



## Safety Data Sheet FORMATRAY LIQUID

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product identifier

Product name : FORMATRAY LIQUID

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

##### Relevant identified uses

Main use category : Professional use

Function or use category : Dental materials.

##### Uses advised against

No additional information available

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

##### Supplier

Kerr Italia S.r.l.  
Via Passanti, 332  
84018 Scafati (SA) - Italy  
T +39-081-850-8311  
[E-mail: safety@kerrhawe.com](mailto:safety@kerrhawe.com)

##### Manufacturer

Kerr Italia S.r.l.  
Via Passanti, 332  
84018 Scafati (SA) - Italy  
T +39-081-850-8311  
[E-mail: safety@kerrhawe.com](mailto:safety@kerrhawe.com)

Contact person : [safety@kerrhawe.com](mailto:safety@kerrhawe.com) - tel. 00-800-41-050-505 (08.00-17.00)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC® Emergency Call Center. Emergency Telephone Number (for USA only) 001-800-424-9300 International and Maritime Telephone Number +1 (703) 527-3887

Country	Organisation/Company	Address	Emergency number
United Kingdom	National Poisons Information Service (Newcastle Unit)	Claremont Place Newcastle-upon-Tyne, Newcastle	+44 191 2606182/+44 191 2606180 24H

### SECTION 2: HAZARDS IDENTIFICATION

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

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225  
Skin Irrit. 2 H315  
Skin Sens. 1 H317  
STOT SE 3 H335

Full text of classification categories and H statements : see section 16

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS07

Signal word (CLP) : Danger

Hazardous ingredients : methyl methacrylate, methyl 2-methylprop-2-enoate, methyl 2-methylpropenoate

Hazard statements (CLP) :  
H225 - Highly flammable liquid and vapour  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H335 - May cause respiratory irritation

Precautionary statements (CLP)	: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P243 - Take precautionary measures against static discharge P261 - Avoid breathing spray, vapours, gas, fume, mist P280 - Wear eye protection, protective gloves P403+P233 - Store in a well-ventilated place. Keep container tightly closed P501 - Dispose of contents/container to ...
Extra phrases	: The product is seen as a medical device and therefore not subject to labelling (EU-regulation 1907/2006, article 2, paragraph 6c).

### 2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
methyl methacrylate, methyl 2-methylprop-2-enoate, methyl 2-methylpropenoate	(CAS No) 80-62-6 (EC no) 201-297-1 (EC index no) 607-035-00-6 (REACH-no) 01-2119452498-28	> 95	Flam. Liq. 2, H225 STOT SE 3, H335 Skin Irrit. 2, H315 Skin Sens. 1, H317
N,N-dimethyl-p-toluidine	(CAS No) 99-97-8 (EC no) 202-805-4 (EC index no) 612-056-00-9 (REACH-no) 01-2119937766-23	< 1	Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Oral), H301 STOT RE 2, H373 Aquatic Chronic 3, H412
mequinol, 4-methoxyphenol, hydroquinone monomethyl ether	(CAS No) 150-76-5 (EC no) 205-769-8 (EC index no) 604-044-00-7 (REACH-no) 01-2119541813-40	< 0.1	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Skin Sens. 1, H317

Full text of H-statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

First-aid measures general	: If medical advice is needed, have product container or label at hand.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: If swallowed, rinse mouth with water (only if the person is conscious). Call a POISON CENTER or doctor/physician if you feel unwell.

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

Symptoms/injuries	: In all cases of doubt, or when symptoms persist, seek medical attention.
Symptoms/injuries after inhalation	: May cause respiratory irritation.
Symptoms/injuries after skin contact	: Causes skin irritation. May cause an allergic skin reaction.

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

No specific measures identified.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire. Foam, carbon dioxide (CO2) and powder.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapour.
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- Explosion hazard : Product is not explosive.
- Hazardous decomposition products in case of fire : Carbon monoxide. Carbon dioxide.

### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

- General measures : Wear appropriate personal protective equipment - see Section 8. Avoid contact with skin and eyes. Remove ignition sources. No open flames. No smoking. Use special care to avoid static electric charges. Eliminate every possible source of ignition. Ensure adequate ventilation, especially in confined areas.

#### For non-emergency personnel

No additional information available

#### For emergency responders

No additional information available

### 6.2. Environmental precautions

Discharging into rivers and drains is forbidden.

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

- For containment : Collect all waste in suitable and labelled containers and dispose according to local legislation.
- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

- Precautions for safe handling : Keep container tightly closed. Avoid contact with skin and eyes. Ensure good ventilation of the work station. Prevent the build-up of electrostatic charge. Use only non-sparking tools. No open flames. No smoking. Keep away from sources of ignition - No smoking.
- Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

- Storage conditions : Store in dry protected location to prevent any moisture contact. Keep container tightly closed. Keep cool. Keep only in original container. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from sunlight. Store in a well-ventilated place.
- Incompatible materials : Oxidizing substances. Organic peroxides. Catalyst. Amines. Heavy metals.

