

## Section 1 –Identification: Product identifier and chemical identity

### •1.1 Product identifier

•Trade name: LINE MARKING SPRAY PAINT

•1.2 Relevant identified uses of the substance or mixture and uses advised against application of the substance /the mixture Lacquer

### •1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Lapwing UK Ltd

•Unit 3 Keytec Business Park East, Pershore, Worcestershire, WR10 2NX

•01386 551090 - sales@lapwinguk.com

•1.4 Emergency telephone number: 01386 551090

## Section 2 –Hazard identification

### •2.1 Classification of the substance or mixture

•Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

### •Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Warning! Pressurized container.

### •Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

### •2.2 Label elements

•Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

### •Hazard pictograms



GHS02 GHS07

•Signal word Danger

**•Hazard-determining components of labelling:**

No Data Available

**•Hazard statements**

- H222 Extremely flammable aerosol.
- H229 Pressurised container: May burst if heated
- H302 Harmful if swallowed
- H312 Harmful in contact with skin
- H332 Harmful if inhaled.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.

**•Precautionary statements**

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P211 Do not spray on an open flame or other ignition source.
- P251 Do not pierce or burn, even after use.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray..
- P264 Wash hand thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301 + P312 If swallowed: Call a poison center or doctor/physician if you feel unwell.
- P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
- P501 Dispose of contents / container in accordance with regional regulations.

**•Additional information:**

Buildup of explosive mixtures possible without sufficient ventilation.

**•2.3 Other hazards**

**•Results of PBT and vPvB assessment**

- PBT: Not applicable.
- vPvB: Not applicable.

## SECTION 3: Composition/information on ingredients

INGREDIENTS	CAS NO INDEX	EC NO.	Classification	COMPOSITION
Petroleum distillates	64742-47-8	265-149-8	No classification	2%-4%
Methyl acetate	79-20-9	201-185-2	Flam. Liq. 2: H225; Eye Irrit. 2: H319; STOT SE 3:H336	4%-7%
Acetone	67-64-1	200-662-2	Flam. Liq. 2: H225; Eye Irrit. 2:H319; STOT SE 3:H336	7%-11%
Resin	N/A	N/A	No classification	13%-19%
Exxon solvent s-100	25551-13-7	247-099-9	Flam. Liq. 2: H225; STOT SE 3:H336; Aquatic Tox. 2: H413	7%-10%
Calcium carbonate	19569-21-2	1185-2009	Eye Irrit. 2:H319; Skin Irrit. 2: H315	6%-9%
Ethyl acetate	141-78-6	205-500-4	Flam. Liq. 2: H225; Eye Irrit. 2:H319; STOT SE	15%-19%

			3:H336	
Pigment	N/A	N/A	Demal Acute Tox. 4: H312; Inhalation acute Tox. 4: H332; Eye Irrit. 2:H319; STOT SE 3: H335	8%-13%
DME	115-10-6	204-065-8	Flam. Gas 1:H220	27%-35%

• **Additional information:**

For the wording of the listed risk phrases refer to section 16.

## Section 4 – First aid measures

### •4.1 Description of first aid measures

• **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

• **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

• **After eye contact:** Rinse opened eye for several minutes under running water.

• **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.

• **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

No further relevant information available.

## Section 5 - Fire-fighting measures

### • 5.1 Extinguishing media

• **Suitable extinguishing agents:**

Water spray (large fires only), foam, dry chemical or carbon dioxide.

• **For safety reasons unsuitable extinguishing agents:** Water with full jet

• **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

• **5.3 Advice for firefighters -**

• **Protective equipment:** Mouth respiratory protective device.

## Section 6 - Accidental release measures

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

Wear protective equipment. Keep unprotected persons away.

• **6.2 Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

• **6.3 Methods and material for containment and cleaning up:**

Do not flush with water or aqueous cleansing agents

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

• **6.4 Reference to other sections**

See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## Section 7 - Handling and Storages

### • 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.

### • Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.

### • 7.2 Conditions for safe storage, including any incompatibilities

#### • Storage:

#### • Requirements to be met by storerooms and receptacles:

Store in a cool location.  
Observe official regulations on storing packagings with pressurized containers.

#### • Information about storage in one common storage facility: Not required.

#### • Further information about storage conditions:

Do not seal receptacle gas tight.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.

