

## Safety data sheet

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

#### 1.1. Product identifier

Code: M8119SPR  
Product name: DRAI

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

Intended use: Oleo-repellent for marble and granite. Professional use only.

Uses advised against: no one in particular

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

Name: ILPA ADESIVI SRL  
Full address: Via Ferorelli, 4  
District and Country: 70132 BARI (BARI)  
ITALIA  
Tel. + 39 0805383837  
Fax + 39 0805377807

e-mail address of the competent person responsible for the Safety Data Sheet: aborricelli@ilpa.it

#### 1.4. Emergency telephone number

For urgent inquiries refer to: + 39 3355405598 (Technical support - 8,00 - 17,00 - LUN-VEN; MON-FRI)(Italian time zone)  
Safety Executive (HSE) Chemicals Regulation Directorate 5S.1 Redgrave Court, Merton Road, Bootle, Merseyside. L20 7HS.  
Phone: +44 151 9513317

### SECTION 2. Hazards identification

#### 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Aerosol, category 1	H222 H229	Extremely flammable aerosol. Pressurised container: may burst if heated.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
Eye irritation, category 2	H319	Causes serious eye irritation.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

#### 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words:

Danger

Hazard statements:

<b>H222</b>	Extremely flammable aerosol.
<b>H229</b>	Pressurised container: may burst if heated.
<b>H319</b>	Causes serious eye irritation.
<b>H336</b>	May cause drowsiness or dizziness.
<b>H412</b>	Harmful to aquatic life with long lasting effects.
<b>EUH066</b>	Repeated exposure may cause skin dryness or cracking.

Precautionary statements:

<b>P102</b>	Keep out of reach of children.
<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P211</b>	Do not spray on an open flame or other ignition source.
<b>P251</b>	Do not pierce or burn, even after use.
<b>P331</b>	Do NOT induce vomiting.
<b>P410+P412</b>	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
<b>P501</b>	Dispose of contents / container to compliance with local regulations.

<b>Contains:</b>	METHYL ETHYL KETONE HYDROCARBONS, C9, AROMATICS  ETHYL ACETATE  XYLENE (MIXTURE OF ISOMERS)
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Statements on the aspiration toxicity classification were not included in the label elements, based on section 1.3.3. of Annex I to CLP.

### 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

## SECTION 3. Composition/information on ingredients

### 3.1. Substances

Information not relevant

### 3.2. Mixtures

Contains:

The full wording of hazard (H) phrases is given in section 16 of the sheet.

<b>Identification</b>	<b>x = Conc. %</b>	<b>Classification 1272/2008 (CLP)</b>
<b>METHYL ETHYL KETONE</b>		
CAS 78-93-3	$54 \leq x < 58$	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066
EC 201-159-0		
INDEX 606-002-00-3		
Reg. no. 01-2119457290-43		
<b>PROPANE</b>		
CAS 74-98-6	$19,5 \leq x < 21$	Flam. Gas 1 H220, Press. Gas (Liq.) H280, Note U
EC 200-827-9		
INDEX 601-003-00-5		
Reg. no. 01-2119486944-21		
<b>BUTANE</b>		
CAS 106-97-8	$6 \leq x < 7$	Flam. Gas 1 H220, Press. Gas (Liq.) H280, Note C U
EC 203-448-7		
INDEX 601-004-00-0		
Reg. no. 01-2119474691-32		
<b>ISOBUTANE</b>		
CAS 75-28-5	$6 \leq x < 7$	Flam. Gas 1 H220, Press. Gas (Liq.) H280, Note C U
EC 200-857-2		
INDEX 601-004-00-0		
Reg. no. 01-2119485395-27		
<b>HYDROCARBONS, C9, AROMATICS</b>		
CAS -	$5 \leq x < 6$	Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H335, STOT SE 3 H336, Aquatic Chronic 2 H411, EUH066
EC 918-668-5		
INDEX -		
Reg. no. 01-2119455851-35		
<b>ETHYL ACETATE</b>		
CAS 141-78-6	$2 \leq x < 2,5$	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066
EC 205-500-4		
INDEX 607-022-00-5		
Reg. no. 01-2119475103-46		
<b>XYLENE (MIXTURE OF ISOMERS)</b>		
CAS 1330-20-7	$1 \leq x < 1,5$	Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Note C
EC 215-535-7		

INDEX 601-022-00-9

Reg. no. 01-2119488216-32

**ETHYL SILICATE**

CAS 78-10-4

$0 \leq x < 0,05$

Flam. Liq. 3 H226, Acute Tox.  
4 H332, Eye Irrit. 2 H319,  
STOT SE 3 H335

EC 201-083-8

INDEX 014-005-00-0

Reg. no. 01-2119496195-28

The product is an aerosol containing propellants. For the purposes of calculation of the health hazards, propellants are not considered (unless they have health hazards). The percentages indicated are inclusive of the propellants.

