

# SAFETY DATA SHEET

Revision: 2.0 Date: 12 August 2016

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),  
1272/2008 (CLP) & 2015/830

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

- 1.1 Product identifier**  
Product Name Gagekote 8  
Chemical Name Mixture  
CAS No. Mixture  
EINECS No. Mixture  
REACH Registration No. None assigned.
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**  
Identified Use(s) PC14 Metal surface treatment products, including galvanic and electroplating products  
Uses Advised Against Anything other than the above.
- 1.3 Details of the supplier of the safety data sheet**  
Company Identification VISHAY MEASUREMENTS GROUP UK LTD  
Stroudley Road  
Basingstoke  
Hampshire  
RG24 8FW  
United Kingdom  
Telephone +44 (0) 1256 462131  
Fax +44 (0) 1256 471441  
E-Mail (competent person) mm.uk@vishaypg.com
- 1.4 Emergency telephone number**  
Emergency Phone No. (00-1) 703-527-3887 CHEMTREC (24 hours)  
Languages spoken All official European languages.

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### 2.1.1 Regulation (EC) No. 1272/2008 (CLP)

Flam. Liq. 2; H225  
Asp. Tox. 1; H304  
Skin Irrit. 2; H315  
Eye Irrit. 2; H319  
STOT SE 3; H336  
Repr. 2; H361d  
STOT RE 2; H373

### 2.2 Label elements

Product Name

Gagekote 8

Contains:

Toluene and Methyl ethyl ketone

Hazard Pictogram(s)



Signal Word(s)

DANGER

Hazard Statement(s)

H225: Highly flammable liquid and vapour.  
H304: May be fatal if swallowed and enters airways.  
H315: Causes skin irritation.  
H319: Causes serious eye irritation.  
H336: May cause drowsiness or dizziness.

# SAFETY DATA SHEET

Revision: 2.0 Date: 12 August 2016

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),  
1272/2008 (CLP) & 2015/830

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Precautionary Statement(s)

H361d: Suspected of damaging the unborn child.  
H373: May cause damage to organs through prolonged or repeated exposure.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P331: Do NOT induce vomiting.  
P308+P313: IF exposed or concerned: Get medical advice/attention.  
P403+P235: Store in a well-ventilated place. Keep cool.

2.3 Other hazards None known.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Not applicable

3.2 Mixtures

EC Classification Regulation (EC) No. 1272/2008 (CLP)

Chemical identity of the substance	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard Statement(s)
Toluene	45-55	108-88-3	203-625-9	Not yet assigned in the supply chain	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Repr. 2; H361d STOT RE 2; H373
Methyl ethyl ketone	10-20	78-93-3	201-159-0	Not yet assigned in the supply chain	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066

For full text of H/P Statements see section 16.

## SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Self-protection of the first aider

Inhalation

Skin Contact

Eye Contact

Ingestion

Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Do not breathe vapour. Avoid all contact. Avoid exposure during pregnancy.

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Apply artificial respiration if breathing has ceased or shows signs of failing. Immediately call a POISON CENTER/doctor.

IF ON SKIN (or hair): After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of soap and water. If irritation (redness, rash, blistering) develops, get medical attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation develops and persists, get medical attention.

IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. If vomiting occurs turn patient on side. Do not give milk or alcoholic beverages. Rinse mouth with water but do not swallow. Never give anything by mouth to an unconscious person.

Revision: 2.0 Date: 12 August 2016

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),  
1272/2008 (CLP) & 2015/830

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4.2	<b>Most important symptoms and effects, both acute and delayed</b>	May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of damaging the unborn child. - Inhalation. May cause damage to organs through prolonged or repeated exposure: Central nervous system - Inhalation.
4.3	<b>Indication of any immediate medical attention and special treatment needed</b> Notes to a physician:	Treat symptomatically.  IF SWALLOWED: Consider use of charcoal as a slurry (240mL water/30 g charcoal). Usual dose: 25 to 100 g in adults. If determined necessary (and under qualified medical supervision), the stomach should be emptied by gastric lavage with the airway protected by endotracheal intubation.