### 7.3. Specific end use(s)

Consult the supplier for further information.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

methyl methacrylate, methyl 2-methylprop-2-enoate, methyl 2-methylpropenoate (80-62-6)		
EU	Local name	Methyl methacrylate
EU	IOELV TWA (ppm)	50 ppm
EU	IOELV STEL (ppm)	100 ppm
United Kingdom	Local name	Methyl methacrylate
United Kingdom	WEL TWA (mg/m³)	208 mg/m³
United Kingdom	WEL TWA (ppm)	50 ppm
United Kingdom	WEL STEL (mg/m³)	416 mg/m³
United Kingdom	WEL STEL (ppm)	100 ppm

### 8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Personal protective equipment : Gloves. Safety glasses.

Hand protection	: Butylrubber protective gloves. Neoprene rubber gloves. Layer thickness : 0,2 - 0,4 mm. Breakthrough time : 6 (> 480 minutes). STANDARD EN 374.
Eye protection	: Safety glasses. STANDARD EN 166.
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Use respiratory equipment with gas filter, type A2. Standard EN 149.



Other information	: Do not eat, drink or smoke during use. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

Physical state	: Liquid
Colour	: Colourless.
Odour	: Fruity.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: -48.2
Boiling point	: 100
Flash point	: < 9.4 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 29 mm Hg
Relative vapour density at 20 °C	: No data available
Relative density	: > 1
Density	: 0.94 g/cm³
Solubility	: In water, material is partially soluble. Water: 1.59 g/100ml
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.63 mPa.s
Explosive properties	: Product is not explosive.
Oxidising properties	: Flammable liquid and vapour.
Explosive limits	: 2.1 - 12.5 vol %

### 9.2. Other information

Additional information	: None to our knowledge
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## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

No flames, no sparks. Eliminate all sources of ignition. Keep away from heat and direct sunlight.

### 10.5. Incompatible materials

Oxidizing agent. Strong acids. reducing materials.

### 10.6. Hazardous decomposition products

No decomposition if stored normally.

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects**

Acute toxicity : Not classified

<b>methyl methacrylate, methyl 2-methylprop-2-enoate, methyl 2-methylpropenoate (80-62-6)</b>	
LD50 oral rat	7872 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
LC50 inhalation rat (Vapours - mg/l/4h)	78 mg/l/4h

<b>N,N-dimethyl-p-toluidine (99-97-8)</b>	
LC50 inhalation rat (Vapours - mg/l/4h)	1.4 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.  
Repeated exposure may cause skin dryness or cracking

Serious eye damage/irritation : Not classified  
Liquid splashes in the eye may cause irritation

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : May cause respiratory irritation.  
May cause drowsiness or dizziness

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

<b>FORMATRAY LIQUID</b>	
Viscosity, kinematic	0.67021277 mm²/s

**SECTION 12: ECOLOGICAL INFORMATION****12.1. Toxicity**

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

<b>methyl methacrylate, methyl 2-methylprop-2-enoate, methyl 2-methylpropenoate (80-62-6)</b>	
LC50 fish 1	191 mg/l (96 hours - Lepomis macrochirus)
EC50 Daphnia 1	69 mg/l (48 hours - Daphnia magna)

<b>N,N-dimethyl-p-toluidine (99-97-8)</b>	
LC50 fish 1	46 mg/l (96 hours - Pimephales promelas)

**12.2. Persistence and degradability**

<b>FORMATRAY LIQUID</b>	
Persistence and degradability	No data available.

<b>methyl methacrylate, methyl 2-methylprop-2-enoate, methyl 2-methylpropenoate (80-62-6)</b>	
Persistence and degradability	Easily biodegradable.
Biodegradation	94 % (14 days, method: OECD 301C)

**12.3. Bioaccumulative potential**

<b>FORMATRAY LIQUID</b>	
Bioaccumulative potential	No data.

<b>methyl methacrylate, methyl 2-methylprop-2-enoate, methyl 2-methylpropenoate (80-62-6)</b>	
Bioconcentration factor (BCF REACH)	3.5
Log Pow	1.38

<b>N,N-dimethyl-p-toluidine (99-97-8)</b>	
Bioconcentration factor (BCF REACH)	28.84
Log Pow	2.81

**12.4. Mobility in soil**

<b>FORMATRAY LIQUID</b>	
Ecology - soil	In water, material is partially soluble.

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

<b>FORMATRAY LIQUID</b>	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	

**FORMATRAY LIQUID**

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

**12.6. Other adverse effects**

Other adverse effects : None to our knowledge.  
 Additional information : No other effects known

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods**

Regional legislation (waste) : Dispose as hazardous waste.  
 Waste treatment methods : Recover the product with absorbent material. Dispose of contents/container in accordance with licensed collector's sorting instructions.  
 Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
 Ecology - waste materials : Avoid release to the environment.  
 European List of Waste (LoW) code : 18 01 06\* - chemicals consisting of or containing dangerous substances