Percentage of propellants: 34,00 %

## SECTION 4. First aid measures

### 4.1. Description of first aid measures

**EYES:** Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

**SKIN:** Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

**INHALATION:** Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

**INGESTION:** Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

**PROTECTIVE MEASURES FOR THE FIRST RESCUE WORKERS:** for PPE (personal protection equipment) required for first aid refer to section 8.2 of this safety data sheet.

### 4.2. Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

## SECTION 5. Firefighting measures

### 5.1. Extinguishing media

**SUITABLE EXTINGUISHING EQUIPMENT**

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

**UNSUITABLE EXTINGUISHING EQUIPMENT**

None in particular.

**5.2. Special hazards arising from the substance or mixture****HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

If overheated, aerosol cans can deform, explode and be propelled considerable distances. Put a protective helmet on before approaching the fire. Do not breathe combustion products.

**5.3. Advice for firefighters****GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

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

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

**6.2. Environmental precautions**

Do not disperse in the environment.

**6.3. Methods and material for containment and cleaning up**

Use inert absorbent material to soak up leaked product. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

**6.4. Reference to other sections**

Any information on personal protection and disposal is given in sections 8 and 13.

**SECTION 7. Handling and storage**

**7.1. Precautions for safe handling**

Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Do not eat, drink or smoke during use. Do not breathe spray.

**7.2. Conditions for safe storage, including any incompatibilities**

Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C / 122°F, away from any combustion sources.

**7.3. Specific end use(s)**

No use other than specified in Section 1.2 of this safety data sheet.

**SECTION 8. Exposure controls/personal protection**

**8.1. Control parameters**

Regulatory References:

DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NLD	Nederland	Databank of the social and Economic Concil of Netherlands (SER) Values, AF 2011:18
EU	OEL EU	Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2016

**METHYL ETHYL KETONE**

**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	600	200	600	200	SKIN
MAK	DEU	600	200	600	200	SKIN
VLA	ESP	600	200	900	300	
VLEP	FRA	600	200	900	300	SKIN
WEL	GBR	600	200	899	300	SKIN
VLEP	ITA	600	200	900	300	
OEL	EU	600	200	900	300	
TLV-ACGIH		590	200	885	300	

**Predicted no-effect concentration - PNEC**

Normal value in fresh water	55,8	mg/l
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Normal value in marine water	55,8	mg/l
Normal value for fresh water sediment	284,74	mg/kg/d
Normal value for marine water sediment	284,74	mg/kg/d
Normal value for water, intermittent release	55,8	mg/l
Normal value of STP microorganisms	709	mg/l
Normal value for the food chain (secondary poisoning)	1000	mg/kg
Normal value for the terrestrial compartment	22,5	mg/kg/d

**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	31 mg/kg bw/d				
Inhalation			VND	106 mg/m3			VND	600 mg/m3
Skin			VND	412 mg/kg bw/d			VND	1161 mg/kg bw/d

**PROPANE**

**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
AGW	DEU	1800	1000	7200	4000
MAK	DEU	1800	1000	7200	4000
TLV-ACGIH			1000		

**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		VND		VND				
Inhalation	VND	VND	VND	VND	VND	VND	VND	VND
Skin	VND	VND	VND	VND	VND	VND	VND	VND

**ISOBUTANE**

**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
AGW	DEU	2400	1000	9600	4000
MAK	DEU	2400	1000	9600	4000
VLA	ESP		800		
VLEP	FRA	1900	800		
WEL	GBR	1450	600	1810	750
OEL	NLD	1430			
TLV-ACGIH				2377	1000

**BUTANE**

**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
AGW	DEU	2400	1000	9600	4000
MAK	DEU	2400	1000	9600	4000
VLA	ESP		800		
VLEP	FRA	1900	800		
WEL	GBR	1450	600	1810	750
OEL	NLD	1430			
TLV-ACGIH				2377	1000