## SECTION 5: FIRE-FIGHTING MEASURES

5.1	<b>Extinguishing media</b> Suitable Extinguishing Media  Unsuitable extinguishing Media	As appropriate for surrounding fire. Extinguish preferably with foam, carbon dioxide or dry chemical.  Do not use water jet. Direct water jet may spread the fire.
5.2	<b>Special hazards arising from the substance or mixture</b>	Highly flammable liquid and vapour. May decompose in a fire giving off toxic fumes. Oxides of carbon and Nitrogen oxides. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback.
5.3	<b>Advice for fire-fighters</b>	Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1	<b>Personal precautions, protective equipment and emergency procedures</b>	Avoid all contact. Do not ingest. If swallowed then seek immediate medical assistance. Use personal protective equipment as required. Do not breathe vapour. Ensure adequate ventilation. Remove all ignition sources. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Remove clothing and wash thoroughly before use. Isolate the area and allow vapours to disperse. In confined spaces, sewers, etc., the vapours may collect to form explosive mixtures with air.
6.2	Large spillages: <b>Environmental precautions</b>	Evacuate the area and keep personnel upwind. Avoid release to the environment. Do not allow to enter drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be alerted to the Environment Agency or other appropriate regulatory body.
6.3	<b>Methods and material for containment and cleaning up</b>  Large spillages:	Use non-sparking equipment when picking up flammable spill. Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Ventilate the area and wash spill site after material pick-up is complete. Dispose of this material and its container as hazardous waste
6.4	<b>Reference to other sections</b>	Evacuate the area and keep personnel upwind. Notify police and fire brigade as soon as possible. See Section: 8, 13

## SECTION 7: HANDLING AND STORAGE

7.1	<b>Precautions for safe handling</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take precautionary measures against static discharge. Do not use sparking tools. Ensure adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid all contact. Do not breathe vapour. Use personal protective equipment as required. See Section: 8. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.
7.2	<b>Conditions for safe storage, including any incompatibilities</b>  Storage temperature Incompatible materials	Ground/bond container and receiving equipment. Store in a well-ventilated place. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from direct sunlight. Ambient. 5 - 25°C Stable under normal conditions.

Revision: 2.0 Date: 12 August 2016

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),  
1272/2008 (CLP) & 2015/830

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## 7.3 Specific end use(s)

Keep away from: Aerosol, Flammable liquid, Oxidizing agents, Corrosive Substances, Acids and Alkalis.  
See Section: 1.2.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1 Control parameters

## 8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m <sup>3</sup> )	STEL (ppm)	STEL (mg/m <sup>3</sup> )	Note
Toulene	108-88-3	50	191	100	384	WEL, Sk
Methyl ethyl ketone	78-93-3	200	600	300	899	WEL, Sk

Source: WEL: Workplace Exposure Limit (UK HSE EH40)

Sk - Can be absorbed through skin.

## 8.1.2 Biological limit value

SUBSTANCE	CAS No.	Biological monitoring guidance value	Sampling Time
Butan-2-one (Methyl ethyl ketone)	78-93-3	70 µmol butan-2-one/L in Urine	Post shift

Note: Bmgv: Biological monitoring guidance value (UK HSE EH40)

## 8.1.3 PNECs and DNELs

Not established.

## 8.2 Exposure controls

## 8.2.1 Appropriate engineering controls

Ensure adequate ventilation. or Use appropriate containment. Atmospheric levels should be controlled in compliance with the occupational exposure limit. Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems.

## 8.2.2 Individual protection measures, such as personal protective equipment (PPE)

General hygiene measures for the handling of chemicals are applicable. Avoid all contact. Do not breathe vapour. Wash hands before breaks and after work. Keep work clothes separately. Contaminated clothing should be thoroughly cleaned. Do not eat, drink or smoke at the work place.

Eye/face protection



Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection (EN166).

Skin protection

**Hand protection:**

Wear impervious gloves (EN374). Protective index 6, corresponding > 480 minutes of permeation time according to EN 374 Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer.

Suitable materials:

Nitrile rubber (Minimum thickness: 0.45 mm)

Butyl rubber (Minimum thickness: 0.7 mm)

**Body protection:**

Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Open system(s): Wear suitable respiratory protective equipment. A suitable mask with filter type A (EN141 or EN405) may be appropriate.

Revision: 2.0 Date: 12 August 2016

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),  
1272/2008 (CLP) & 2015/830

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Thermal hazards

Not applicable

**8.2.3 Environmental Exposure Controls**

Avoid release to the environment.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

Appearance	Clear liquid with perceptible odour.
Odour	Aromatic.
Odour threshold	Not available.
pH	Not established.
Melting point/freezing point	Not established.
Initial boiling point and boiling range	82.2°C
Flash point	-1°C [Closed cup]
Evaporation rate	3.62 (BuAC = 1)
Flammability (solid, gas)	Not applicable - Liquid
Upper/lower flammability or explosive limits	Flammable Limits (Lower) (%v/v): 1.6 (Air) Flammable Limits (Upper) (%v/v): 11.2 (Air)
Vapour pressure	45.4 mmHg
Vapour density	4 (Air = 1)
Relative density	0.88 g/cm <sup>3</sup> (H <sub>2</sub> O = 1)
Solubility(ies)	Water: 0.1%
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

