



INDENTA™
Chemicals (India) Pvt. Ltd.
(ISO 9001:2008 Certified Company)



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Material Safety Data Sheet
Allyl Alcohol

SECTION 1.1 – PRODUCT IDENTIFICATION

Product name : **Allyl Alcohol**
Molecular formula : **C3 H6O**
Molecular weight : **58.08**
CAS no. : **107-18-6**

SECTION: 1.2 – COMPANY IDENTIFICATION

Company Name: Indenta Chemicals (India) Pvt. Ltd.

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SECTION 2: HAZARD IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 2
Acute oral toxicity	Category 3
Acute dermal toxicity	Category 2
Acute Inhalation Toxicity - Vapors	Category 2
Skin Corrosion/irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system	

Label Elements

Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor
Toxic if swallowed
Fatal in contact with skin

Causes skin irritation
Causes serious eye irritation
Fatal if inhaled
May cause respiratory irritation

Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not get in eyes, on skin, or on clothing
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear respiratory protection
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Immediately call a POISON CENTER or doctor/physician
Call a POISON CENTER or doctor/physician if you feel unwell

Skin
Immediately call a POISON CENTER or doctor/physician
Wash contaminated clothing before reuse
If skin irritation occurs: Get medical advice/attention
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Ingestion
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth

Fire
In case of fire: Use CO2, dry chemical, or foam for extinction

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

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Very toxic to aquatic life
Harmful to aquatic life with long lasting effects
Lachrymator (substance which increases the flow of tears)

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No	Weight %
Allyl Alcohol	107-18-6	>95

SECTION 4: FIRST AID MEASURES

Eye Contact: Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes

Skin Contact: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

Inhalation: Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.

Ingestion: Call a physician immediately. Clean mouth with water

Most important symptoms/effects: Breathing difficulties. . Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Notes to Physician: Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water spray. Carbon dioxide (CO₂). Dry chemical. chemical foam. Cool closed containers exposed to fire with water spray.

Unsuitable Extinguishing Media: No information available

Flash Point: 21 °C / 69.8 °F

Method - No information available

Autoignition Temperature: 375 °C / 707 °F

Explosion Limits

Upper No data available

Lower No data available

Sensitivity to Mechanical Impact: No information available

Sensitivity to Static Discharge: No information available

Specific Hazards Arising from the Chemical:

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous Combustion Products: Carbon monoxide (CO) Carbon dioxide (CO₂)

Protective Equipment and Precautions for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA Rating: Health: 4; Flammability: 3; Instability: 0; Physical Hazards: N/A

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental Precautions: Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

Methods for Containment and Clean Up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Do not let this chemical enter the environment

SECTION 7: HANDLING AND STORAGE

Handling: Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Use only in area provided with appropriate exhaust ventilation. Use explosion-proof equipment. Use only non-sparking tools. Keep away from open flames, hot surfaces and sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

Storage: Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat and sources of ignition. Flammables area. Keep under nitrogen.

SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Guidelines:

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Allyl alcohol	TWA: 0.5 ppm Skin	(Vacated) TWA: 2 ppm (Vacated) TWA: 5 mg/m ³ (Vacated) STEL: 4 ppm (Vacated) STEL: 10 mg/m ³ Skin TWA: 2 ppm TWA: 5 mg/m ³	IDLH: 20 ppm TWA: 2 ppm TWA: 5 mg/m ³ STEL: 4 ppm STEL: 10 mg/m ³

Component	Quebec	Mexico OEL (TWA)	Ontario TWA/EV
Allyl alcohol	TWA: 2 ppm TWA: 4.8 mg/m ³ STEL: 4 ppm STEL: 9.5 mg/m ³ Skin	TWA: 2 ppm TWA: 5 mg/m ³ STEL: 4 ppm STEL: 10 mg/m ³	TWA: 0.5 ppm Skin

Engineering Measures: Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment.

Personal Protective Equipment :

Eye/face Protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Colourless
Odor	No information available
Odor Threshold	No information available
pH	No information available
Melting Point/Range	-129 °C / -200.2 °F
Boiling point/Range	96 - 98 °C / 204.8 - 208.4 °F
Flash Point	21 °C / 69.8 °F
Evaporation Rate	No information available
Flammability (Solid, gas)	Not applicable
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	17.3 mmHg @ 20 °C
Vapor Density	No information available
Relative Density	0.850
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	375 °C / 707 °F
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	C3H6O
Molecular Weight	58.08

SECTION 10: STABILITY AND REACTIVITY

Reactive Hazard: None known, based on information available

Stability: Stable under normal conditions.

Conditions to Avoid: Keep away from open flames, hot surfaces and sources of ignition. Incompatible products.

Incompatible Materials: Acids, Strong oxidizing agents, Metals

Hazardous Decomposition Products: Carbon monoxide (CO), Carbon dioxide (CO₂)

Hazardous Polymerization: Polymerization can occur.

Hazardous Reactions: None under normal processing.