**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		VND		VND				
Inhalation	VND	VND	VND	VND	VND	VND	VND	VND
Skin	VND	VND	VND	VND	VND	VND	VND	VND

**HYDROCARBONS, C9, AROMATICS**

**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	11 mg/kg bw/d				
Inhalation			VND	32 mg/m3			VND	150 mg/m3
Skin			VND	11 mg/kg bw/d			VND	25 mg/kg bw/d

**ETHYL ACETATE**

**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
AGW	DEU	1500	400	3000	800
MAK	DEU	1500	400	3000	800
VLA	ESP	1460	400		
VLEP	FRA	1400	400		
WEL	GBR		200		400
OEL	NLD	550		1100	
OEL	EU	734	200	1468	400
TLV-ACGIH		1441	400		

**Predicted no-effect concentration - PNEC**

Normal value in fresh water	0,24	mg/l
Normal value in marine water	0,024	mg/l
Normal value for fresh water sediment	1,15	mg/kg/d
Normal value for marine water sediment	0,115	mg/kg/d
Normal value for water, intermittent release	1,65	mg/l
Normal value of STP microorganisms	650	mg/l
Normal value for the food chain (secondary poisoning)	200	mg/kg
Normal value for the terrestrial compartment	0,148	mg/kg/d
Normal value for the atmosphere	NPI	

**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	4,5 mg/kg bw/d				
Inhalation	734 mg/m3	734 mg/m3	367 mg/m3	367 mg/m3	1468 mg/m3	1468 mg/m3	734 mg/m3	734 mg/m3
Skin			VND	37 mg/kg bw/d			VND	63 mg/kg bw/d

**XYLENE (MIXTURE OF ISOMERS)**

**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
AGW	DEU	440	100	880	200
MAK	DEU	440	100	880	200
VLA	ESP	221	50	442	100



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## M8119SPR - DRAI

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Page n. 9/20

VLEP	FRA	221	50	442	100	SKIN
WEL	GBR	220	50	441	100	
VLEP	ITA	221	50	442	100	SKIN
OEL	NLD	210		442		SKIN
OEL	EU	221	50	442	100	SKIN
TLV-ACGIH		434	100	651	150	

### Predicted no-effect concentration - PNEC

Normal value in fresh water	0,327	mg/l
Normal value in marine water	0,327	mg/l
Normal value for fresh water sediment	12,46	mg/kg/d
Normal value for marine water sediment	12,46	mg/kg/d
Normal value for water, intermittent release	0,327	mg/l
Normal value of STP microorganisms	6,58	mg/l
Normal value for the terrestrial compartment	2,31	mg/kg/d

### Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	1,6 mg/kg bw/d				
Inhalation	174 mg/m3	174 mg/m3	VND	14,8 mg/m3	289 mg/m3	289 mg/m3	VND	77 mg/m3
Skin			VND	108 mg/kg bw/d			VND	180 mg/kg bw/d

### ETHYL SILICATE

#### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
AGW	DEU	12	1,4	12	1,4
MAK	DEU	86	10	86	10
VLA	ESP	87	10		
VLEP	FRA	85	10		
OEL	NLD	10			
OEL	EU	44	5		
TLV-ACGIH		85	10		

### Predicted no-effect concentration - PNEC

Normal value in fresh water	0,19	mg/l
Normal value in marine water	0,019	mg/l
Normal value for fresh water sediment	0,83	mg/kg/d
Normal value for marine water sediment	0,083	mg/kg/d
Normal value for water, intermittent release	10	mg/l
Normal value of STP microorganisms	4000	mg/l
Normal value for the terrestrial compartment	0,05	mg/kg/d

### Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral	VND	NPI	VND	NPI				
Inhalation	14 mg/m3	14 mg/m3	14 mg/m3	14 mg/m3	85 mg/m3	85 mg/m3	85 mg/m3	85 mg/m3
Skin	NPI	3 mg/kg bw/d	NPI	3 mg/kg bw/d	NPI	56 mg/kg bw/d	NPI	56 mg/kg bw/d

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

## 8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

### HAND PROTECTION

None required.

### SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

### EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

### RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, a mask with a type AX filter combined with a type P filter should be worn (see standard EN 14387).

