POLY (VINYL ETHYL ETHER) LUTA50 50% ETHANOL

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name:	Poly (vinyl ethyl ether) Luta 50, 50% Ethanol
CAS Number:	25104-37-4 & 64-17-5

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

Product use:	For industrial use only.

1.3 Details of the supplier of the safety data sheet

Company name:	East Harbour Group Ltd 20 Clough Road, Severalls Industrial Park Colchester, Essex, CO4 9QS United Kingdom
Telephone:	+44 (0) 333 242 0100
Email:	info@eastharbourgroup.com

1.4 Emergency telephone number

Emergency telephone:	0800 246 1274

Section 2: Hazardous identification

2.1 Classification of the substance or mixture

GHS Classification of the product

Flammable Liquids	2
Serious eye damage/eye irritation	2A
Specific target organ toxicity-Single exposure; Respiratory tract irritation	3
Specific target organ toxicity-Single exposure; Narcotic effects	3
Specific target organ toxicity-Repeated exposure; Liver	1
Specific target organ toxicity-Repeated exposure: Central nervous system	2

2.2 Label elements

Signal word — Danger!

Pictogram(s) or Symbol(s)

Precautionary Statement(s):

Hazard Statement

H225	Highly flammable liquid and vapour.
H319	Causes severe eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness

POLY (VINYL ETHYL ETHER) LUTA50 50% ETHANOL

H372	Cause damage to organs through prolonged or repeated exposure: liver
H373	May cause damage to organs through prolonged or repeated exposure: central nervous system

Precautionary Statements (Prevention)

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242	Use only non-sparking tools.
P243	Take action to prevent static discharge.
P280	Wear protective gloves and eye/face/hearing protection.
P264 + P265	Wash hands thoroughly after handling. Do not touch eyes.
P260	Do not breathe dusts/ fume/ gas/ mists/ vapours/ spray.
P271	Use only outdoors or in a well-ventilated area.
P270	Do not eat, drink or smoke when using this product.

Precautionary Statements (Response)

P303 + P361 + P352	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Immediately wash with plenty water.
P370 + P378	In case of fire: Use sand, alcohol-resistant foam, dry chemical powder or carbon dioxide to extinguish.
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 + P317	If eye irritation persists: Get medical help.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P319	Get medical help if you feel unwell.

Precautionary Statements (Storage)

P403 + P235 + P233	Store in a well-ventilated place. Keep cool. Keep container tightly closed.
P405	Store locked up.

Precautionary Statements (Disposal)

P501	Dispose of contents/container to authorized chemical company in accordance with local/ regional/ national/ international regulations.

According to UN GHS criteria

Hazard determining component(s) for labelling: Ethanol

Hazards not otherwise classified

No specific dangers known, if the regulations/ notes for storage and handling are considered.

Section 3: Composition/information on ingredients

Composition

Chemical Name	CAS No.	EINECS No.	% by Weight
Poly (ethyl vinyl ether)	25104-37-4	680-545-4	48.0 - 52.0
Ethanol	64-17-5	200-578-6	52.0 - 48.0

POLY (VINYL ETHYL ETHER) LUTA50 50% ETHANOL

Section 4: First aid measures

4.1 Description of first aid measures
General advice
Immediately remove contaminated clothing.

If inhaled
Keep the patient calm, remove to fresh air, seek medical attention.

If on skin
Immediately wash thoroughly with soap and water.

If in eyes
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed
Immediately rinse mouth and then drink 200-300mL of water. Seek medical attention.

Most important symptoms and effects, both acute and delayed
Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labelling phrases available in Section 2 and in the Toxicological assessments available in Section 11. (Further) symptoms and/ or effects are not known so far.
Hazards: No hazards is expected under intended use and appropriate handling.

Indication of any immediate medical attention and special treatment needed
Note to physician
Treatment
Treat according to symptoms (decontamination, vital functions).

Section 5: Fire-fighting measures

5.1 Extinguishing Media
Suitable extinguishing media: foam, carbon dioxide, dry powder

Special hazards arising from the substance or mixture Hazards during firefighting
Highly flammable. See MSDS section 7 - Handling and storage.

Advice for fire-fighters
Special protective equipment for firefighting: Wear a self-contained breathing apparatus.

Further information
See MSDS section 7 - Handling and storage.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Personal precautions, protective equipment and emergency procedures

POLY (VINYL ETHYL ETHER) LUTA50 50% ETHANOL

For personnel handling the product
Use personal protective clothing. Avoid contact with the skin, eyes and clothing. Use breathing apparatus if exposed to vapours/ dust/ aerosol.

Environmental Precautions
Contain contaminated water/ firefighting water. Do not discharge into drains/ surface waters/ groundwater.

Methods and materials for containment and cleaning up
Small Spill
Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Dispose of absorbed material in accordance with regulations.