#### • Storage class: 2B

#### • 7.3 Specific end use(s) No further relevant information available.

## Section 8 - Exposure controls and personal protection

### • 8.1 Control parameters

• Ingredients with limit values that require monitoring at the workplace:	
Acetone (CAS#67-64-1)	NOHSC-TWA: 1185 mg/m <sup>3</sup> NOHSC-STEL: 2375 mg/m <sup>3</sup>
Ethyl Acetate (CAS#141-78-6)	NOHSC-TWA: 720 mg/m <sup>3</sup> NOHSC-STEL: 1440 mg/m <sup>3</sup>
Dimethyl Ether (CAS#115-10-6)	NOHSC-TWA: 760 mg/m <sup>3</sup> NOHSC-STEL: 950 mg/m <sup>3</sup>

### • 8.2 Exposure controls

#### • Personal protective equipment:

#### • General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Do not inhale gases / fumes / aerosols.  
Avoid contact with the skin.  
Avoid contact with the eyes and skin.

· **Respiratory protection:**

Not necessary if room is well-ventilated.

Otherwise, filter class A / P2 or self contained.

· **Protection of hands:**

Protective gloves

Solvent resistant gloves

In case of contact with spray dust protective gloves made of butyl should be used (min. 0.4 mm thick), e.g.

KCL Camatril, article no. 898 or similar products

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves** Butyl rubber, BR

· **Penetration time of glove material**

Butyl rubber gloves with a thickness of 0.4 mm are resistant to:

Acetone: 480 min

Ethyl acetate: 170 min

· **Eye protection:** Safety glasses

## Section 9 - Physical and chemical properties

<b>Appearance:</b>	Viscous liquid
<b>Odour:</b>	Solvent
<b>Odour threshold:</b>	Not determined
<b>pH:</b>	Not determined
<b>Self-igniting</b>	Product is not self-igniting.
<b>Melting point/freezing point:</b>	<-20°C
<b>Boiling point:</b>	>60°C
<b>Flash point:</b>	-40°C
<b>Evaporation rate:</b>	Not determined
<b>Flammability (solid, gas):</b>	Flammable
<b>Upper/lower flammability or explosive limits:</b>	Not determined
<b>Vapour pressure:</b>	Not determined
<b>Vapour density:</b>	Not determined
<b>Relative density:</b>	0.93~0.95g/cm <sup>3</sup>
<b>Vapour density</b>	Not determined
<b>Solubility:</b>	Not water soluble. Re-dispersible in aromatic solvents.
<b>Auto-ignition temperature:</b>	Not determined
<b>Decomposition temperature:</b>	Not determined
<b>Viscosity:</b>	Not determined
<b>Explosive properties:</b>	Not determined
<b>Oxidising properties:</b>	Not determined
<b>Partition coefficient (n-octanol/water)</b>	Not determined

## Section 10 - Stability and reactivity

- **10.1 Reactivity:** Stable under recommended storage and handling conditions.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions:** No dangerous reactions known.
- **10.4 Conditions to avoid:** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## Section 11 - Toxicological information

### • 11.1 Information on toxicological effects

#### • Acute toxicity:

• LD/LC50 values relevant for classification:		
115-10-6 Dimethyl Ether		
Oral	LD50	8700
Dermal	LD50	>2000
Inhalative	LC50/4	h

#### • Primary irritant effect:

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

#### • Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful, Irritant, Vapours have narcotic effect.

## Section 12 - Ecological information

### • 12.1 Toxicity

Ingredient:	Persistence - Water/Soil:	Persistence – Air:	Bioaccumulation:	Mobility:
Acetone	Low	High	Low	High
Dimethyl Ether	Low	No Data Available	Low	High
Ethyl Acetate	Low	High	Low	High

### • 12.2 Persistence and degradability

#### ACETONE

Fish LC50 (96hr.) (mg/l): 8300- 40000  
 Daphnia magna EC50 (48hr.) (mg/l): 10  
 log Kow (Prager 1995): - 0.24  
 log Kow (Sangster 1997): - 0.24  
 log Pow (Verschueren 1983): - 0.24  
 Half- life Soil - High (hours): 168

Half- life Soil - Low (hours): 24  
Half- life Air - High (hours): 2790  
Half- life Air - Low (hours): 279  
Half- life Surface water - High (hours): 168  
Half- life Surface water - Low (hours): 24  
Half- life Ground water - High (hours): 336  
Half- life Ground water - Low (hours): 48  
Aqueous biodegradation - Aerobic - High (hours): 168  
Aqueous biodegradation - Aerobic - Low (hours): 24  
Aqueous biodegradation - Anaerobic - High (hours): 672  
Aqueous biodegradation - Anaerobic - Low (hours): 96  
Aqueous biodegradation - Removal secondary treatment - High (hours): 75%  
Aqueous biodegradation - Removal secondary treatment - Low (hours): 54%  
Aqueous photolysis half- life - High (hours): 270  
Photooxidation half- life water - High (hours): 3.97E+06  
Photooxidation half- life water - Low (hours): 9.92E+04  
Photooxidation half- life air - High (hours): 2790  
Photooxidation half- life air - Low (hours): 279

For Acetone:

Log Kow : -0.24;  
Half-life (hr) air : 312-1896;  
Half-life (hr) H2O surface water : 20;  
Henry's atm m3 /mol : 3.67E-05  
BOD 5: 0.31-1.76,46-55%  
COD: 1.12-2.07  
ThOD: 2.2BCF: 0.69.

