

SAFETY DATA SHEET

GBF Number SDS 68
Prepare Date 27.10.2019
Revision Date -
Revision -



likitkimya

SYNTHETIC ETHYL ALCOHOL

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Synthetic ethyl alcohol

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

Identified uses : Solvents, Anti-freezing agents, Heat transfer agents, Fuels and fuel additives, Laboratory chemicals, intermediates

1.3 Details of the supplier of the safety data sheet

Company : Likit Kimya Sanayi Ticaret A.Ş.

Terminal Address : Terminal Adres: Seymen Yolu. 3.km Marmara Ereğlisi/Tekirdağ

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1.4 Hazards identification

Emergency First Aid Centere : 112

Poison Information Centere : 114

Company Consultation : 0(282) 613 41 39

2. Hazard Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) no 1272/2008

Flammable liquids (Category 2), H225

Eye Irritation (Category 2), H319

May cause drowsiness or dizziness, H336

For 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 vapour.

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H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness
Precautionary statement(s)	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P242	Use only non-sparking tools.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+ P353	IF ON SKIN(or hair) : Remove/Take off immediately all contaminated clothing
P403+P235	Store in a well-ventilated place. Keep cool.

Hazards for people:

Vapors may be slightly intoxicating.

- when in contact with skin: Prolonged and multiple contacts cause slight drying of the skin
 - when in contact with eyes: Causes burning sensation.
 - when swallowed in large quantities: Causes nausea and vomiting. Not to be used as food due to the presence of a denaturant.
- Causes nausea and vomiting. Not to be used as food due to the presence of a denaturant.
- Supplemental Hazard information (EU)
 EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other Hazards

None.

3. Composition/information on ingredients

3.1 Substane

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Ethanol CAS NO: 64-17-5 EC NO: 200-578-6	Flam.Liq.2,H225	> 90%

For the full text of the H-Statements and R-Phrases mentioned in this Section, see section 16

4. First Aid Measures

4.1 Description of First Aid Measures

General advice

Inhalation: Supply of fresh air, if complaints persist, seek medical advice.
 Skin contact: Rinse with plenty of water. Take off all contaminated clothing.
 Eye contact: Rinse eyes with plenty of water for several minutes. Seek medical attention.
 Ingestion: Rinse your mouth with water. It is recommended to drink several glasses of water. Seek medical

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attention in case of complaints.

4.2 Indication of any immediate medical attention and special treatment needed

Irritating effect, respiratory paralysis, dermatitis, dizziness, narcosis, intoxication, euphoria, nausea, vomiting.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Chemical foam, finely dispersed water, air and mechanical foam, CO₂.

5.2 Special hazards arising from the substance or mixture.

The vapors of the substance are heavier than air. Formation of explosive mixtures with air under normal temperatures is possible.

The formation of flammable gasses or hazardous vapors is possible in the presence of fire.

5.3 Advice for firefighters

Firefighters should not be present in the danger zone without suitable clothing for chemical protection and a breathing apparatus.

5.4 Further information

Use water spray to cool unopened containers.

6. Accidental release measures

6.1 Personal precautions, Protective equipment and emergency procedures

Eliminate all sources of ignition. Provide protective equipment for respiratory protection or adequate ventilation.

6.2 Environmental precautions

Prevent contamination of drains / surface water / soil waters. Explosion hazard.

6.3 Methods and materials for containment and cleaning up

Usage of absorbent material; dilution.

7. Handling and storage

7.1 Precautions for safe handling

Avoid spills. Keep away from open fire, hot surfaces or sources of ignition. Keep containers tightly closed. Take precautionary measures against static electricity. No smoking when material is handled.

7.2 Conditions for safe storage, including any incompatibilities.

Store away from sources of heat and fire. Overfilling of containers is prohibited. Store in well-ventilated areas. No smoking is allowed in storage areas. Storage temperature: no restrictions.

8. Exposure controls/personal protection

8.1 Expose Levels

Inhalation DNEL (short term, local): 1900mg/m³
(1000ppm)

Inhalation DNEL (long term, systemic) :950mg/m³

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(500ppm)
Dermal DNEL (long term, systemic): 343mg/kgbw/day
PNEC aqua (freshwater): 0.96mg/l
PNEC aqua (marine water): 0.79mg/l
PNEC aqua (intermittent release): 2.75mg/l

PNEC STP: 580mg/l
PNEC sediment (freshwater): 3.6mg/kgdw
PNEC sediment (marine water): 2.9mg/kgdw
PNEC soil: 0.63 mg/kgdw
PNEC oral: 0.72g/kg food

8.2 Exposure controls

Appropriate engineering controls

When working in indoor areas, they should be equipped with: intake and pressure ventilation, emergency ventilation, gas alarm.

Personal protection equipment:

Protection of respiratory organs:

Required when vapors/aerosols are formed.

Short-term filtration: Filter A

Protection of hands:

Gloves to be used for prolonged or constant contact. Usage of protective cream on skin is recommended.

Prolonged contact:

Material of gloves – butyl rubber

Thickness of gloves – 0.7 mm

Penetration time - > 480 min

Short contact:

Material of gloves – nitrile rubber

Thickness of gloves – 0.4 mm

Penetration time - > 120 min

Eye protection:

Tightly fit protective goggles

Skin protection:

Work clothing should not be made from textile materials (synthetic fabrics) which can melt in case of a fire.

General protection and hygiene measures:

Follow the usual protection work measures. Wash your hands after work and before a break, especially eating, drinking or smoking. Avoid contact with skin or eyes, and do not inhale the dust.

Environmental exposure controls:

Not to be released in the canalization system. Explosion hazard.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|---------------|-----------------------------------|
| a) Appearance | Form:clear, liquid |
| | Color: colourless |
| b) Odour | Mild but typical alcoholic odour. |
| c) pH | Neutral |

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d) Freezing point	-114 ° C
e) Boiling point	78 ° C
f) Critical temperature	235°C
g) Critical perssure	47600 hPa
h) Flash point	13 ° C
i) Solution in water(20° C)	Unlimited
j) Flame point	425 ° C
k) Explosion limits	2,5 vol%
	13,5 vol
l) Explosive properties	No data available.
m) Oxidizing properties	No data available
n) Vapour pressure	57,26 hPa at 20,0 ° C
o) Relative density at 20°C	0,7844 g/cm ³ (25,0° C)

10. Stability and reactivity**10.1 Reactivity**

May react violently with very strong oxidising agents (eg perchlorates).

10.2 Chemical Stability

Stable under normal temperatures and pressures..

10.3 Possibility of hazardous reactions

Hazard of ignition or formation of flammable gases or vapors with: alkali metals or oxides, halogen compounds, acids

10.4 Conditions to avoid

Any possible ignition sources (spark or flame) are to be avoided.

10.5 Incompatible materials

Strong mineral acids, oxidising agents. Aluminium at higher temperatures

10.6 Hazardous decomposition products

Combustion will generate oxides of carbon.

11. Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

ORAL (OECD401 equivalent): Rat LD50: 6.2 –15g/kgbw
 INHALATION (OECD403 equivalent): Rat LC50 (4hr)>50mg/l
 DERMAL: No data available.

Available data indicates that classification criteria are not met.

Skin corrosion/irritation

All available acute 4 hour exposure studies show not irritating in animals (OECD404 or equivalent) and humans. In humans, repeated dose studies show no irritation with repeated application over a whole day under occlusive conditions for up to 12 days. Further exposures cause irritation to occur.

Available data indicates that classification criteria are not met.

Serious eye damage/irritation

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Studies according to OECD guideline405 generally cause moderate eye irritation. All effects disappear within 8-14 days. The level of response is insufficient to trigger classification under directive 67/548 but is sufficient in terms of conjunctival response to require classification as a category 2 irritant under regulation 1272/2008.