Large Spill
Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Dispose of absorbed material in accordance with regulations.

Reference to other sections
Information regarding exposure controls/ personal protection and disposal considerations can be found in section 8 and 13.

Section 7: Handling and storage

7.1 Precautions for safe handling
Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.
The viscous consistency of the polymer can cause disturbances in pipelines.
Protection against fire and explosion: Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking.

Conditions for safe storage, including any incompatibilities
Suitable materials for containers
Galvanized carbon steel (Zinc), tinned carbon steel (Tinplate), Stove-lacquer O 360, Stove-lacquer RDL 50, Stainless steel 1.4301 (V2), Stainless steel 1.4401, glass.

Unsuitable materials for containers
Low density polyethylene (LDPE), Paper/ Fibreboard, High density polyethylene (HDPE), Carbon steel (Iron)
Further information on storage conditions: Protect against heat. Protect against moisture.

Specific end use(s):
For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

Section 8: Exposure controls/personal protection

Components with occupational exposure limits

Chemical Name	ACGIH	NIOSH	OSHA PEL
Poly (ethyl vinyl ether) CAS No.: 25104-37-4	Not listed	Not listed	Not listed
Ethanol CAS No.: 64-17-5	STEL 1,00 ppm	TWA 1,000 ppm 1,900 mg/m^3	TWA 1,000 ppm 1,900 mg/m^3

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POLY (VINYL ETHYL ETHER) LUTA50 50% ETHANOL

Exposure controls
Personal protection equipment

Respiratory protection
Suitable respiratory protection for lower concentration or short-term effect: Gas filter for gases/ vapours of organic compounds (boiling point >65°C, e.g. EN 14387 Type A)

Hand Protection
Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding >480 minutes of permeation time according to EN 374): butyl rubber - 0.7 mm coating thickness etc. Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Eye/ Face Protection
Safety glasses with side-shields (frame goggles) (e.g. EN166).

General safety and hygiene measures
Wear of closed work clothing is recommended. Hands and/or face should be washed before breaks and at the end of the shift.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical Form	liquid	
Odour	odour of ethanol	
Odour threshold	not determined	
Colour	Colourless, clear	
Solid content	48.0 - 52.0%	(DIN EN ISO 3251)
pH value	N/A	
Glass transition temperature	-30°C	
Boiling temperature	78.5°C	(1,013 hPa, literature data)
Deposition points	not applicable	
Thermal decomposition	No decomposition if used correctly.	
Flash point	12°C	(Closed cup)
Flammability	Highly flammable	
Lower explosion limit	3.5 %(V)	(DIN 51649-1)
	For liquids not relevant for classification and labelling	
Upper explosion limit	15 %(V)	
	For liquids not relevant for classification and labelling	
Explosion hazard	not explosive	
Fire promoting properties	not fire-propagating	
Ignition temperature	320°C	
Self-ignition temperature	not self-igniting	
Density	0.87 g/cm3	(20 °C)
Relative density	0.87	(20 °C)
Vapour density	not determined	
Vapour pressure	60 mbar (20°C)	240 mbar (50°C)
Evaporation rate	Value can be approximated from Henry's Law Constant or vapor pressure	

POLY (VINYL ETHYL ETHER) LUTA50 50% ETHANOL

Viscosity, dynamic	5,000 - 20,000 mPa·s	DIN EN ISO 3219, Annex A
Solubility in water	not soluble	
Information on: Ethanol Partitioning coefficient n-octanol/water (log Kow):	-0.31 (25°C, Literature data.)	(Calculated)

Section 10: Stability and Reactivity

10.1 Reactivity
No hazardous reactions if stored and handled as prescribed/ indicated.

10.2 Chemical Stability
The product is stable if stored and handled as prescribed/ indicated.

10.3 Possibility of hazardous reactions
No hazardous reactions when stored and handled according to instructions.

10.4 Conditions to avoid
Avoid all source of ignition: heat, sparks, open flame.

10.5 Incompatible materials
Substance to avoid: No substances known that should be avoided.

10.6 Hazardous decomposition products
Decomposition products: No hazardous decomposition products if stored and handled as prescribed/ indicated.

Section 11: Toxicological Information

11.1 Toxicological effects:
Acute toxicity
Information on Ethanol
Assessment of acute toxicity
Virtually nontoxicity after a single ingestion. Virtually nontoxic by inhalation.

Information on Ethanol
Experimental/ calculated data
LD50 rat (oral): 10,470 mg/kg (OECD Guideline 401)

Information on Ethanol
Experimental/ calculated data
LC50 rat (by inhalation): 124.7 mg/L 4h
The vapour was tested.

Information on Ethanol
Experimental/ calculated data
LDLo rabbit (dermal): 20,000 mg/kg 4h
Literature data.

