular mass	:	53.06 g/mol
Colour	:	Clear Colorless.
Odour	:	mild peach kernels.
Odour threshold	:	21.4 ppm
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	-83 °C
Freezing point	:	No data available
Boiling point	:	77.3 °C
Flash point	:	5 °C
Critical temperature	:	262.78 °C
Auto-ignition temperature	:	481 °C
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Flammable Highly flammable liquid and vapour.

Vapour pressure	:	11.1 kPa
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Density	:	0.806 g/cm ³
Relative gas density	:	1.8
Solubility	:	Water: slightly soluble
Log Pow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	0.03 - 0.17 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. Direct sunlight.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	Toxic in contact with skin. Toxic if inhaled. Toxic if swallowed.
Skin corrosion/irritation	:	Causes skin irritation.
Serious eye damage/irritation	:	Causes serious eye damage.
Respiratory or skin sensitisation	:	May cause an allergic skin reaction.
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	May cause cancer.
Reproductive toxicity	:	Not classified
STOT-single exposure	:	May cause respiratory irritation.
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified

Potential adverse human health effects and symptoms : Toxic if swallowed. Toxic in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

ACRYLONITRILE 99% AR (107-13-1)

Persistence and degradability	May cause long-term adverse effects in the environment.
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12.3. Bioaccumulative potential

No additional information available

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

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Additional information : Handle empty containers with care because residual vapours are flammable.

Ecology - waste materials : Hazardous waste due to toxicity.

SECTION 14: Transport information

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

14.1. UN number

UN-No. (ADR)	:	1093
UN-No. (IMDG)	:	1093
UN-No. (IATA)	:	1093
UN-No. (ADN)	:	1093
UN-No. (RID)	:	1093

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	ACRYLONITRILE, AR
Proper Shipping Name (IMDG)	:	ACRYLONITRILE, AR
Proper Shipping Name (IATA)	:	Acrylonitrile, AR

Proper Shipping Name (ADN) :	ACRYLONITRILE, AR
Proper Shipping Name (RID) :	ACRYLONITRILE, AR
Transport document description (ADR) :	UN 1093 ACRYLONITRILE, AR, 3 (6.1), I, (C/E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG) :	UN 1093 ACRYLONITRILE, AR, 3 (6.1), I, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS (-5°C c.c.)
Transport document description (IATA) :	UN 1093 Acrylonitrile, AR, 3 (6.1), I, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN) :	UN 1093 ACRYLONITRILE, AR, 3 (6.1), I, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID) :	UN 1093 ACRYLONITRILE, AR, 3 (6.1), I, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) :	3 (6.1)
Danger labels (ADR) :	3, 6.1



IMDG

Transport hazard class(es) (IMDG) :	3 (6.1)
Danger labels (IMDG) :	3, 6.1



IATA

Transport hazard class(es) (IATA) :	3 (6.1)
Hazard labels (IATA) :	3, 6.1



AND

Transport hazard class(es) (ADN) : 3 (6.1)

Danger labels (ADN) : 3, 6.1



RID

Transport hazard class(es) (RID) : 3 (6.1)

Danger labels (RID) : 3, 6.1

**14.4. Packing group**

Packing group (ADR) : I

Packing group (IMDG) : I

Packing group (IATA) : I

Packing group (AND) : I

Packing group (RID) : I

14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : F1

Limited quantities (ADR) : 0

Excepted quantities (ADR) : E0

Packing instructions (ADR) : P001

Mixed packing provisions (ADR) : MP7, Mp17

Portable tank and bulk container instructions (ADR) : T14

Portable tank and bulk container special provisions (ADR) : Tp2

Tank code (ADR) : L10CH

Tank special provisions (ADR)	:	TU14, TU15, Te21
Vehicle for tank carriage	:	FL
Transport category (ADR)	:	1
Special provisions for carriage - Loading, unloading and handling (ADR)	:	CV13, Cv28
Special provisions for carriage - Operation (ADR)	:	S2, S22
Hazard identification number (Kemler No.)	:	336
Orange plates	:	336
		1093
Tunnel restriction code (ADR)	:	C/E
EAC code	:	*3WE
APP code	:	A(fl)
- Transport by sea		
Limited quantities (IMDG)	:	0
Excepted quantities (IMDG)	:	E0
Packing instructions (IMDG)	:	P001
Tank instructions (IMDG)	:	T14
Tank special provisions (IMDG)	:	TP2, Tp13
EmS-No. (Fire)	:	F-E
EmS-No. (Spillage)	:	S-D
Stowage category (IMDG)	:	E
Stowage and handling (IMDG)	:	Sw2
Flash point (IMDG)	:	-5°C c.c.
MFAG-No	:	131P
- Air transport		
PCA Excepted quantities (IATA)	:	E0
PCA Limited quantities (IATA)	:	Forbidden
PCA limited quantity max net quantity (IATA)	:	Forbidden
PCA packing instructions (IATA)	:	Forbidden
PCA max net quantity (IATA)	:	Forbidden
CAO packing instructions (IATA)	:	361
CAO max net quantity (IATA)	:	30L
ERG code (IATA)	:	3P
- Inland waterway transport		
Classification code (ADN)	:	Ft1
Special provisions (ADN)	:	802
Limited quantities (ADN)	:	0
Excepted quantities (ADN)	:	E0

Carriage permitted (AND)	:	T
Equipment required (ADN)	:	PP, EP, EX, TOX, A
Ventilation (ADN)	:	VE01, Ve02
Number of blue cones/lights (ADN)	:	2
- Rail transport		
Classification code (RID)	:	Ft1
Limited quantities (RID)	:	0
Excepted quantities (RID)	:	E0
Packing instructions (RID)	:	P001
Mixed packing provisions (RID)	:	MP7, Mp17
Portable tank and bulk container instructions (RID)	:	T14
Portable tank and bulk container special provisions (RID)	:	Tp2
Tank codes for RID tanks (RID)	:	L10CH
Special provisions for RID tanks (RID)	:	TU14, TU15, TU38, TE21, Te22
Transport category (RID)	:	1
Special provisions for carriage - Loading, unloading and handling (RID)	:	CW13, Cw28
Hazard identification number (RID)	:	336

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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

No REACH Annex XVII restrictions

ACRYLONITRILE 99% AR is not on the REACH Candidate List

ACRYLONITRILE 99% AR is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 3, Highly hazardous to water
(Classification according to AwSV; ID No. 10)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : ACRYLONITRILE 99% AR is listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen - : The substance is not listed

Vruchtbaarheid

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling

Denmark

Class for fire hazard	:	Class I-1
Store unit	:	1 liter
Classification remarks	:	F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followed
Recommendations Danish Regulation	:	Young people below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product must not be in direct contact with the product The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Carc. 1B	Carcinogenicity, Category 1B
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H350	May cause cancer.

H411	Toxic to aquatic life with long lasting effects.
R11	Highly flammable
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed
R37/38	Irritating to respiratory system and skin
R41	Risk of serious damage to eyes
R43	May cause sensitisation by skin contact
R45	May cause cancer
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
F	Highly flammable
N	Dangerous for the environment
T	Toxic
Xi	Irritant

Further information

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. Chemnovo Synthesis Pvt Ltd. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.chemnovo.in for additional terms and conditions of sale.

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