

An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841

Email: info@ottokemi.com Web: www.ottokemi.com

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: Acrylonitrile, 99%

Product Code: A 1410 CAS No: 107-13-1

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

Use: Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification
OTTO CHEMIE PVT LTD

101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate,

Chinchpada, Vasai East, Waliv, Maharashtra 401208.

Email info@ottokemi.com

1.4. Emergency telephone number

Phone no.: + 91 22 2207 0099 (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

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

Skin sensitization (Sub-category 1B), H317

Carcinogenicity (Category 1B), H350

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Long-term (chronic) aquatic hazard (Category 2), H411For the full text of the H-Statements mentioned in this Section, see Section 16

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word Danger

Hazard statement(s)

H225 Highly flammable liquid and vapor.

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 statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and

other ignition sources. No smoking.

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.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated

clothing. Rinse skin with water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue

rinsing.

Supplemental Hazard

Statements

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none

Restricted to professional users.

Reduced Labeling (<= 125 ml)

Pictogram

Signal Word Danger

Hazard statement(s)

H317 May cause an allergic skin reaction.

H350 May cause cancer.

H318 Causes serious eye damage.

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

Precautionary statement(s)

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

protection.

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

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue

rinsing.

Supplemental Hazard

Statements

none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at

levels of 0.1% or higher. Lachrymator., Vesicant.

Lacinymator., vesicant.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Vinyl cyanide Formula : C3H3N

Molecular weight: 53,06 g/mol

CAS-No.: 107-13-1 EC-No.: 203-466-5 Index-No.: 608-003-00-4

Component	Classification	Concentration
acrylonitrile		
CAS-No. 107-13-1	Flam. Liq. 2; Acute Tox. 3;	<= 100 %
EC-No. 203-466-5	Skin Irrit. 2; Eye Dam. 1;	
Index-No. 608-003-00-4	Skin Sens. 1B; Carc. 1B;	
	STOT SE 3; Aquatic	
	Chronic 2; H225, H301,	
	H331, H311, H315, H318,	
\\S\\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	H317, H350, H335, H411	

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately. In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

Remove contact lenses.

If swallowed

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If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as guickly as possible.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section

2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO2) Foam Dry powder

Unsuitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NOx)

Combustible.

Pay attention to flashback.

Vapors are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air at ambient temperatures.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition.

Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8. 6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions

(see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g.

Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized

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Otto Chemie Pvt Ltd - provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy.

This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product

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persons.

Light sensitive.

Storage class

Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU)

2016/425 and the standard EN 374 derived from it.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0,3 mm

Break through time: 480 min

Splash contact Material: Chloroprene

Minimum layer thickness: 0,6 mm

Break through time: 37 min

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail

sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

Recommended Filter type: Filter A-(P3)

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state

b) Color

c) Odor

d) Melting point/freezing point

Melting point/range: -

e) Initial boiling point

f) Flammability (solid,gas)

g) Upper/lower flammability or

explosive limits

Clear Liquid Colorless Pungent

83 °C - lit

77 °C - lit. and boiling range

No data available

Upper explosion limit: 28 %(V)

Lower explosion limit: 2 %(V)

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h) Flash point -

i) Autoignition

temperature

j) Decomposition

temperature

k) pH

I) Viscosity Viscosity, kinematic:

Viscosity, dynamic:

m) Water solubility

n) Partition coefficient:

n-octanol/water

o) Vapor pressure

p) Density

Relative density

q) Relative vapor

density

r) Particle

characteristics

s) Explosive properties

t) Oxidizing properties

9.2 Other safety information

Surface tension 27,3 mN/m at 24 °C

Relative vapor

density

1,83 - (Air = 1.0)

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapors may form explosive mixture with air.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature)

10.3 Possibility of hazardous reactions

Risk of explosion with: Bromine

Sodium hydroxide

Esters

Chlorine

Nitric acid

Violent polymerization may be caused by:

alkali hydroxides

Strong bases

Oxidizing agents

Copper

Copper alloys

sulfuric acid

silver salt

polymerisation initiators

Peroxides

sodium amide

with

Sodium hydroxide

Exothermic reaction with:

chlorosulfonic acid

Strong acids

10.4 Conditions to avoid

Heat. May polymerize on exposure to light.

Warming.

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

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5 °C - closed cup 481 °C at 1.013 hPa

No data available No data available No data available 0,34 mPa.s at 25 °C Soluble

log Pow: 0,016 at 21 °C - Bioaccumulation is not expected.