Irritation
Assessment of irritating effects

POLY (VINYL ETHYL ETHER) LUTA50 50% ETHANOL

No reliable data was available concerning skin irritation. No irritating to the eyes.
Experimental/ calculated data:
Serious eye damage/irritation in vitro assay: no irreversible damage (BCOP)
Serious eye damage/irritation In vitro assay: non-irritant (OECD Guideline 492)

Respiratory/ Skin sensitization
Information on Ethanol
Assessment of sensitization
Skin sensitizing effects were not observed in animal studies.

Germ cell mutagenicity
Assessment of mutagenicity
Based on the ingredients, there is no suspicious of a mutagenic effect.

Information on Ethanol
Assessment of mutagenicity
The substance was not mutagenic in bacteria. The substance was not mutagenic in mammal cell culture. The substance was not mutagenic in a test with mammals.

Carcinogenicity
Information on Ethanol
Assessment of carcinogenicity
The International Agency for Research on Cancer (IARC) has classified this substance as a Group 1 (known) human carcinogen. The whole of the information assessable provides no indication of a carcinogenic effect.

Reproductive toxicity
Information on Ethanol
Assessment of reproductive toxicity
The potential to impair fertility cannot be excluded when given at high doses.

Developmental toxicity
Information on Ethanol
Assessment of teratogenicity
At high doses there are indications of a developmental effect.

Specific target organ toxicity (single exposure)
Remarks: No data available.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)
Information on Ethanol
Assessment of repeated dose toxicity
The substance may cause damage to the liver after repeated ingestion. Repeated inhalation uptake of the substance did not cause substance-related effects. The substance may cause damage to the peripheral nervous system after repeated ingestion of high dose. The substance may cause damage to the central nervous system after repeated ingestion of high doses.

Aspiration hazard
No aspiration hazard expected.

Other relevant toxicity information
Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designates uses. The toxicity of the product is determined mainly by the solvent (or solvents).

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POLY (VINYL ETHYL ETHER) LUTA50 50% ETHANOL

Section 12: Ecological Information

12.1 Toxicity
Microorganisms/ Effect on activated sludge:
Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentration.

Information on Ethanol
Assessment of aquatic toxicity
There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Persistence and degradability
Assessment biodegradation and elimination (H2O)
The solvent is biodegradable. The product is virtually insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plants.

Bioaccumulative potential
Information on Ethanol
Bioaccumulation potential
No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow)

Mobility in soil
Information on Ethanol
Assessment transport between environmental compartments
Volatility: The substance will not evaporate into the atmosphere from the water surface. Adsorption in soil: Adsorption to solid soil phase is not expected.

Results of PBT and vPvB assessment
According to Annex XIII of Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/ bioaccumulative/ toxic) criteria or the vPvB (very persistent/ very bioaccumulative) criteria.

Other adverse effects
No data available.

Additional information
Absorbable organically bound halogen (AOX)
No data available.

Other ecotoxicological advice
Do not release untreated into natural waters. The local regulations on waste-water treatment must be followed. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Section 13: Disposal considerations

13.1 Waste treatment methods

POLY (VINYL ETHYL ETHER) LUTA50 50% ETHANOL

Must be sent to a suitable incineration plant, observing local regulations.
A waste code in accordance with the European waste catalogue (EWC) cannot be specified, due to dependence on the usage.
Observe national and local legal requirements.

Section 14: Transport Information

LAND (ADR)

Proper Shipping Name	RESIN SOLUTION, FLAMMABLE.
Technical Name	Poly (ethyl vinyl ether) 50% in Ethanol
Hazard Class	3
UN NO.	1866
Packing Group	II
Environmental hazard	No
Special precautions for users	Tunnel code: D/E SP 640 D

OCEAN (IMDG)

Proper Shipping Name	RESIN SOLUTION, FLAMMABLE.
Technical Name	Poly (ethyl vinyl ether) 50% in Ethanol
Hazard Class	3
UN NO.	1866
Packing Group	II
Environmental hazard	No Marine pollutant No
Special precautions for user	None

AIR (DGR)

Proper Shipping Name	RESIN SOLUTION, FLAMMABLE.
Technical Name	Poly (ethyl vinyl ether) 50% in Ethanol
Hazard Class	3
UN NO.	1866
Packing Group	II
Environmental hazard	No Special
precautions for users:	None

Section 15: Regulatory Information

15.1 Safety, health and environmental regulations/ legislation specific for the substance or mixture
Prohibitions, Regulations (EC) No. 1907/2006: Number on list: 3, 40

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

Section 16: Other Information

The information herein is believed to be correct but does not claim to be all inclusive and should be used only as a guide. Neither the above-named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of

POLY (VINYL ETHYL ETHER) LUTA50 50% ETHANOL

suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Our MSDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.