**9.2 Other information**

Volatile Organic Compound Content: 592 g/l

**SECTION 10: STABILITY AND REACTIVITY**

<b>10.1 Reactivity</b>	Stable under normal conditions.
<b>10.2 Chemical stability</b>	Stable under normal conditions.
<b>10.3 Possibility of hazardous reactions</b>	Highly flammable liquid and vapour. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback.
<b>10.4 Conditions to avoid</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from direct sunlight. Do not use sparking tools.
<b>10.5 Incompatible materials</b>	Keep away from: Aerosol, Flammable liquid, Oxidizing agents, Corrosive Substances, Acids and Alkalis.
<b>10.6 Hazardous decomposition product(s)</b>	May decompose in a fire giving off toxic fumes. Combustion products: Carbon monoxide, Carbon dioxide and Nitrogen oxides.

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

All test data taken from existing ECHA registrations for the substances mentioned.

**Acute toxicity**

Ingestion

Based upon the available data, the classification criteria are not met.  
Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day.

Inhalation

Based upon the available data, the classification criteria are not met.  
Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 20.0 mg/l.

Skin Contact

Based upon the available data, the classification criteria are not met.

Revision: 2.0 Date: 12 August 2016

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),  
1272/2008 (CLP) & 2015/830

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<p><b>Skin corrosion/irritation</b> Toluene:</p> <p><b>Serious eye damage/irritation</b> Methyl ethyl ketone:</p> <p><b>Respiratory or skin sensitization</b></p> <p><b>Germ cell mutagenicity</b></p> <p><b>Carcinogenicity</b></p> <p><b>Reproductive toxicity</b> Toluene:</p> <p><b>STOT - single exposure</b></p> <p>Toluene:</p> <p><b>STOT - repeated exposure</b></p> <p>Toluene: Methyl ethyl ketone:</p> <p><b>Aspiration hazard</b> Toluene:</p> <p>11.2 <b>Other information</b></p>	<p>Acute Toxicity Estimate Mixture Calculation: Estimated LC50 &gt; 2000 mg/kg bw/day.</p> <p>Skin Irrit. 2: Causes skin irritation. Irritating to skin. (EU Method B.4)</p> <p>Eye Irrit. 2: Causes serious eye irritation. Irritating to eyes. (OECD 405)</p> <p>Based upon the available data, the classification criteria are not met. Based upon the available data, the classification criteria are not met. Based upon the available data, the classification criteria are not met.</p> <p>Repr. 2: Suspected of damaging the unborn child. - Inhalation. Toxicity for reproduction: Positive 2000 ppm (Ono A, et al, 1996) Developmental Toxicity: NOAEC 500 ppm (OECD 414) STOT SE 3: May cause drowsiness or dizziness. Toluene: NOAEC of 50 ppm (188mg/m3) can be determined for acute neurobehavioural effects. (Muttray A, et al, 2005) NOAEC of 50 ppm (188mg/m3) can be determined for acute neurobehavioural effects. (Muttray A, et al, 2005)</p> <p>STOT RE 2: May cause damage to organs through prolonged or repeated exposure: Central nervous system. - Inhalation. LOAEC 600 ppm (OECD 453) No data. Harmonised Classification Asp. Tox. 1: May be fatal if swallowed and enters airways. Kinematic Viscosity; 0.55 cST None.</p>
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## SECTION 12: ECOLOGICAL INFORMATION

<p>12.1 <b>Toxicity</b></p> <p>12.2 <b>Persistence and degradability</b></p> <p>12.3 <b>Bioaccumulative potential</b></p> <p>12.4 <b>Mobility in soil</b></p> <p>12.5 <b>Results of PBT and VPvB assessment</b></p> <p>12.6 <b>Other adverse effects</b></p>	<p>Based upon the available data, the classification criteria are not met. Estimated Mixture LC50 &gt;100 mg/l (Fish)</p> <p>Part of the components are poorly biodegradable.</p> <p>The product has low potential for bioaccumulation.</p> <p>The product is predicted to have low mobility in soil. (The product is essentially insoluble in water.)</p> <p>Not classified as PBT or vPvB. None known.</p>
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## SECTION 13: DISPOSAL CONSIDERATIONS