Section 11: TOXICOLOGICAL INFORMATION**Acute Toxicity**

Product Information:

Component information

Toxicologically Synergistic Products: No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation: No information available.

Sensitization: No information available.

Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Allyl Alcohol	107-18-6	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

Mutagenic Effects: Not mutagenic in AMES Test.

Reproductive Effects: No information available.

Developmental Effects: No information available

Teratogenicity: No information available.

STOT - single exposure Respiratory system

STOT - repeated exposure None known.

Aspiration hazard: No information available.

Symptoms / effects, both acute and delayed: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Endocrine Disruptor Information: No information available

Other Adverse Effects: See actual entry in RTECS for complete information.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic organisms. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Allyl Alcohol	Not listed	0.32 mg/L LC50 96 h 0.28 - 0.37 mg/L LC50 96 h	EC50 = 216 mg/L 30 min EC50 = 342 mg/L 15 min EC50 = 608 mg/L 5 min	0.25 mg/L EC50 = 96 h

Persistence and Degradability: Miscible with water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation: No information available

Mobility: Will likely be mobile in the environment due to its water solubility.

Component	<u>Log Pow</u>
Allyl Alcohol	0.17

Section 13: DISPOSAL CONSIDERATION

Waste Disposal Methods: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: TRANSPORT INFORMATION**DOT**

UN-No UN1098
 Proper Shipping Name ALLYL ALCOHOL
 Hazard Class 6.1
 Subsidiary Hazard Class: 3
 Packing Group I

TDG

UN-No UN1098
 Proper Shipping Name ALLYL ALCOHOL
 Hazard Class 6.1
 Subsidiary Hazard class: 3
 Packing Group I

IATA

UN-No UN1098
 Proper Shipping Name ALLYL ALCOHOL
 Hazard Class 6.1
 Subsidiary Hazard class: 3
 Packing Group I

IMDG/IMO

UN-No UN1098
 Proper Shipping Name ALLYL ALCOHOL
 Hazard Class 6.1
 Subsidiary Hazard Class: 3
 Packing Group I

15: OTHER REGULATORY INFORMATION

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Allyl Alcohol	X	X	-	203-470-7	-		X	X	X	X	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations:

TSCA 12(b): Not applicable

SARA 313:

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Allyl alcohol	107-18-6	>95	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard Yes

Chronic Health Hazard No

Fire Hazard Yes

Sudden Release of Pressure Hazard No

Reactive Hazard No

Clean Water Act:

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Allyl alcohol	X	100 lb	-	-

Clean Air Act: Not applicable

OSHA: Occupational Safety and Health Administration Not applicable

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Allyl Alcohol	100 lb	100 lb

California Proposition 65: This product does not contain any Proposition 65 chemicals.

State Right-to-Know:

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Allyl Alcohol	X	X	X	-	X

U.S. Department of Transportation:

Reportable Quantity (RQ): N

DOT Marine Pollutant: N

DOT Severe Marine Pollutant: N

U.S. Department of Homeland Security:

This product contains the following DHS chemicals:

Component	DHS Chemical Facility Anti-Terrorism Standard
Allyl Alcohol	11250 lb STQ

Other International Regulations:**Mexico – Grade:** No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class: B2 Flammable liquid
D1A Very toxic materials
D2B Toxic materials

SECTION 16: ADDITIONAL INFORMATION

This information is provided for documentation purposes only.

The information contained in this Certificate of Analysis and Material Safety Data Sheet is obtained from current and reliable sources. The information contained herein is true and to the best of Indenta Chemicals (India) Pvt. Ltd. knowledge. Nothing herein should be interpreted as a recommendation to infringe existing patents or violate any Laws or Regulation. Final determination of the suitability of the material is the sole responsibility of the user. Customers should purchase products from Indenta Chemicals (India) Pvt. Ltd. with the clear understanding that all products must be used at the customers own discretion and only after referencing Material Safety Data Sheets (MSDS) and all other relevant technical information specific to the product. Indenta Chemicals (India) Pvt. Ltd. shall not be held responsible for any damages to property or for any adverse physical effects (including injury or bodily harm) caused by insufficient knowledge or the improper use of a product. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As with any manufacturing process, Indenta Chemicals (India) Pvt. Ltd. strongly recommends small lab scale testing for evaluation purposes prior to full commercial manufacturing. The information on the Indenta Chemicals (India) Pvt. Ltd. website is obtained from current and reliable sources but makes no representation as to its comprehensiveness or accuracy. Nothing contained herein should be considered as a recommendation by Indenta Chemicals (India) Pvt. Ltd. as to the fitness for any use. As the ordinary or otherwise use(s) of this product is outside the control of Indenta Chemicals (India) Pvt. Ltd., no representation or warranty, expressed or implied is made as to the effect(s) of such use(s) (including damage or injury), or the results obtained. The liability of Indenta Chemicals (India) Pvt. Ltd. is limited to the value of the goods and does not include any consequential loss. Indenta Chemicals (India) Pvt. Ltd. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon.