



Flame Paste

Safety Data Sheet

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

1.1. Product identifier

Product name Angel Fire Flame Paste
Product number FL1

1.2. Relevant identified uses of the substance or mixture

Identified Uses Usage as combustible in entertainment (e.g. fire decoration) and hazard training (e.g. fire simulation).

Uses Advised Against Applications which do not fulfill the above-mentioned purpose.

1.3. Details of the supplier of the safety data sheet

Supplier Le Maitre Ltd.
6 Forval Close,
Wandle Way,
Mitcham, Surrey
CR4 4NE
Tel: +44 208 646 2222
Fax: +44 208 646 1955

1.4. Emergency telephone

France Hopital Fernand WIDAL
200 rue du Faubourg Saint Denis
75475 Paris Cedex 10
Tel: 01 40 05 48 48

Belgium Antigifcentrum
p/a Militair hospitaal Koningin Astrid

Bruynstraat 1, 1120 Brussel
Tel: 070 245 245

Spain

Instituto Nacional de Toxicologia
Servicio Nacional de Informació n Toxicoló gica
c/Merce´ , 1
08002 Barcelona
Tel: 03 3 17 44 00

Great Britain

National Poisons Information Service
(Birmingham Centre)
City Hospital
Dudley Road
Birmingham B18 7QH
Tel: 087 06 00 62 66

Italy

Centro Antiveleni
Servicio de Tossicologia Clinica
Inst. di Anest. e Rian.
Universita Cattolica del Sacro Cuore
Largo A. Gemelli 8
00168 Roma
Tel: 06 3 05 43 43

Poland

Pracownia Informacji Toksykologicznej i Analiz Laboratoryjnych
Uniwersytetu Jagiellońskiego - Collegium Medicum,
31-501 Krakow
ul. Kopernika 15, III piętro, pok. 329, 330
Tel: 012 411 99 99

Danmark

Clinic of Occupational Medicine
Bispebjerg Hospital
Bispebjerg Bakke 23
2400 Copenhagen NV
Tel: 35 31 60 60

Section 2: Hazards Identification

2.1. Classification of the substance or mixture classification (EC/1272/2008)

| | |
|------------------|--|
| Flam. Sol. 2 | H228 Flammable solid |
| Eye irritation 2 | H319 Eye irritation |
| STOT SE 3 | H336 May cause drowsiness or dizziness |

Additional information

Full text of H- and EUH-phrases: see SECTION 16.

Most important adverse effects**Human Health:**

Chronic exposure damages the brain and the central nervous system.

May cause drowsiness or dizziness.

Causes serious eye irritation.

See section 11 for toxicological information.

Physical and chemical hazards:

Highly flammable liquid and vapour.

See section 9 for toxicological information.

Potential environmental effects:

According to available data, this product is not harmful to the environment.

See section 12 for toxicological information.

2.2. Label elements**Labelling according to Regulation (EC) No 1272/2008****Hazard pictograms****Signal word**

Danger

Hazard statements

H228

Flammable solid.

H319

Causes serious eye irritation.

H336

May cause drowsiness or dizziness.

Precautionary statements:**Prevention**

P210

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233

Keep container tightly closed.

P243

Take precautionary measures against static discharge.

P280

Wear protective gloves/protective clothing/eye protection/fa

P370+P378

In case of fire: Use water spray, CO₂, sand, alcohol resistant foam, ABC powder for extinction.

Response

P303+P361+P353 IF ON SKIN (or hair)

Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304+P340 IF INHALED:

Remove to fresh air and keep at rest in a position comfortable for breathing.

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
P370+P378 In case of fire

If eye irritation persists: Get medical advice/attention.
Use water spray, CO₂, dry sand, alcohol resistant foam,
ABC powder for extinction.

Storage

P403+P233+235

Store in a well-ventilated place. Keep container tightly closed.
Keep cool.

2.3. Other hazards

For Results of PBT and vPvB assessment see section 12.5.

Section 3: Composition/information on ingredients

3.1. Substances

Non applicable

3.2. Mixtures

| Substance name | CAS No. | INDEX No. | EC No. | Concentration. | Classification according to Regulation (EC) No. 1272 [CLP] |
|--------------------|---------|---------------|-----------|----------------|---|
| <i>Ethanol</i> | 64-17-5 | 603-002-00-05 | 200-578-6 | 0-100% | <i>Flam. Liq. 2</i> <i>H225</i> <i>Eye Irrit. 2</i> <i>H319</i> |
| <i>Propan-2-ol</i> | 67-63-0 | 603-117-00-0 | 200-661-7 | 0-100% | <i>STOT SE3</i> <i>H336</i> <i>Flam. Liq. 2</i> <i>H225</i> <i>Eye Irrit. 2</i> <i>H319</i> |
| <i>Butanone</i> | 78-93-3 | 606-002-00-3 | 201-159-0 | < 0,25 % | <i>STOT SE3</i> <i>H336</i> <i>Flam. Liq. 2</i> <i>H225</i> <i>Eye Irrit. 2</i> <i>H319</i> |

Additional information:

Full text of H- and EUH-phrases: see SECTION 16.

Section 4: First aid measures

4.1. Description of first aid measures

General information

Move out of dangerous area. Take off all contaminated clothing immediately.

After inhalation

Move to fresh air. In case of shortness of breath, give oxygen.
If unconscious place in recovery position and seek medical advice.

After skin contact

Wash off immediately with plenty of water. If skin irritation persists, call a physician.

After eye contact

Rinse thoroughly with plenty of water, also under the eyelids.
Protect unharmed eye. Consult an eye specialist immediately.

After swallowed

Rinse mouth with water and drink afterwards plenty of water.
Never give anything by mouth to an unconscious person. Do NOT induce vomiting. If a person vomits when lying on his back, place him in the recovery position. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed**Symptoms**

Depending on the quantity and other circumstances consumption of ethanol can lead to a state of mental excitement and subsequent intoxication with symptoms like loss of self-control, dizziness or vomiting. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Eye irritation, can cause redness, tearing, pain and weakness of vision.

Effects

Liver injury may occur. Central nervous system depression, prolonged skin contact may cause skin irritation and/or dermatitis. Aspiration hazard if swallowed – can enter lungs and cause damage.

4.3. Indication of any immediate medical attention and special treatment needed**Treatment**

Clean mouth with water and drink afterwards plenty of water.
In case of shortness of breath, give oxygen.
Treat symptomatically.

Section 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing agents**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

For safety reasons unsuitable extinguishing agents

High volume water jet.

5.2. Special hazards arising from the substance or mixture**Specific hazards during firefighting**

Combustible solid. Vapours may form explosive mixtures with air. In case of fire hazardous decomposition products may be produced such as: Carbon oxides. Vapours are heavier than air and may spread along floors. Flash back possible over considerable distance.

5.3. Advice for firefighters**Special protective equipment for firefighters**

In the event of fire, wear self-contained breathing apparatus.
Wear appropriate body protection (full protective suit)

Further information

Cool closed containers exposed to fire with water spray. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Section 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Keep people away from and upwind of spill/leak. Provide adequate ventilation. Keep away from heat and sources of ignition. Avoid contact with skin and eyes. Do not breathe gas/fumes/vapour.

6.2. Environmental precautions

Avoid subsoil penetration. If material reaches soil inform authorities responsible for such cases. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3. Methods and materials for containment and cleaning up

Ensure adequate ventilation. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
Treat recovered material as described in the section "Disposal considerations". After cleaning, flush away traces with water.

6.4. Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on personal protective equipment.
See Section 13 for waste treatment information.

Section 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Keep container tightly closed. Use personal protective equipment. Provide sufficient air exchange and/or exhaust in work rooms. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

Hygiene measures

Take off all contaminated clothing immediately. Do not breathe gas/fumes/vapour/spray. Avoid contact with the skin and the eyes. Keep away from food, drink and animal feeding stuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage areas and containers**

Keep in an area equipped with solvent resistant flooring. Keep in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition.

Advice on protection against fire and explosion

Combustible Liquids; Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread along floors. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge. Use only explosion-proof equipment. Use water spray to cool unopened containers.

Advice on common storage

Keep away from food, drink and animal feeding stuffs. Incompatible with oxidizing agents. Do not store together with oxidizing and self-igniting products.

7.3. Specific end use(s)

Usage as combustible in entertainment (e.g. fire decoration) and hazard training (e.g. fire simulation).

Section 8: Exposure Controls/personal protection**8.1. Control parameters****Component: Ethanol (CAS-No 64-17-5)****Other Occupational Exposure Limit Values**

TRGS 900, AGW:

500 ppm, 960 mg/m³, (2)

If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).

Component: Butanone (CAS-No 78-93-3)**Other Occupational Exposure Limit Values**

TRGS 900, Skin designation:

Can be absorbed through the skin.

TRGS 900, AGW:

200 ppm, 600 mg/m³, (1)

If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).

EU ELV, Short Term Exposure Limit (STEL):

300 ppm, 900 mg/m³

Indicative

EU ELV, Time Weighted Average (TWA):

200 ppm, 600 mg/m³

Indicative

Component: Propan-2-ol (CAS-No 67-63-0)

Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)

DNEL

Workers, Long-term - systemic effects, Skin contact: 888 mg/kg bw/day

DNEL

Workers, Long-term - systemic effects, Inhalation: 500 mg/m³

DNEL

Consumers, Long-term - systemic effects, Skin contact: 319 mg/kg bw/day

DNEL

Consumers, Long-term - systemic effects, Inhalation: 89 mg/m³

DNEL

Consumers, Long-term - systemic effects, Ingestion: 26 mg/kg bw/day

Predicted No Effect Concentration (PNEC)

Fresh water: 140.9 mg/l

Marine water: 140.9 mg/l

Intermittent releases: 140.9 mg/l

Sewage treatment plant (STP): 2251 mg/l

Sediment: 552 mg/kg d.w.

Soil: 28 mg/kg

Secondary poisoning: 160 mg/kg food

Other Occupational Exposure Limit Values

UK.

STEL: 500ppm 15min

STEL: 1250mg/m³ 15 min

TWA: 400ppm 8hr

TWA: 999mg/m³ 8hr

8.2. Exposure controls

Appropriate engineering controls

Refer to protective measures listed in sections 7 and 8.

Personal protective equipment:

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment.

Required, if exposure limit is exceeded (e.g. OEL).

In case of intensive or longer exposure use self-contained breathing apparatus.

In case of brief exposure or low pollution use breathing filter apparatus.

Respirator with a vapour filter (EN 141)

Recommended Filter type: A

Hand protection:

Protective gloves complying with EN 374.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Protective gloves should be replaced at first signs of wear.

| | |
|---------------------|--------------------|
| Material: | butyl-rubber |
| Break through time: | >= 8 h |
| Glove thickness: | 0.5 mm |
| Material: | Fluorinated rubber |
| Break through time: | >= 8 h |
| Glove thickness: | 0.4 mm |

Eye protection:

Safety glasses with side-shields conforming to EN166

Skin and body protection:

Flame retardant antistatic protective clothing

Environmental exposure controls:

Do not flush into surface water or sanitary sewer system.

Avoid subsoil penetration.

If the product contaminates rivers and lakes or drains inform respective authorities.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---|
| Appearance: | Solid paste |
| Colour | Colourless , clear respectively white |
| Odour: | Alcohol-like |
| Odour Threshold: | No data available. |
| pH | No information available. |
| Initial boiling point and range | No information available. |
| Flash point | Ca. 12°C |
| Evaporation rate | No data available |
| Flammability (solid, gas) | 1 sec. – 5 sec./25 cm (UN Manual Of Tests And Criteria) |

| | |
|--------------------------------------|--|
| Self-ignition temperature | 425°C |
| Explosive Properties | EU legislation: Formation of explosive air/vapour mixtures is possible |
| <u>Explosion limits</u> | |
| Lower | 3.5% (V) |
| Upper | 15% (V) |
| Oxidising properties | None known |
| Vapour pressure | Ca. 60hPa @ 20°C |
| Density @ 20°C | 0.860 – 0.950 g/am ³ |
| Evaporation rate | No data available |
| Solubility(ies) | Completely miscible |
| Partition coefficient | No data available |
| Auto-ignition temperature | No data available |
| Decomposition Temperature | No information available |
| Viscosity | No data available |
| Relative vapour density | No data available |
| Thermal decomposition | No data available |
| <u>9.2. Other information</u> | |
| Other information | Not determined |

Section 10: Stability and Reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Formation of explosive air/vapour mixtures is possible.

Exothermic reaction with strong acids. Incompatible with oxidizing agents.

10.4 Conditions to avoid:

Heat, flames and sparks

10.5 Incompatible materials:

Strong oxidizing agents, Strong acids, Aldehydes, Amines, alkalis, alkanolamines

10.6 Hazardous decomposition products:

In case of fire hazardous decomposition products may be produced such as: Carbon monoxide, Carbon dioxide (CO₂)

Section 11: Toxicological effects

11.1. Information on toxicological effects

Acute toxicity

Oral For this mixture is no data available.
Please find this information in the listing of the component/components below in the MSDS.

Inhalation For this mixture is no data available.
Please find this information in the listing of the component/components below in the MSDS.

Dermal For this mixture is no data available.
Please find this information in the listing of the component/components below in the MSDS.

Irritation

Skin Based on available data, the classification criteria are not met.

Eyes Causes serious eye irritation.

Sensitisation

No sensitizing effect known by skin contact.

CMR effects

CMR Properties

Carcinogenicity: Contains no ingredient listed as a carcinogen
Mutagenicity: Contains no ingredient listed as a mutagen
Reproductive toxicity: Contains no ingredient listed as toxic to reproduction

Specific Target Organ Toxicity

Single exposure The substance or mixture is not classified as specific target organ toxicant, single exposure.

Repeated exposure The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Other toxic properties

Repeated dose toxicity No data available
Aspiration hazard No aspiration toxicity classification

Component: Ethanol (CAS-No: 64-17-5)

Acute toxicity

Oral LD50: > 2000 mg/kg (rat) (OECD Test Guideline 401)
Inhalation LC50: > 20 mg/l (rat; 4 h; vapour)
Dermal LD50: > 2000 mg/kg (rabbit) (OECD Test Guideline 402)

Further information

Exposure to ethanol vapors may result in irritation of the eyes and nose, drowsiness and headache. Other symptoms may include stupor, nausea, mental excitement or depression, vomiting, flushing and coma. It can cause irritation of the respiratory tract, intra ocular tension, ataxia, sleepiness, narcosis, impaired perception and incoordination. It can also cause lowered inhibitions, dizziness, shallow respiration, unconsciousness and death.

Chronic symptoms of ingestion and/or vapor exposure may include weight loss, cirrhosis of the liver, gastroenteritis, anorexia, diarrhea, polyneuritis with pain, motor and sensory loss in the extremities, optic atrophy and loss or impairment of other abilities, excitement, acute and chronic gastritis, malabsorption syndrome, acute and chronic pancreatitis, anemia due to acute or chronic blood myopathy, alcoholic cardiomyopathy, lactic acidosis, hypomagnesemia, hypouricemia, hyperlipidemia, pulmonary aspiration and respiratory infections. Chronic exposure may also result in serious neurological and mental disorders (e.g. brain damage, memory loss, sleep disturbances, and psychoses). Other symptoms include mucous membrane irritation, central nervous system depression, giddiness, jaundice, pain in upper abdomen on the right side and staggering gait. It may cause liver, kidney and heart damage. The pupils are sometimes widely dilated and unreactive to light. The liquid can defat the skin, producing a dermatitis characterized by drying and fissuring. It rarely causes temporary blindness. Ingestion of this compound can enhance the effects of coumarin, anticoagulants, antihistamines, hypnotics, sedatives, tranquilizers, insulin, monoamine oxidase inhibitors, and antidepressants. Can cause reproductive and teratogenic effects

Inhalation of aerosols may cause irritation to mucous membranes.

Component: Butanone (CAS-No: 78-93-3)

Acute toxicity

| | |
|------------|---|
| Oral | LD50: > 2193 mg/kg (rat) (OECD 423) |
| Inhalation | LC50: 34 mg/l (rat; 4 h) |
| Dermal | LD50: > 5000 mg/kg (rabbit) (OECD Test Guideline 402) |

Component: Propan-2-ol (CAS-No. 67-63-00)

Acute toxicity

| | |
|------------|--|
| Oral | LD50: 5840 mg/kg (Rat) (OECD Test Guideline 401) |
| Inhalation | LC50: > 25 mg/l (Rat; 6 h; vapour) (OECD Test Guideline 403) |
| Dermal | LD50: 13900 mg/kg (Rabbit) (OECD Test Guideline 402) |

CMR effects

CMR Properties

| | |
|------------------------|---|
| Carcinogenicity: | Based on available data, the classification criteria are not met. |
| Mutagenicity: | In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects |
| Teratogenicity: | No effects on or via lactation |
| Reproductive toxicity: | Based on available data, the classification criteria are not met. |

Carcinogenicity

| | |
|-------|--|
| NOEL: | 5.000 ppm (Negative, Mouse, male and female) (Inhalation; 0, 500, 2500, 5000 ppm; 78 weeks; Frequency of treatment: 5 days/week) (OECD Test Guideline 451) |
|-------|--|

Genotoxicity in vitro

Negative (Bacterial Reverse Mutation Test; Salmonella typhimurium; with and without metabolic activation) (OECD Test Guideline 471)

Negative (In vitro gene mutation study in mammalian cells; CHO (Chinese Hamster Ovary) cells; with and without metabolic activation) (OECD Test Guideline 476)

Genotoxicity in vivo

Negative (In vivo micronucleus test; Mouse, male and female) (intraperitoneal;) (OECD Test Guideline 474)

Teratogenicity

NOAEL Maternal: 400 mg/kg bw/day
NOAEL Develop.: 400 mg/kg bw/day (Rat, Sprague-Dawley)
(Oral)
(OECD Test Guideline 414) No adverse effects

Reproductive toxicity

NOAEL Parent: 853 mg/kg bw/day
(One-Generation Reproduction Toxicity Study; Rat, wistar, male and female)
(Oral)
(OECD Test Guideline 415) No negative effects.