<p>13.1 <b>Waste treatment methods</b></p> <p>13.2 <b>Additional Information</b></p>	<p>Dispose of this material and its container as hazardous waste. Send after pre-treatment to a appropriate hazardous waste incinerator facility according to legislation.</p> <p>Dispose of contents in accordance with local, state or national legislation.</p>
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## SECTION 14: TRANSPORT INFORMATION

	ADR/RID	IMDG	IATA/ICAO
14.1 <b>UN number</b>	1263	1263	1263
14.2 <b>UN proper shipping name</b>	PAINT	PAINT	PAINT
14.3 <b>Transport hazard class(es)</b>	33	3	3
14.4 <b>Packing group</b>	II	II	II
14.5 <b>Environmental hazards</b>	Not classified	Not classified as a Marine Pollutant.	Not classified
14.6 <b>Special precautions for user</b>	See Section: 2		
14.7 <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable	Not applicable	Not applicable

## SECTION 15: REGULATORY INFORMATION

<p>15.1 <b>Safety, health and environmental regulations/legislation specific for the substance or</b></p>	
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Revision: 2.0 Date: 12 August 2016

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),  
1272/2008 (CLP) & 2015/830

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<b>mixture</b>	
<b>15.1.1 EU regulations</b>	
Authorisations and/or Restrictions On Use	Not restricted
Annex XVII (Restrictions)	Toluene: Entry 48: Restricted as a substance or in mixtures > 0.1% w/w used in adhesives or spray paints for the general public
CoRAP Substance Evaluation	Toluene: Substance evaluated in 2012; evaluating Member State has concluded that no additional information is required
<b>15.1.2 National regulations</b>	
<b>15.2 Chemical Safety Assessment</b>	A REACH chemical safety assessment has been carried out.

## SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16: New SDS Regulation 2015/830 format, all sections have been updated to include new information. Please review SDS with care.

### References:

Existing Safety Data Sheet (SDS), Harmonised Classification(s) for Methyl ethyl ketone (CAS No. 78-93-3) and Toluene (CAS No. 108-88-3). Existing ECHA registration(s) for Methyl ethyl ketone (CAS No. 78-93-3) and Toluene (CAS No. 108-88-3).

### Literature References:

- Ono A, Sekita K, Ogawa Y, Hirose A, Suzuki S, Saito M, Naito K, Kaneko T, Furuya T, Kawashima K, Yasuhara K, Matsumoto K, Tanaka S, Inoue T and Kurokawa Y, 1996, Reproductive and developmental toxicity studies of toluene II. Effects of inhalation exposure on fertility in rats, Journal of Environmental Pathology Toxicology and Oncology 15, 9-20
- Muttray A, Spelmeyer U, Hommel G, Oesch F, Jung D, Rose D, Mayer-Popken O, Rossbach B and Letzel S, 2005, Acute exposure to 50 ppm toluene does not increase sleepiness, Environ. Toxicol. Pharmacol. 19, 665-669

EU Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830.

Classification of the substance or mixture According to Regulation (EC) No. 1272/2008 (CLP)	Classification Procedure
Flam. Liq. 2; H225	Flash Point [Closed cup] Test Result/ Boiling Point (°C)
Asp. Tox. 1; H304	Expert judgement
Skin Irrit. 2; H315	Threshold Calculation
Eye Irrit. 2; H319	Threshold Calculation
STOT SE 3; H336	Threshold Calculation
Repr. 2; H361d	Threshold Calculation
STOT RE 2; H373	Threshold Calculation

### LEGEND

LTEL: Long Term Exposure Limit

DNEL: Derived No Effect Level

PBT: PBT: Persistent, Bioaccumulative and Toxic

STEL: Short Term Exposure Limit

PNEC: Predicted No Effect Concentration

vPvB: very Persistent and very Bioaccumulative

### Hazard classification / Classification code:

Flam. Liq. 2; Flammable Liquid Category 2

Asp. Tox. 1; Aspiration Toxicity Category 1

Skin Irrit. 2; Skin Irritation Category 2

Eye Irrit. 2; Eye Irritation Category 2

STOT SE 3; Specific target organ toxicity — single exposure Category 3

Repr. 2; Reproductive toxicity Category 2

STOT RE 2; Specific target organ toxicity — repeated exposure Category 2

2

### Hazard Statement(s)

H225: Highly flammable liquid and vapour.

H304: May be fatal if swallowed and enters airways.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H336: May cause drowsiness or dizziness.

H361d: Suspected of damaging the unborn child.

H373: May cause damage to organs through prolonged or repeated exposure.

EUH066: Repeated exposure may cause skin dryness or cracking.

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Revision: 2.0 Date: 12 August 2016

**ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),  
1272/2008 (CLP) & 2015/830**

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