Environmental Fate: The relatively long half-life allows acetone to be transported long distances from its emission source.

Atmospheric Fate: Acetone preferentially locates in the air compartment when released to the environment. In air, acetone is lost by photolysis and reaction with photochemically produced hydroxyl radicals; the estimated half-life of these combined processes is about 22 days. Air Quality Standards: none available.

Terrestrial Fate: Very little acetone is expected to reside in soil, biota, or suspended solids and has low propensity for soil absorption and a high preference for moving through the soil and into the ground water.

Acetone released to soil volatilizes although some may leach into the ground where it rapidly biodegrades.

Soil Guidelines: none available.

Aquatic Fate: A substantial amount of acetone can also be found in water. Acetone is highly soluble and slightly persistent in water, with a half-life of about 20 hours Drinking Water Standard: none available.

Ecotoxicity: Acetone does not concentrate in the food chain, is minimally toxic to aquatic life and is considered to be readily biodegradable. Testing shows that acetone exhibits a low order of toxicity for brook trout, fathead minnow, Japanese quail, ring-neck pheasant and water fleas. Low toxicity for aquatic invertebrates. For aquatic plants, NOEC: 5400-7500 mg/L. Acetone vapours were shown to be relatively toxic to flour beetle and flour moths and their eggs. The direct application of acetone liquid to the body of the insects or surface of the eggs did not, however, cause any mortality. The ability of acetone to inhibit cell multiplication has been examined in a wide variety of microorganisms. Mild to moderate toxicity occurred in bacteria exposed to acetone for 6-4 days however, overall data indicates a low degree of toxicity for acetone. The only exception to these findings was the results obtained with the flagellated protozoa (*Entosiphon sulcatum*).

For Ketones: Ketones, unless they are alpha, beta--unsaturated ketones, can be considered as narcosis or baseline toxicity compounds.

Aquatic Fate: Hydrolysis of ketones in water is thermodynamically favourable only for low molecular weight ketones.

Reactions with water are reversible with no permanent change in the structure of the ketone substrate. Ketones are stable to water under ambient environmental conditions. When pH levels are greater than 10, condensation reactions can occur which produce higher molecular weight products. Under ambient conditions of temperature, pH, and low concentration, these condensation reactions are unfavourable. Based on its reactions in air, it seems likely that ketones undergo photolysis in water.

Terrestrial Fate: It is probable that ketones will be biodegraded by micro-organisms in soil and water.

Ecotoxicity: Ketones are unlikely to bioconcentrate or biomagnify.

## **DIMETHYL ETHER**

Water solubility (g/l): 35300

log Kow (Sangster 1997): 0.1

Most ethers are very resistant to hydrolysis, and the rate of cleavage of the carbon-oxygen bond by abiotic processes is expected to be insignificant. Direct photolysis will not be an important removal process since aliphatic ethers do not absorb light at wavelengths >290 nm. DO NOT discharge into sewer or waterways.

log Kow: 0.1-0.12

Koc: 14

Half-life (hr) air: 528

Half-life (hr) H<sub>2</sub>O surface water: 2.6-30

Henry's atm m<sup>3</sup> /mol: 9.78E-04

BCF: 1.7

processes Abiotic: RxnOH\*

## **ETHYL ACETATE**

log Pow (Verschueren 1983): 0.66/0.73

ThOD: 50.4

log Pow (Verschueren 1983): 0.66/0.73

BOD<sub>5</sub>: 15%

COD: 1.54 (83%)