**SECTION 14: TRANSPORT INFORMATION**

In accordance with ADR / RID / IMDG / IATA / ADN

**14.1. UN number**

UN-No. (ADR) : 1247  
 UN-No. (IMDG) : 1247  
 UN-No. (IATA) : 1247  
 UN-No. (RID) : 1247

**14.2. UN proper shipping name**

Proper Shipping Name (ADR) : METHYL METHACRYLATE MONOMER, STABILIZED  
 Proper Shipping Name (IMDG) : METHYL METHACRYLATE MONOMER, STABILIZED  
 Proper Shipping Name (IATA) : Methyl methacrylate monomer, stabilized  
 Proper Shipping Name (RID) : METHYL METHACRYLATE MONOMER, STABILIZED  
 Transport document description (ADR) : UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED (acetone, propan-2-one, propanone(67-64-1) 2-hydroxyethyl methacrylate(868-77-9) ; acetone, propan-2-one, propanone(67-64-1) methyl methacrylate, methyl 2-methylprop-2-enoate, methyl 2-methylpropenoate(80-62-6)), 3, II, (D/E)  
 Transport document description (IMDG) : UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED, 3, II

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

Transport hazard class(es) (ADR) : 3  
 Danger labels (ADR) : 3

**IMDG**

Transport hazard class(es) (IMDG) : 3  
 Danger labels (IMDG) : 3

**IATA**

Transport hazard class(es) (IATA) : 3  
 Hazard labels (IATA) : 3

**RID**

Transport hazard class(es) (RID) : 3  
 Danger labels (RID) : 3

**14.4. Packing group**

Packing group (ADR) : II  
 Packing group (IMDG) : II  
 Packing group (IATA) : II  
 Packing group (RID) : II

**14.5. Environmental hazards**

Dangerous for the environment : No  
 Marine pollutant : No  
 Other information : No supplementary information available

**14.6. Special precautions for user****- Overland transport**

Classification code (ADR) : F1  
 Limited quantities (ADR) : 1I  
 Excepted quantities (ADR) : E2  
 Packing instructions (ADR) : P001, IBC02, R001  
 Mixed packing provisions (ADR) : MP19  
 Portable tank and bulk container instructions (ADR) : T4  
 Portable tank and bulk container special provisions (ADR) : TP1  
 Tank code (ADR) : LGBF  
 Vehicle for tank carriage : FL  
 Transport category (ADR) : 2  
 Special provisions for carriage - Operation (ADR) : S2, S20  
 Hazard identification number (Kemler No.) : 339  
 Orange plates :



Tunnel restriction code (ADR) : D/E  
 EAC code : 3YE

**- Transport by sea**

Limited quantities (IMDG) : 1 L  
 Excepted quantities (IMDG) : E2  
 Packing instructions (IMDG) : P001  
 IBC packing instructions (IMDG) : IBC02  
 Tank instructions (IMDG) : T4  
 Tank special provisions (IMDG) : TP1  
 EmS-No. (Fire) : F-E  
 EmS-No. (Spillage) : S-D  
 Stowage category (IMDG) : B  
 Stowage and segregation (IMDG) : Clear of living quarters.

Flash point (IMDG) : 8°C c.c.  
 Properties and observations (IMDG) : Colourless, volatile liquid. Flashpoint: 8°C c.c. Explosive limits: 1.5% to 11.6% Immiscible with water. Irritating to skin, eyes and mucous membranes.

**- Air transport**

PCA Excepted quantities (IATA) : E2  
 PCA Limited quantities (IATA) : Y341  
 PCA limited quantity max net quantity (IATA) : 1L  
 PCA packing instructions (IATA) : 353  
 PCA max net quantity (IATA) : 5L  
 CAO packing instructions (IATA) : 364  
 CAO max net quantity (IATA) : 60L  
 ERG code (IATA) : 3L

**Rail transport**

No data available

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

Not applicable

**SECTION 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU-Regulations**

Contains no REACH substances with Annex XVII restrictions  
 Contains no substance on the REACH candidate list  
 Contains no REACH Annex XIV substances

**National regulations**

EC-regulation 453/2010/EC, 1907/2006/EC (REACH), 1272/2008/EC (CLP), 790/2009/EC. Transport of dangerous goods (ADR/RID, IMDG, IATA/ICAO). Workplace exposure limits.

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out for the substance or the mixture by the supplier

**SECTION 16: OTHER INFORMATION**

Indication of changes:

Regulatory information.

2.1	Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]	Removed	
3.2	Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]	Removed	

Date of issue : 13/02/2004  
 Revision date : 23/09/2015  
 Supersedes : 28/08/2014  
 Signature : A. Åsebø Murel

Full text of H- and EUH-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Sensitisation — Skin, Category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H225	Highly flammable liquid and vapour
H301	Toxic if swallowed



300637		FORMATRAY LIQUID	23/09/2015
H302		Harmful if swallowed	
H311		Toxic in contact with skin	
H315		Causes skin irritation	
H317		May cause an allergic skin reaction	
H319		Causes serious eye irritation	
H331		Toxic if inhaled	
H335		May cause respiratory irritation	
H373		May cause damage to organs through prolonged or repeated exposure	
H412		Harmful to aquatic life with long lasting effects	

*The information in this safety data sheet is based on information from the manufacturer/supplier, present European and national legislation, and presupposes that the product is used within the specified area of application.*