133,3 hPa at 23,6 °C

0,806 g/cm3

No data available

No data available

No data available No data available

None

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute toxicity estimate Oral - 95,1 mg/kg

(Calculation method)

LD50 Oral - Rat - female - 95,1 mg/kg

Remarks: (ECHA)

Acute toxicity estimate Inhalation - 4 h - 2,05 mg/l - vapor(Calculation method)

LC50 Inhalation - Rat - female - 4 h - 2,05 mg/l - vapor

(OECD Test Guideline 403)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of

respiratory tract

Acute toxicity estimate Dermal - 250 mg/kg

(Calculation method)

LD50 Dermal - Rabbit - 250 mg/kg

Remarks: (IUCLID) Skin corrosion/irritation

Skin - Rabbit

Result: Skin irritation - 24 h (OECD Test Guideline 404)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Risk of serious damage to eyes.

(OECD Test Guideline 405)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: positive

(OECD Test Guideline 406) Germ cell mutagenicity Test Type: Ames test

Test system: S. typhimurium

Metabolic activation: Metabolic activation

Method: OECD Test Guideline 471

Result: positive

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation

Result: positive Remarks: (ECHA)

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Metabolic activation: without metabolic activation

Method: OECD Test Guideline 476

Result: positive Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity No data available

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity - repeated exposure

No data available Aspiration hazard

No data available

11.2 Additional Information Endocrine disrupting properties

Product:

Assessment: The substance/mixture does not contain

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components considered to have endocrine disrupting properties according to REACH Article

57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU)

2018/605 at levels of 0.1% or higher.

RTECS: AT5250000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory

tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

To the best of our knowledge, the chemical, physical, and toxicological properties have not

been thoroughly investigated.

After absorption:

Headache

Nausea

Vomiting Dizziness

agitation

Convulsions

respiratory arrest

Unconsciousness

The following applies to cyanogen compounds/ nitriles in general: utmost caution! Release of hydrocyanic acid is possible - blockade of cellular respiration. Cardiovascular disorders, dyspnoea, unconsciousness.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish semi-static test LC50 - Oryzias latipes - 5,1 mg/l - 96 h

(OECD Test Guideline 203)

Toxicity to daphnia

and other aquatic

invertebrates

static test EC50 - Daphnia magna (Water flea) - 2,5 mg/l - 48 h

(OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata - 10 mg/l - 72 h

(OECD Test Guideline 201)

Toxicity to bacteria EC5 - Pseudomonas putida - 53 mg/l - 16 h

Remarks: (Lit.)

(maximum permissible toxic concentration)

Toxicity to

fish(Chronic toxicity)

flow-through test NOEC - Pimephales promelas (fathead minnow) -

0,17 mg/l - 30 d Remarks: (ECHA)

Toxicity to daphnia and other aquatic

invertebrates(Chronic

toxicity)

NOEC - Daphnia magna (Water flea) - 2 mg/l - 21 d

Remarks: (ECOTOX Database)
12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 14 d

Result: 100 % - Inherently biodegradable.

(OECD Test Guideline 302C) Ratio BOD/ThBOD 70 %

Remarks: (Lit.)

12.3 Bioaccumulative potential

Bioaccumulation Lepomis macrochirus - 14 d

- 9,94 µg/l(acrylonitrile)

Bioconcentration factor (BCF): 48

12.4 Mobility in soil

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No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment: The substance/mixture does not contain components

considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods No data available

SECTION 14: Transport information

14.1 UN number

ADR/RID: 1093 IATA: 1093

14.2 UN proper shipping name

ADR/RID: ACRYLONITRILE, STABILIZED IMDG: ACRYLONITRILE, STABILIZED

IATA: Acrylonitrile, stabilized

Passenger Aircraft: Not permitted for transport14.3 Transport hazard class(es) IATA: 3 (6.1)

ADR/RID: 3 (6.1) IMDG: 3 (6.1)

14.4 Packaging group

ADR/RID: I IMDG: I IATA: I

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: no

14.6 Special precautions for user Tunnel restriction code: (C/E) Further information: No data available

SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No.

1907/2006.

Authorisations and/or restrictions on use REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

: acrylonitrile

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

: ACUTE TOXIC

: ENVIRONMENTAL HAZARDS

: FLAMMABLE LIQUIDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

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For this product a chemical safety assessment was not carried out

Section 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

