

2-ETHYL HEXANOL

Section-1 - IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY / UNDERTAKING	
Product Name (Commercial Name)	: 2-ETHYL HEXANOL
Uses	: Chemical for Synthesis
Synonyms	: 2 Ethyl 1- Hexanol / Octyl Alcohol / 2 EH / 2Ethylhexyl Alcohol
Manufacturer's Name & Address	: Bharat Petroleum Corporation Limited 4&6, Currimbhoy Road, Ballard Estate Mumbai- 400 001, INDIA
Telephone No.	: 091-22-24176354
Fax No.	: 091-22-24166512/24182511
Emergency Coordination Centre Contact	: BPCL Kochi Refinery, Ambalamugal Kochi Kerala
EMERGENCY CONTACT DETAILS	: BPCL – KOCHI REFINERY, Ambalamugal, Dist. Ernakulam, Kerala, India 091-484-2722061
24*7 Emergency contact No	: +91 9495001031

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Section 2 – HAZARD IDENTIFICATION

Classification of substance /mixture: Hazard Class and Category code.



GHS Label :

IRRITANT


HAZARD STATEMENTS	<p>H315 : Causes skin irritation [Warning Skin corrosion/irritation] H319 : Causes serious eye irritation [Warning Serious eye damage/eye irritation] H332 : Harmful if inhaled [Warning Acute toxicity, inhalation] H335 : May cause respiratory irritation [Warning Specific target organ toxicity, single exposure; Respiratory tract irritation] Information may vary between notifications depending on impurities, additives, and other factors. The percentage value in parenthesis indicates the notified classification ratio from companies that provide hazard codes. Only hazard codes with percentage values above 10% are shown.</p>
PRECAUTIONARY STATEMENTS PREVENTION RESPONSE	<p>P280 - Wear protective gloves. Wear eye or face protection. P210 - Keep away from flames and hot surfaces. - No smoking. P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing vapor. P264 - Wash hands thoroughly after handling.</p> <p>P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable</p>

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Storage	for breathing. Call a POISON CENTER or physician if you feel unwell. P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. P332 + P313 - If skin irritation occurs: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention. P405 - Store locked up.
Disposal	P403 - Store in a well-ventilated place. P235 - Keep cool. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
SIGNAL WORD	Warning

NFPA HAZARD CODES

NFPA 704

Diamond	Hazard	Value	Description
	Health	2	Can cause temporary incapacitation or residual injury.
	Flammability	2	Must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.
	Instability	0	Normally stable, even under fire conditions.
	Special		

(NFPA, 2010)

RATINGS SYSTEM

0 = No Hazard 1 = Slight Hazard 2 = Moderate Hazard

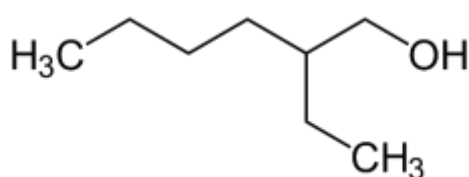
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3 = Serious Hazard 4 = Severe Hazard

Section 3 – COMPOSITION & INFORMATION ON INGREDIENTS

Ingredients /Hazardous	CAS No.	EC No.	Percentage
2 Ethyl Hexanol / Yes	104-76-7	203-234-3	99.00 % (wt.) min.

Chemical Formula : C₈H₁₈O



Section 4 – FIRST AID MEASURES

First Aid

EYES: First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

SKIN: IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. If symptoms such as redness or irritation develop, IMMEDIATELY call a physician and be prepared to transport the victim to a hospital for treatment.

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INHALATION: IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. If symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop, call a physician and be prepared to transport the victim to a hospital. Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to that advised under Protective Clothing.

INGESTION: DO NOT INDUCE VOMITING. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. Be prepared to transport the victim to a hospital if advised by a physician. If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. IMMEDIATELY transport the victim to a hospital.

Section 5 – FIRE FIGHTING MEASURES

Flash Ignition Temperature	: 60°C
Auto Ignition Temperature	: 231 °C
Flammable Limits	: 0.9- 12.7 vol %
Suitable Extinguishing Media	: Carbon dioxide, dry chemical powder or appropriate foam.
Unusual or Explosive Hazards	: Emits toxic fumes under fire conditions.
Special Fire Fighting Procedures	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

CAUTION: All these products have a very low flash point: Use of water spray when fighting fire may be inefficient.

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SMALL FIRE: Dry chemical, CO₂, water spray or alcohol-resistant foam.

LARGE FIRE: Water spray, fog or alcohol-resistant foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal; do not scatter the material. Use water spray or fog; do not use straight streams.

FIRE INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Section 6 –ACCIDENTAL RELEASE MEASURES

Procedures in case of breakage or leakage : Wear filter respirator for organic gases and vapours, rubber boots and heavy rubber gloves. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Do NOT let this chemical enter the environment. Ventilate area and wash spill site after material pick up is complete..

Non-Fire Response

Fully encapsulating, vapor-protective clothing should be worn for spills and leaks with no fire. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor-suppressing foam may be used to reduce vapors.