Respiratory or skin sensitisation

Mouse swelling study: negative
Local Lymph Node Assay (OECD429): Negative
Guinea Pig maximisation study: (OECD406) Negative
Respiration sensitisation: no data available.
Available data indicates that classification criteria are not met.

Germ cell mutagenicity

Bacterial reverse mutation studies (OECD471): all negative
In vitro cytogenicity studies (eg OECD473): negative without metabolic activation. No studies available with metabolic activation.
In vitro mammalian cell gene mutation studies (ef OECD476): negative with and without metabolic activation.
In vivo micronucleus test (OECD474): no convincing evidence that ethanol causes micronuclei in the bone marrow.
In vivo chromosome aberration test (OECD475):negative.
Dominant Lethal assay (OECD478): Ethanol is unlikely to produce an effect up to the maximum tolerated dose.
There is some evidence from in vitro studies that ethanol can cause genotoxic or clastogenic effects. However, the effects seen are weak and only occur at very high doses.. The balance of evidence is that ethanol is not genotoxic. Available data indicates that classification criteria are not met.

Carcinogenicity

Rats: NOAEL>3000mg/kg
Mice: Females NOAEL>4400mg/kg, Males NOAEL>4250mg/kg based on historic control data, BMDL10=1400mg/kg based on concurrent control data.
In humans, the consumption of alcoholic beverages is associated with an increased incidence of certain tumours. There is no evidence that the exposure of humans to ethanol other than by repeated consumption of alcoholic beverages may result in an increase in cance incidence. From the available data, the classification criteria are not met.

Reproductive toxicity

FERTILITY:
NOAEL (oral, mouse) = 13.8g/kg (OECD416 equiv.)
NOAEC (inhalation, rat) >16,000ppm
DEVELOPMENTAL TOXICITY (OECD414 equiv):
NOAEL (oral) = 5.2g/kgbw/day
NOAEC (inhalation) = 39mg/l.

In humans excessive consumption of alcoholic beverages during pregnancy is associated with the induction of Foetal Alcohol Syndrome in the offspring causing reduced birth weight and physical and mental defect to occur. There is no evidence that such effects might be caused by exposures other than direct ingestion of alcoholic drinks. Blood ethanol concentrations resulting from ethanol exposure by any route other than deliberate and repeated oral

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consumption are unlikely to reach levels associated with reproductive or developmental effects. From the available data, it can be concluded that it is impossible to reach the doses of ethanol required to produce any sort of adverse reproductive response other than by repeated oral consumption of large amounts of ethanol, doses normally only associated with problem drinking, and therefore classification for reproductive or developmental toxicity in the context of a chemical substance is not appropriate or warranted.

STOT – single exposure

No specific target organ effects observed following single exposure.

STOT – repeated exposure

In sub-chronic feeding or drinking water studies in rats, NOAELs ranged from 1.73g/kg to 3.9g/kg. The most sensitive effect above these doses appeared to be to the kidney in males. Effects are only seen at doses well above the levels that would require classification.

Aspiration hazard

No aspiration hazard expected.

Toxicokinetics

In humans, ethanol is readily absorbed by the oral and inhalation routes, is distributed throughout all tissues and organs and is readily, metabolized and excreted.

At exposures relevant to occupational inhalation exposure, the alcohol dehydrogenase metabolic route in the liver dominates and does not become saturated. Ethanol is not accumulated in the body. Dermal uptake of ethanol is very low.

Likely routes of exposure

Inhalation is the most likely route of exposure during normal use. Dermal uptake only likely under extended exposure under occluded conditions. Substance is readily absorbed following ingestion.

Symptoms related to the physical and toxicological characteristics

INGESTION: Swallowing may have the following effects: central nervous system depression, nausea/vomiting, symptoms similar to alcoholic beverage intoxication.