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

### ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

## SECTION 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Appearance	aerosol
Colour	transparent
Odour	aromatic
Odour threshold	10 ppm, (METHYL ETHYL KETONE)
pH	Not applicable
Melting point / freezing point	-86°C (NIOSH) (METHYL ETHYL KETONE)
Initial boiling point	> 35 °C.
Boiling range	Not applicable
Flash point	< 23 °C.
Evaporation rate	4,60 (N-butyl ACETATE=1, PPG TRUEFINISH) (METHYL ETHYL KETONE).
Flammability (solid, gas)	gas inflammable (PROPANE, 0319 ICSC)
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	2,1 Vol% (PROPANE, 0319 ICSC)
Upper explosive limit	9,5 Vol% (PROPANE, 0319 ICSC)
Vapour pressure	10,5 kPa (T=20°C) (NIOSH) (METHYL ETHYL KETONE)
Vapour density	2,41 (air=1) (NIOSH) (METHYL ETHYL KETONE)
Relative density	0,80 Kg/l
Solubility	insoluble in water
Partition coefficient: n-octanol/water	0,29 log Pow (NIOSH) (METHYL ETHYL KETONE)
Auto-ignition temperature	505°C (NIOSH) (METHYL ETHYL KETONE)
Decomposition temperature	Not applicable
Viscosity	0,4 mPas (dynamic, T=25°C) (METHYL ETHYL KETONE)
Explosive properties	Not applicable

Oxidising properties

Not applicable

## 9.2. Other information

VOC (Directive 2010/75/EC) : 99,15 % - 793,18 g/litre

## SECTION 10. Stability and reactivity

### 10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

#### METHYL ETHYL KETONE

Reacts with: light metals, strong oxidants. Attacks various types of plastic materials. Decomposes under the effect of heat.

#### ETHYL ACETATE

Decomposes slowly into acetic acid and ethanol under the effect of light, air and water.

### 10.2. Chemical stability

The product is stable in normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

#### METHYL ETHYL KETONE

May form peroxides with: air, light, strong oxidising agents. Risk of explosion on contact with: hydrogen peroxide, nitric acid, sulphuric acid. May react dangerously with: oxidising agents, trichloromethane, alkalis. Forms explosive mixtures with: air.

#### ETHYL ACETATE

Risk of explosion on contact with: alkaline metals, hydrides, oleum. May react violently with: fluorine, strong oxidising agents, chlorosulphuric acid, potassium tert-butoxide. Forms explosive mixtures with: air.

#### XYLENE (MIXTURE OF ISOMERS)

Stable in normal conditions of use and storage. Reacts violently with: strong oxidants, strong acids, nitric acid, perchlorates. May form explosive mixtures with: air.

### 10.4. Conditions to avoid

Avoid overheating.

#### METHYL ETHYL KETONE

Avoid exposure to: sources of heat.

#### ETHYL ACETATE

Avoid exposure to: light, sources of heat, naked flames.

### 10.5. Incompatible materials

Strong reducing or oxidising agents, strong acids or alkalis, hot material.

#### METHYL ETHYL KETONE

Incompatible with: strong oxidants, inorganic acids, ammonia, copper, chloroform.

#### ETHYL ACETATE

Incompatible with: acids, bases, strong oxidants, aluminium, nitrates, chlorosulphuric acid. Incompatible materials: plastic materials.

### 10.6. Hazardous decomposition products

Information not available

## SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

### 11.1. Information on toxicological effects

#### Metabolism, toxicokinetics, mechanism of action and other information

Information not available

#### Information on likely routes of exposure

XYLENE (MIXTURE OF ISOMERS)

WORKERS: inhalation; contact with the skin.

POPULATION: ingestion of contaminated food or water; inhalation of ambient air.

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

XYLENE (MIXTURE OF ISOMERS)

Toxic effect on the central nervous system (encephalopathy); irritating for the skin, conjunctiva, cornea and respiratory apparatus.

#### Interactive effects

XYLENE (MIXTURE OF ISOMERS)

Intake of alcohol interferes with the metabolism of the substance, inhibiting it. Ethanol consumption (0.8 g/kg) before a 4-hour exposure to xylene vapours (145 and 280 ppm) causes a 50% reduction in the excretion of methyl hippuric acid, whereas the concentration of xylenes in the blood increases approx. 1.5-2 times. At the same time there is an increase in the secondary side effects of the ethanol. The metabolism of the xylenes is increased by phenobarbital and 3-methyl-colantrene type enzyme inducers. Aspirin and xylenes mutually inhibit their conjugation with the glycine, which results in a decrease in urinary excretion of methyl hippuric acid. Other industrial products can interfere with the metabolism of xylenes.

#### ACUTE TOXICITY

LC50 (Inhalation) of the mixture: > 20 mg/l

LD50 (Oral) of the mixture: Not classified (no significant component)

LD50 (Dermal) of the mixture: > 2000 mg/kg

ETHYL SILICATE

> 2500 mg/kg rat, according to (OECD Guideline 423)  
 LD50 (Oral)  
 10 mg/l/1h male rats, according to (OECD Guideline 403)  
 LC50 (Inhalation)

**XYLENE (MIXTURE OF ISOMERS)**  
 3523 mg/kg Rat (equivalent or similar to EU Method B.1 )  
 LD50 (Oral)  
 4200 mg/kg Rabbit (Industrial Medicine 39, 215-200, 1970)  
 LD50 (Dermal)  
 26 mg/l/4h Rat(equivalent or similar to EU Method B.2)  
 LC50 (Inhalation)

**METHYL ETHYL KETONE**  
 2193 mg/kg Rat (read-across from supporting substance, Equivalent or similar to OECD Guideline 423)  
 LD50 (Oral)  
 6480 mg/kg Rabbit (Shell Chemical Company. Vol. MSDS-5390-4)  
 LD50 (Dermal)  
 5000 ppm Rat (Rif. SDS Brenntag)  
 LC50 (Inhalation)

**ETHYL ACETATE**  
 4934 mg/kg Rabbit (Equivalent to OECD 401)  
 LD50 (Oral)  
 20000 mg/kg Rabbit (Publication Am Ind Hyg Ass J, 23, 95)  
 LD50 (Dermal)  
 22,5 mg/l/6h Rat (40 CFR Part 799 (58 FR 40262))  
 LC50 (Inhalation)

**HYDROCARBONS, C9, AROMATICS**  
 3492 mg/kg Rat (Study report ECHA)  
 LD50 (Oral)  
 3160 mg/kg Rabbit (Equivalent or similar to OECD Guideline 402)  
 LD50 (Dermal)  
 6193 ppm/4h Rat (Equivalent or similar to OECD Guideline 403, GLP)  
 LC50 (Inhalation)

**SKIN CORROSION / IRRITATION**

Repeated exposure may cause skin dryness or cracking.Does not meet the classification criteria for this hazard class

**SERIOUS EYE DAMAGE / IRRITATION**

Causes serious eye irritation

**RESPIRATORY OR SKIN SENSITISATION**

Does not meet the classification criteria for this hazard class

**GERM CELL MUTAGENICITY**

Does not meet the classification criteria for this hazard class

**CARCINOGENICITY**

Does not meet the classification criteria for this hazard class

**XYLENE (MIXTURE OF ISOMERS)**

Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC).

The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

**REPRODUCTIVE TOXICITY**

Does not meet the classification criteria for this hazard class

**STOT - SINGLE EXPOSURE**

May cause drowsiness or dizziness

**STOT - REPEATED EXPOSURE**

Does not meet the classification criteria for this hazard class

**ASPIRATION HAZARD**

Toxic for aspiration

**SECTION 12. Ecological information**

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

**12.1. Toxicity**

**ETHYL SILICATE**

LC50 - for Fish	> 245 mg/l/96h Danio rerio, according to ( EU Method C.1)
EC50 - for Crustacea	> 75 mg/l/48h Daphnia magna, according to (OECD Guideline 202)
EC50 - for Algae / Aquatic Plants	> 22 mg/l/72h Pseudokirchnerella subcapitata, according to (OECD Guideline 201)
Chronic NOEC for Fish	> 245 mg/l Danio rerio, according to ( EU Method C.1)

**XYLENE (MIXTURE OF ISOMERS)**

LC50 - for Fish	2,6 mg/l/96h Oncorhynchus mykiss (OECD TG 203)
Chronic NOEC for Fish	1,3 mg/l 56d Oncorhynchus mykiss (Appl. Sci. Branch, Eng. Res. Cent. Denver, CO: 15p.)
Chronic NOEC for Crustacea	1,17 mg/l 7d Ceriodaphnia dubia (Ecotoxicology and Environmental Safety 39, 136-146)

