Safety Data Sheet

Date of Issue: 28.11.2024 Date of Expiry: 28.11.2029

1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : **ECP Limited**
Address : PO Box 34125, Birkenhead, Auckland 0746
Telephone : +64 9 480 4386
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Emergency phone number : 0800 243 622 (24 hours)

Product Name	**Amy Alcohol, mixed isomers**
Product Code	13891
CAS No.	71-41-0

Recommended use : Laboratory Investigations

2: Hazard's identification

2.1 GHS Classification

Flammable liquids (Category 3), H226
Acute toxicity, Oral (Category 3), H301
Acute toxicity, Inhalation (Category 4), H332
Acute toxicity, Dermal (Category 4), H312
Skin corrosion/irritation (Category 2), H315
Serious eye damage/eye irritation (Category 2), H319
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word : Danger

Hazard statement(s)

H226 Flammable liquid and vapor.
H301 Toxic if swallowed.
H312 + H332 Harmful in contact with skin or if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statement(s)
Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing mist or vapors.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

2.3 Other hazards
Lachrymator.

3: Composition/information on ingredients

3.1 Substances

Synonyms	:	Pentyl alcohol
Formula	:	C5H12O
Molecular weight	:	88.15 g/mol
EC-No.	:	200-752-1
Index-No.	:	603-200-00-1

Mixtures	CAS No.	Concentration
Amyl Alcohol	71-41-0	55 - 65%
2-Methylbutanol	137-32-6	30 - 40%
Iso amy alcohol	123-51-3	4 -14%

4: First aid measures

4.1 Description of first-aid measures
General advice
Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air.

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

In case of eye contact
After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed
After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

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
Nature of decomposition products not known.
Combustible.
Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air at elevated temperatures.
Development of hazardous combustion gases or vapours possible in the event of fire.

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. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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 with liquid-absorbent material.
Dispose of properly. Clean up affected area.

6.4 Reference to other sections
For disposal see section 13

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.

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

8: Exposure controls/personal protection

8.1 Control parameters
Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment
Eye/face protection
Face shield and safety glasses.

Skin protection
Handle with gloves. Gloves must be inspected prior to use.

Body Protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state	:	liquid
b) Color	:	No data available
c) Odor	:	No data available
d) Melting point/freezing point		
Melting point/range	:	-78 °C - lit.
e) Initial boiling point and boiling range	:	136 - 138 °C - lit.
f) Flammability (solid, gas)	:	No data available
g) Upper/lower flammability or explosive limits		
Upper explosion limit	:	8.0 %(V)
Lower explosion limit	:	1.6 %(V)
h) Flash point	:	49 °C - closed cup
i) Autoignition temperature	:	300 °C at 1,004 - 1,008 hPa - DIN 51794
j) Decomposition temperature	:	No data available
k) pH	:	7
l) Viscosity		
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	3.441 mPa.s at 24.9 °C
m) Water solubility	:	21 g/l at 20 °C-OECD Test Guideline 105
n) Partition coefficient: n-octanol/water		
log Pow	:	1.41 at 25 °C - - Bioaccumulation is not expected., (ECHA)

o) Vapor pressure	:	2.04 hPa at 20 °C - OECD Test guideline 104
p) Density	:	0.811 g/mL at 25 °C - lit.
Relative density	:	No data available
q) Relative vapor density	:	No data available
r) Particle characteristics	:	No data available
s) Explosive properties	:	No data available
t) Oxidizing properties	:	none

9.2 Other safety information

Dissociation constant	:	16.26

10: Stability and reactivity

10.1 Reactivity

danger of spontaneous combustion!
Vapor/air-mixtures are explosive at intense warming.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapors with:
Fluorine, Oxygen

Violent reactions possible with:
Oxidizing agents, Alkali metals, Alkaline earth metals, halogens, Acid chlorides, Isocyanates, lithium silicide, acids

10.4 Conditions to avoid

Heating.
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

10.5 Incompatible materials

rubber, various plastics

10.6 Hazardous decomposition products

In the event of fire: see section 5

11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 3,645 mg/kg
(OECD Test Guideline 401)
Acute toxicity estimate Inhalation - 4 h - 11.1 mg/l - vapor

(Expert judgment)
LD50 Dermal - Rabbit - male - 2,292 mg/kg
(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit
Result: Irritations - 20 h
Remarks: (ECHA)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye damage.
(OECD Test Guideline 405)
Remarks: (ECHA)

Respiratory or skin sensitization
Maximization Test - Guinea pig
Result: negative
(OECD Test Guideline 406)

Germ cell mutagenicity
Test Type: Micronucleus test
Test system: Chinese hamster fibroblasts
Metabolic activation: with and without metabolic activation
Result: negative
Remarks: (ECHA)
Test Type: Ames test
Test system: S. typhimurium
Metabolic activation: with and without metabolic activation
Result: negative
Remarks: (ECHA)

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
May cause respiratory irritation. - Respiratory system

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Additional Information
Repeated dose toxicity - Rat - male and female - Oral - NOAEL (No observed adverse effect level) - 1,000 mg/kg
Repeated dose toxicity - Rat - male - inhalation (vapor)
Remarks: (ECHA)

RTECS: SB9800000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
After absorption:
Headache, somnolence, lack of appetite, Nausea, Vomiting, Diarrhea, Dizziness, Unconsciousness, Coma, narcosis

Possible damages:
Damage to:
Liver, Kidney, Cardiac, Lungs

Other dangerous properties can not be excluded.
Handle in accordance with good industrial hygiene and safety practice.

Liver - Irregularities - Based on Human Evidence

12: Ecological information

12.1 Toxicity
Toxicity to fish
static test LC50 - Danio rerio (zebra fish) - 530 mg/l - 96 h
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates
static test EC50 - Daphnia magna (Water flea) - 341.21 mg/l - 48 h
(Regulation (EC) No. 440/2008, Annex, C.2)

12.2 Persistence and degradability
Biodegradability aerobic - Exposure time 18 d
Result: 100 % - Readily biodegradable.
(OECD Test Guideline 310)

Biochemical Oxygen
Demand (BOD)
1,278 mg/g
Remarks: (IUCLID)

Chemical Oxygen
Demand (COD)
1,814 mg/g
Remarks: (IUCLID)

Ratio BOD/ThBOD 47 %
Remarks: (IUCLID)

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties
No data available

12.7 Other adverse effects
Additional ecological information :
No data available

13: Disposal considerations

13.1 Waste treatment methods
Product
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

14: Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	**UN Number**	1105	1105	1105
14.2	**UN Proper Shipping name**	PENTANOLS	PENTANOLS	pentanols
14.3	**Transport Hazard Class**	3	3	3
14.4	**Packaging group**	III	III	III
14.5	**Environmental Hazards**	No	No	No
14.6	**Special precautions for user**	none		

Other regulations
Hazchem Code : •3Y

15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulatory information
HSNO Approval Code: HSR001418
HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006
Tracking Required: not required
Approved Handler Cert.: not required

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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