INHALATION: Inhalation of high vapour concentrations may cause transient irritation of the respiratory tract, headache, nausea.

Delayed effects

Delayed effects not expected.

12. Ecological Information**12.1 Toxicity**

FISH: LC50 (96hr) *Salmo gairdneri*: 13g/l; *Pimephales promelas*: 13.5, 14.2 and 15.3g/l.

INVERTEBRATES FRESHWATER EC50 (48hr) *Daphnia*

Magna: 12.34g/l; NOEC (reproduction, 21 days):

>10mg/l. *Ceriodaphnia dubia*: EC50 (48hrs): 5.012g/l;

NOEC (reproduction, 10 days): 9.6mg/l. *Palaemonetes*

pugio NOEC (developmental, 10 days): 79mg/l.

INVERTEBRATES SALTWATER EC50 (24hr) *Artemia*

salina 23.9, >10g/l; EC50 (48hr) *Artemia salina* nauplii: 857mg/l

AQUATIC ALGAE FRESHWATER: *Chlorella vulgaris*,

72hr: EC50 275mg/l, EC10 11.5mg/l; *Selenastrum*

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capricornutum, 72hr, EC50: 12.9g/l, EC10=0.44g/l;
 Chlamydomonas eugametos, 48hr, EC50: 18g/l,
 NOEC=7.9g/l
 AQUATIC ALGAE SALTWATER: Skeletonema costatum,
 NOEC (5 days): 3.24g/l.

12.2 Persistence and degradability

The product is readily biodegradable. BOD20=84%.
 Substance is expected to degrade readily in sewage treatment plants.

12.3 Bioaccumulation potential

Based on the partition coefficient, the substance has a low bioaccumulation potential

12.4 Other unfavorable effects

If released to air or water the product will disperse rapidly. If released to soil it will evaporate at a rapid rate. The product is volatile and water soluble. If released to the environment it will partition to air and water. The product is poorly absorbed on to soil or sediments.

Persistence Assessment: Substance is readily biodegradable and is therefore neither P nor vP.

Bioaccumulation Assessment: Substance logKow<4.5 and is therefore it is neither B nor vB.

Toxicity Assessment: Acute aquatic toxicity (LC50 and EC50) >0.1mg/l. Substance is neither carcinogenic, mutagenic nor teratogenic. Substance is not T.

13. Disposal considerations**13.1 Waste treatment methods****Product**

SUBSTANCE DISPOSAL: Dispose of in accordance with all applicable local and national regulations. Use recovery/recycling where feasible, otherwise incineration is the recommended method of disposal.

If correctly incinerated this material will decompose to carbon dioxide and water only.

CONTAINER DISPOSAL: Empty containers may contain hazardous residues. Do not cut, puncture or weld on or near to the container. Labels should not be removed from containers until they have been cleaned. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers.

14. Transport Information**14.1 UN number**

ADR/RID: 1170 IMDG: 1170 IATA: 1170

14.2 UN proper shipping name

ADR/RID ETHANOL (ETHYL ALCOHOL)
 IMDG ETHANOL (ETHYL ALCOHOL)
 IATA ETHANOL (ETHYL ALCOHOL)

14.3 Transport hazard class(es)

ADR/RID: 3 IMDG: 3 IATA: 3(F1)-Flammable Liquids

14.4 Packaging group

ADR/RID: II IMDG: II IATA: 3(F1)Flammable liquids

14.5 Environmental hazards

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ADR/RID:3(F1) Flammable liquids

IMDG: 3(F1)Flammable liquids

IATA:3(F1) Flammable liquids

15. Regulatory information

15.1 Labeling in accordance with EC directives: The product is classified and labeled in accordance with the relevant EC directives

15.2 Assessment of the safety of the chemical substance or mixture:
Chemical safety assessment shall not be made for this product.

16. Other information

Further information

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