NOAEL Parent: 500 mg/kg bw/day
(Two-generation reproductive toxicity; Rat, Sprague-Dawley, male and female)
(Oral)
(OECD Test Guideline 416) No negative effects.

Specific Target Organ Toxicity**Single exposure**

Inhalation: Target Organs: Central nervous system.
May cause drowsiness or dizziness.

Repeated exposure

Remark: Oral and inhalation repeated exposure studies demonstrated target organ effects in male rats (kidney) and male and female mice (thyroid) by mechanisms of action that are not relevant to humans

Other toxic properties**Aspiration hazard**

Aspiration hazard if swallowed - can enter lungs and cause damage.
Aspiration may cause pulmonary oedema and pneumonitis.
Based on available data, the classification criteria are not met.

Section 12: Ecological information

Component: Ethanol (CAS-No. 64-17-5)

Acute toxicity**Fish**

LC50: 15300 mg/l (Pimephales promelas (fathead minnow); 96h)
(flow-through test; US-EPA)
LC50: 11200 mg/l (Salmo gairdneri; 24h)
(flow-through test; US-EPA)

Toxicity to daphnia and other aquatic invertebrates

EC50: 858 mg/l (Artemia salina; 24h)
(OECD Test Guideline 202)

Marine water

EC50: > 10000 mg/l (Daphnia magna (Water flea); 48h) Fresh water
LC50: 5012 mg/l (Ceriodaphnia Dubia (Water flea); 48h)
(static test)

Algae

EC50: 275 mg/l (Chlorella vulgaris (Fresh water algae); 3d)
(static test; OECD Test Guideline 201) Fresh water
EC10: 11.5 mg/l (Chlorella vulgaris (Fresh water algae); 3d)
(static test; OECD Test Guideline 201)

Bacteria

EC50: 5800 mg/l (Paramecium caudatum; 4h)
(static test)

Component: Butanone (CAS-No. 78-93-3)

Acute toxicity**Fish**

LC50: 2990 mg/l (Pimephales promelas; 96h)
(static test; OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

EC50: 308 mg/l (Daphnia magna; 48h)
(static test; OECD Test Guideline 202)

Algae

EC50: 1972 mg/l (Pseudokirchneriella subcapitata (green algae); 72h)
(static test; OECD Test Guideline 201)

Bacteria

EC50: 1150 mg/l (Pseudomonas putida; 16 h)
(static test; DIN 38412)

Component: Propan-2-ol (CAS-No. 67-63-0)

Acute toxicity

Fish

LC50: 9640 mg/l (Pimephales promelas; 96h)
(flow-through test; OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

LC50: 9714 mg/l (Daphnia magna; 24h)
(static test; OECD Guideline 202)

Algae

EC50: > 100 mg/l (Scenedesmus subspicatus; 72h)
LOEC: 1000 mg/l (algae; 8d)

Bacteria

EC50: > 100 mg/l (Bacteria) no harming action

12.2 Persistence and degradability:

Component: Ethanol (CAS-No. 64-17-5)

Persistence and degradability

Persistence No data available
Biodegradability 84% (Exposure Time: 20d) Readily biodegradable.

Component: Butanone (CAS-No. 78-93-3)

Persistence and degradability

Persistence No data available
Biodegradability 98% (Exposure Time: 28d) (OECD 301 D)
Readily biodegradable.

Component: Propan-2-ol (CAS-No. 67-63-0)

Persistence and degradability

Persistence Transformation due to hydrolysis not expected to be significant.
Transformation due to photolysis not expected to be significant.
Biodegradability 53 % (aerobic; domestic sewage; Related to: O2 consumption;
Exposure Time: 5d)(Directive 67/548/EEC, Annex V, C.5)
Readily biodegradable

12.3 Bioaccumulative potential:

Component: Ethanol (CAS-No. 64-17-5)

Bioaccumulation log Kow -0,3
BCF: 0,66
Does not bioaccumulate.