**BUTANE**

LC50 - for Fish	24,11 mg/l/96h TGD guideline
EC50 - for Crustacea	14,22 mg/l/48h Calculation using ECOSAR

**PROPANE**

LC50 - for Fish	2411 mg/l/96h TGD guideline
EC50 - for Crustacea	1422 mg/l/48h Calculation using ECOSAR

**METHYL ETHYL KETONE**

LC50 - for Fish	2993 mg/l/96h Pimephales promelas (OECD Guideline 203, GLP)
EC50 - for Crustacea	308 mg/l/48h Daphnia magna (OECD Guideline 202, GLP)
EC50 - for Algae / Aquatic Plants	1972 mg/l/72h Selenastrum capricornutum (OECD Guideline 201, GLP)

**ETHYL ACETATE**

LC50 - for Fish	230 mg/l/96h Pimephales promelas (US EPA method E03-05)
EC50 - for Crustacea	165 mg/l/48h Daphnia (Rif. SDS fornitore)
Chronic NOEC for Crustacea	100 mg/l Scenedesmus subspicatus (OECD Guideline 201, GLP)

**HYDROCARBONS, C9, AROMATICS**

LC50 - for Fish	9,2 mg/l/96h Oncorhynchus mykiss (OECD Guideline 203, GLP)
EC50 - for Crustacea	3,2 mg/l/48h Daphnia magna (OECD Guideline 202, GLP)
EC50 - for Algae / Aquatic Plants	2,6 mg/l/72h Raphidocelis subcapitata (OECD Guideline 201, GLP)

**ISOBUTANE**

LC50 - for Fish	24,11 mg/l/96h TGD guideline
EC50 - for Crustacea	14,22 mg/l/48h Calculation using ECOSAR

**12.2. Persistence and degradability**

**ETHYL SILICATE**

Solubility in water	1000 - 10000 mg/l
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Rapidly biodegradable

**XYLENE (MIXTURE OF ISOMERS)**

Solubility in water 100 - 1000 Handbook of aqueous solubility data. mg/l

Rapidly biodegradable

OECD Guideline 301 F, GLP

**BUTANE**

Solubility in water 0,1 - 100 mg/l

Rapidly biodegradable

**PROPANE**

Solubility in water 0,1 - 100 mg/l

Rapidly biodegradable

**METHYL ETHYL KETONE**

Solubility in water > 10000 mg/l

Rapidly biodegradable

(OECD Guideline 301 D, GLP)

**ETHYL ACETATE**

Solubility in water > 10000 mg/l

Rapidly biodegradable

(Publication JWPCF 46(1), p63-77)

**HYDROCARBONS, C9, AROMATICS**

Rapidly biodegradable

Biodegradazione 78% in 28 d (OECD Guideline 301 F)

**ISOBUTANE**

Solubility in water 0,1 - 100 mg/l

Rapidly biodegradable

**12.3. Bioaccumulative potential**

**ETHYL SILICATE**

Partition coefficient: n-octanol/water 3,18

BCF 3,16

**XYLENE (MIXTURE OF ISOMERS)**

Partition coefficient: n-octanol/water  
BCF 3,12 American Chemical Society, Washington DC  
25,9 Appl. Sci. Branch, Eng. Res. Cent. Denver, CO: 15p.

**BUTANE**

Partition coefficient: n-octanol/water 1,09

**PROPANE**

Partition coefficient: n-octanol/water 1,09

**METHYL ETHYL KETONE**

Partition coefficient: n-octanol/water 0,3

**ETHYL ACETATE**

Partition coefficient: n-octanol/water 0,68  
BCF 30

**ISOBUTANE**

Partition coefficient: n-octanol/water 1,09

**12.4. Mobility in soil****XYLENE (MIXTURE OF ISOMERS)**

Partition coefficient: soil/water 2,73 equivalent or similar to OECD Guideline 121

**12.5. Results of PBT and vPvB assessment**

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

**12.6. Other adverse effects**

Information not available

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

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

**CONTAMINATED PACKAGING**

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.