ThOD: 1.82

Half- life Soil - High (hours): 168

Half- life Soil - Low (hours): 24

Half- life Air - High (hours): 353

Half- life Air - Low (hours): 35.3

Half- life Surface water - High (hours): 168

Half- life Surface water - Low (hours): 24

Half- life Ground water - High (hours): 336

Half- life Ground water - Low (hours): 48

Aqueous biodegradation - Aerobic - High (hours): 168

Aqueous biodegradation - Aerobic - Low (hours): 24

Aqueous biodegradation - Anaerobic - High (hours): 672

Aqueous biodegradation - Anaerobic - Low (hours): 96

Aqueous biodegradation - Removal secondary treatment - High (hours): 96%

Aqueous biodegradation - Removal secondary treatment - Low (hours): 99.90%

Photooxidation half- life water - High (hours): 9.60E+05

Photooxidation half- life water - Low (hours): 24090

Photooxidation half- life air - High (hours): 353

Photooxidation half- life air - Low (hours): 35.3

First order hydrolysis half- life (hours): 1.77E+04

Acid rate constant [M(H<sup>+</sup>)- HR]- 1: 3.05E- 08

Base rate constant [MOH]- HR]- 1: 2.99E- 05

DO NOT discharge into sewer or waterways.

log Kow: 0.66-0.73  
 Half-life (hr) air: 200  
 Half-life (hr) H2O surface water: 10  
 Henry's atm m<sup>3</sup> /mol: 1.20E-04  
 BOD 5 if unstated: 0.1-1.24,16-36%  
 COD: 1.54,83%  
 ThOD: 1.82

- **12.4 Mobility in soil** Very slow
- **Additional ecological information:**
- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## Section 13 - Disposal considerations


- **13.1 Waste treatment methods**
- **Recommendation**


Must not be disposed together with household garbage. Do not allow product to reach sewage system.

• European waste catalogue	
08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances
15 01 04	metallic packaging
15 01 11*	metallic packaging containing a dangerous solid porous matrix (for example asbestos), including empty pressure containers

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

## Section 14 - Transport information

<ul style="list-style-type: none"> <li>• <b>14.1 UN-Number</b></li> <li>• <b>ADR, IMDG, IATA</b></li> </ul>	UN1950
<ul style="list-style-type: none"> <li>• <b>14.2 UN proper shipping name</b></li> <li>• <b>ADR</b></li> <li>• <b>IMDG</b></li> </ul>	UN1950 AEROSOLS AEROSOLS
<ul style="list-style-type: none"> <li>• <b>IATA</b></li> </ul>	AEROSOLS, flammable
<ul style="list-style-type: none"> <li>• <b>14.3 Transport hazard class(es)</b></li> <li>• <b>ADR</b></li> </ul> 	2 5F Gases. 2.1
<ul style="list-style-type: none"> <li>• <b>Class</b></li> </ul>	

<ul style="list-style-type: none"> <li>• Lable</li> </ul>	
 <ul style="list-style-type: none"> <li>• IMDG, IATA</li> </ul>	
<ul style="list-style-type: none"> <li>• Class</li> <li>• Lable</li> </ul>	2.1 2.1
<ul style="list-style-type: none"> <li>• 14.4 Packing group</li> <li>• ADR, IMDG, IATA</li> </ul>	Void
<ul style="list-style-type: none"> <li>• 14.5 Environmental hazards:</li> <li>• Marine pollutant:</li> </ul>	No
<ul style="list-style-type: none"> <li>• 14.6 Special precautions for user</li> <li>• Danger code (Kemler): -</li> <li>• EMS Number:</li> </ul>	Warning: Gases. - F-D,S-U
<ul style="list-style-type: none"> <li>• 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>• Transport/Additional information:</li> <li>• ADR</li> <li>• Limited quantities (LQ)</li> <li>• Excepted quantities (EQ)</li> <li>• Transport category</li> <li>• Tunnel restriction code</li> <li>• IMDG</li> <li>• Limited quantities (LQ)</li> <li>• Excepted quantities (EQ)</li> </ul>	1L Code: E0 Not permitted as Excepted Quantity 2 D  1L Code: E0 Not permitted as Excepted Quantity
<ul style="list-style-type: none"> <li>• UN "Model Regulation":</li> </ul>	UN1950, AEROSOLS, 2.1

## Section 15 - Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture .**
- **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## Section 16 - Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### • Relevant phrases

- H220 Extremely flammable gas.
- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H312 Harmful in contact with skin.
- H332 Harmful if inhaled.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P260 Do not breathe spray.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray

P264 Wash ... thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

P501 Dispose of contents / container in accordance with regional regulations. • **Contact:** Dipl.-Chem. G. Heller oder Dipl.-Ing. U. Voetter

• **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the

International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

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 Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Gas 1: Flammable gases, Hazard Category 1

Flam. Aerosol 1: Flammable aerosols, Hazard Category 1

Press. Gas: Gases under pressure: Compressed gas

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Pyr. Sol. 1: Pyrophoric Solids, Hazard Category 1

Water-react. 2: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 2

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Asp. Tox. 1: Aspiration hazard, Hazard Category 1