Component: Butanone (CAS-No. 78-93-3)

Bioaccumulation log Kow 0,3 (40 °C)
Does not bioaccumulate.

Component: Propan-2-ol (CAS-No. 67-63-0)
Bioaccumulation log Kow 0,05
Bioaccumulation is not expected.

12.4 Mobility in soil

Component: Ethanol (CAS-No. 64-17-5)
Mobility The product is mobile in water environment.

Component: Butanone (CAS-No. 78-93-3)
Mobility Expected to remain in water or migrate through soil. The product is partly soluble in water

Component: Propan-2-ol (CAS-No. 67-63-0)
Mobility Water: The product is water soluble.
Soil: Mobile in soils

12.5 Results of PBT and vPvB assessment

Component: Ethanol (CAS-No. 64-17-5)
Results of PBT and vPvB assessment This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).
This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Component: Butanone (CAS-No. 78-93-3)
Results of PBT and vPvB assessment This substance is not considered to be persistent, bioaccumulating not toxic (PBT).
This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Component: Propan-2-ol (CAS-No. 67-63-0)
Results of PBT and vPvB assessment This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).
This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects:

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Section 13: Disposal considerations

13.1 Waste treatment methods

Product:

Disposal together with normal waste is not allowed. Do not empty into drains. Special disposal required according to local regulations. Contact waste disposal services.

Contaminated packaging:

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Packagings that cannot be cleaned are to be disposed of in the same manner as the product. Do not burn, or use a cutting torch on, the empty drum. Risk of explosion.

European Waste Catalogue Number:

No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

Section 14: Transport information

| | Land transport (ADR/RID) | Inland waterway transport (ADN) | Sea transport (IMDG) | Air transport (ICAO-TI / IATA-DGR) |
|---------------------------------|---|---|---|---|
| 14.1 UN No. | UN3175 | UN3175 | UN3175 | UN3175 |
| 14.2 UN Proper shipping name | Solids containing flammable liquid, n.o.s. (Contains Isopropanol) |
| 14.3 Transport hazard class(es) | 4.1 Flammable Solid | 4.1 Flammable Solid | 4.1 Flammable Solid | 4.1 Flammable Solid |
| Hazard label(s) | 4.1 | 4.1 | 4.1 | 4.1 |
| 14.4 Packing group | II | II | II | II |
| 14.5 Environmental hazards | No | No | No | No |

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ): 1kg
Excepted quantities (EQ): Code: E2
Transport category: 2
Tunnel restriction code: E

IMDG

Excepted quantities (EQ) Code: E2
EMS: F-A, S-I
Stowage: Storage category B

IATA

Limited quantities (LQ): 5kg
Excepted quantities (EQ): Code: E2
Remark: A46

UN "Model Regulation": UN3175, Solids containing flammable liquid, n.o.s.
(Contains Isopropanol), 4.1, II

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

WGK (DE):

WGK:1; slightly water endangering; WGK (DE);

Remarks: Classification according AwSV

Legislation:

Falls under the German StörfallV. 7b

Other regulations:

Occupational restrictions: Take note of Dir 92/85/EEC on the safety and health of pregnant workers at work and of Dir 94/33/EC on the protection of young people at work.

Occupational restrictions:

Take note of Dir 92/85/EEC on the safety and health of pregnant workers at work and of Dir 94/33/EC on the protection of young people at work.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

Section 16: Other information

Full text of R-phrases referred to under sections 2 and 3.

R11 Highly flammable.

R36 Irritating to eyes.

R66 Repeated exposure may cause skin dryness or cracking.

R67 Vapours may cause drowsiness and dizziness.

Full text of H-Statements referred to under sections 2 and 3.

H228 Flammable solid.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Abbreviations and acronyms:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- ICAO: International Civil Aviation Organization
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- ICAO: International Civil Aviation Organisation
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- LD50*: Lethal Dose, 50 percent (Not relevant for classification)
- LD50*: Lethal Concentration, 50 percent (Not relevant for classification)
- Flam. Sol. 1: Flammable solids, Hazard Category 1
- Self-heat. 1: Self-Heating Substances and Mixtures, Hazard Category 1

Further information:**Key literature references and sources for data:**

Supplier information and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were used to create this safety data sheet.

Methods used for product classification:

The classification for human health, physical and chemical hazards and environmental hazards were derived from a combination of calculation methods and if available test data.

Hints for trainings:

The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to.

Other information:

The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship.

The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

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