SMALL SPILL: Absorb with earth, sand or other non-combustible material (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to containers for later disposal according to local /

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national regulations. Use clean, non-sparking tools to collect absorbed material. After cleaning, flush away traces with water. Eliminate all ignition sources if safe to do so.

LARGE SPILL: Dike far ahead of liquid spill for later disposal. Water spray may reduce vapor, but may not prevent ignition in closed spaces.

Contain spillage, soak up with non-combustible absorbent material, and transfer to a container for disposal.

Potentially Incompatible Absorbents

Use caution: Liquids with this reactive group classification have been known to react with the absorbent listed below.

- Cellulose-Based Absorbents

Section 7 –HANDLING AND STORAGE

Handling

Avoid breathing vapour. Avoid contact with eyes, skin, and clothing.

Avoid prolonged or repeated exposure.

Use non-sparking tools and keep away from open flame and other sources of ignition. Provide safety shower and eye bath and wash thoroughly after handling.

Prevent generation of mists.

Storage

: Keep container closed.

Keep away from heat, sparks, and open flame.

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Section 8 –EXPOSURE CONTROL & PERSONAL PROTECTION

Long Term exposure Limits	: (UK 2007) No Limit Specified
Short Term Exposure Limits	: (UK2007) No limit specified
Personal Protective Equipments	
Respiratory Protection	: Government approved respirator
Eye Protection	: Chemical safety goggles.
Skin Protection	: Hand Protection Compatible
Chemical- resistant gloves	
Ingredients with workplace control parameters	: Contains no substances with occupational
Engineering measures	: Ensure adequate ventilation
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice.

Section 9 –PHYSICAL AND CHEMICAL PROPERTIES

Flash Ignition Temperature	: 60 °C
Auto Ignition Temperature	: 231 °C
Flammable Limits	: Lower. 0.9%
	: Upper. 12.7%
Appearance	: Clear colorless liquid
Odor	: Vinous odor
Melting Point	: minus 76 °C
Boiling Point	: 182 °C
Vapour Pressure	: 0.2 mmHg @ 20 °C
Relative Vapor Density (air)	: 4.5
Specific Gravity	: 0.834
Solubility in Water	: 0.72 g/l at 20°C

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Section 10 –CHEMICAL STABILITY AND REACTIVITY INFORMATION

Hazardous Polymerization	: Not applicable
Stability	: Stable
Incompatibilities	: Oxidizing agents Aluminium alkali metals Bases Strong acids Halogens Attacks some plastics, rubbers and coatings
Hazardous Combustion and Decomposition Products	: Carbon monoxide, Carbon dioxide.
Corrosivity	: Not applicable

Reactivity Profile

2-ETHYL HEXANOL is an alcohol. Flammable and/or toxic gases are generated by the combination of alcohols with alkali metals, nitrides, and strong reducing agents. They react with oxoacids and carboxylic acids to form esters plus water. Oxidizing agents convert them to aldehydes or ketones. Alcohols exhibit both weak acid and weak base behavior. They may initiate the polymerization of isocyanates and epoxides. This compound is incompatible with strong oxidizing agents and strong acids.

Section 11 –TOXICOLOGICAL INFORMATION

EYE IRRITATION	: Causes irritation on exposure
SKIN IRRITATION	: Causes irritation on exposure, may get absorbed through skin

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RESPIRATORY/ INHALATION	: Harmful on inhalation, irritating to mucous membranes and upper respiratory tract
INGESTION	: Harmful if swallowed, irritating to mucous membranes
Section 12 –ECOLOGICAL INFORMATION	
Slightly hazardous for water.	

Section 13– DISPOSAL CONSIDERATION	
WASTE DISPOSAL METHOD	: Contact a licensed professional. Waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.
REMARKS	: Follow all applicable international, state, and local disposal regulations. Further disposal information should be sought from other sources.

Section 14– TRANSPORT INFORMATION	
International Regulations IMDG-Code Not regulated as a dangerous good Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable for product as supplied Proper Shipping Name: COMBUSTIBLE LIQUID, N.O.S. (2-Ethyl Hexanol) UN Number: 1986	

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Special transport precautionary measures - NA

Section 15– REGULATORY INFORMATION

MSDS format on a 16 Section based on guidance provided in:

Indian Regulation:

Manufacture, Storage and Import of Hazardous Chemicals Rule, 1989.

The Factories Act 1948

International Regulations:

European SDS Directive

Labelling according to EC directives

*R phrases: R 10-20/21/22-35-50: Flammable. Harmful by inhalation, in contact with skin and if swallowed. Causes severe burns. Very toxic to aquatic organisms.

*S phrases: S 26-36/37/39-45-61

These standard risk and safety phrases for use when interpreting Material Safety data Sheets are derived from the European Union Regulation, CHIP Regulations -Chemicals (Hazard Information and Packaging for Supply). They are required to be used in Materials Safety Data Sheets to identify potential hazards and offer safe handling advice.

Section 16 – OTHER INFORMATION

No specific notes on this product

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End of MSDS