**SECTION 14. Transport information**

**14.1. UN number**

ADR / RID, IMDG, 1950  
IATA:

**14.2. UN proper shipping name**

ADR / RID: AEROSOLS  
IMDG: AEROSOLS (Contens: butane, propane, methyl ethyl ketone, ethyl acetate) MIXTURE  
IATA: AEROSOLS, FLAMMABLE (Contens: butane, propane, methyl ethyl ketone, ethyl acetate) MIXTURE

**14.3. Transport hazard class(es)**

ADR / RID: Class: 2 Label: 2.1  
IMDG: Class: 2 Label: 2.1  
IATA: Class: 2 Label: 2.1



**14.4. Packing group**

ADR / RID, IMDG, -  
IATA:

**14.5. Environmental hazards**

ADR / RID: Environmentally Hazardous  
IMDG: Marine Pollutant  
IATA: NO



For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

**14.6. Special precautions for user**

ADR / RID:	HIN - Kemler: --	Limited Quantities: 1 L	Tunnel restriction code: (D)
	Special Provision: -		
IMDG:	EMS: F-D, S-U	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 150 Kg	Packaging instructions: 203
	Pass.:	Maximum quantity: 75 Kg	Packaging instructions: 203
	Special Instructions:	A145, A167, A802	

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

Information not relevant

## SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: P3a FLAMMABLE AEROSOLS

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product  
Point *40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.*

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

### 15.2. Chemical safety assessment

A chemical safety assessment has been performed for the following contained substances

METHYL ETHYL KETONE

HYDROCARBONS, C9, AROMATICS

ETHYL ACETATE

## SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Flam. Gas 1</b>	Flammable gas, category 1
<b>Aerosol 1</b>	Aerosol, category 1
<b>Aerosol 3</b>	Aerosol, category 3
<b>Flam. Liq. 2</b>	Flammable liquid, category 2
<b>Flam. Liq. 3</b>	Flammable liquid, category 3
<b>Press. Gas (Liq.)</b>	Liquefied gas
<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>Asp. Tox. 1</b>	Aspiration hazard, category 1
<b>STOT RE 2</b>	Specific target organ toxicity - repeated exposure, category 2
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<b>Skin Irrit. 2</b>	Skin irritation, category 2
<b>STOT SE 3</b>	Specific target organ toxicity - single exposure, category 3
<b>Aquatic Chronic 2</b>	Hazardous to the aquatic environment, chronic toxicity, category 2
<b>Aquatic Chronic 3</b>	Hazardous to the aquatic environment, chronic toxicity, category 3
<b>H220</b>	Extremely flammable gas.
<b>H222</b>	Extremely flammable aerosol.
<b>H229</b>	Pressurised container: may burst if heated.
<b>H225</b>	Highly flammable liquid and vapour.
<b>H226</b>	Flammable liquid and vapour.
<b>H280</b>	Contains gas under pressure; may burst if heated.
<b>H312</b>	Harmful in contact with skin.
<b>H332</b>	Harmful if inhaled.
<b>H304</b>	May be fatal if swallowed and enters airways.
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin irritation.
<b>H335</b>	May cause respiratory irritation.
<b>H336</b>	May cause drowsiness or dizziness.
<b>H411</b>	Toxic to aquatic life with long lasting effects.
<b>H412</b>	Harmful to aquatic life with long lasting effects.
<b>EUH066</b>	Repeated exposure may cause skin dryness or cracking.

**LEGEND:**

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%

- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
  2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
  3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
  4. Regulation (EU) 2015/830 of the European Parliament
  5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
  6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
  7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
  8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
  9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
  10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
  11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
- The Merck Index. - 10th Edition
  - Handling Chemical Safety
  - INRS - Fiche Toxicologique (toxicological sheet)
  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - IFA GESTIS website
  - ECHA website
  - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) – Italy

**Istituto Superiore di Sanità (ISS) – Archivio Preparati Pericolosi**

Codice azienda: IT00465900728  
 Ragione sociale: Ilpa Adesivi Srl  
 Nome prodotto ISS: DRAI  
 Codice prodotto ISS: M8119SPR

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**Training for workers:**

Worker training should include content, updates and duration depending on the risk profiles assigned to the business sectors they belong

**Classification according to Regulation (EC) Nr. 1272/2008**

Flam. Gas 1, H222  
 Recipiente sotto pressione: può scoppiare se riscaldato, H229  
 Eye Irrit. 2, H319  
 STOT SE 3, H336  
 Aquatic Chronic 3, H412

**Classification procedure**

Calculation method  
 Calculation method  
 Calculation method  
 Calculation method  
 Calculation method