SAFETY DATA SHEET
QUICK-MARK® APPLICATION FLUID

1. IDENTIFICATION OF SUBSTANCE AND COMPANY

TRADE NAME	**QUICK-MARK® APPLICATION FLUID MEGA PART: 800-308**

Company	Mega Electronics Limited
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	Linton, Cambridge
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2. HAZARDS IDENTIFICATION

The product is not classified according to GHS /CLP / OSHA Regulations.
No hazard label required.

3. COMPOSITION /INFORMATION ON INGREDIENTS

No	Ingredient name	EC No.	CAS No.	Conc. (wt%)		Classification
1	Aqueous Ethanolic Solution (Ethanol 15%)	n/a	n/a	n/a		n/a

COMPOSITION COMMENTS: NO DANGEROUS INGREDIENTS ACCORDING TO REGULATION (EC) NO. 1272/2008

4. FIRST AID MEASURES

GENERAL INFORMATION

INHALATION Fresh Air. Consult Doctor in case of complaints.

INGESTION Rinse out mouth and drink plenty of water. Do not induce vomiting. Consult a doctor.

SKIN CONTACT Wash with water and soap, rinse thoroughly **.**If symptoms persist consult a doctor.

EYE CONTACT Rinse opened eye for several minutes under running water. If symptoms persist consult a doctor.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA Use carbon dioxide(CO_2), foam, dry powder

SPECIAL HAZARDS Combustible material. Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air at elevated temperatures. Development of hazardous combustion gases or vapours possible in events of fire.

PROTECTIVE CLOTHING FOR FIRE-FIGHTING In the event of fire, wear self-contained breathing apparatus.

UNSUITABLE EXTINGUISHING MEDIA Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminated surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS Do not breathe vapours, aerosols. Ensure adequate ventilation.

ENVIRONMENTAL PRECAUTIONS Do not empty into drains. Explosive properties

SPILL CLEAN UP METHODS Take up with liquid-absorbent material (e.g. Chemizorb®). Forward for disposal.

Clean up affected area.

7. HANDLING AND STORAGE

ADVISE OF SAFE HANDLING Observe label precautions and ones advised in this data sheet.

ADVICE ON PROTECTION AGAINST FIRE & EXPLOSION Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

STORAGE PRECAUTIONS

Further information on storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

name						
Aqueous ethanolic Solution (Ethanol 15%)						

PROTECTIVE EQUIPMENT

WEL = WORKPLACE EXPOSURE LIMITS.

Personal protective equipment

Protective clothing should be selected specifically for the work place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection

required when vapours/aerosols are generated.
Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

Hand protection

full contact:

Glove material: butyl-rubber
Glove thickness: 0,7 mm
Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber
Glove thickness: 0,40 mm
Break through time: > 120 min

The protective gloves to be used must comply with the specifications of EC irective 89/686/EEC and he resultant standard EN374, for example. KCL 898 Butoject® (full contact), KCL 730
Camatril® -Velours (splash contact).
The breakthrough times stated above were determined by KCL in laboratory tests acc. To EN374 with samples of the recommended glove types.

Eye protection	Safety glasses
Protective measures	Flame retardant antistatic protective clothing
Hygiene measures	Change contaminated clothing. Application of skin- protective barrier cream recommended. Wash hands after working with substance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid.		
Colour:	Colourless.		
Odour	Alcohol-like		
Ignition temp:	425°C-method DIN 51794 (ethanol)	**Flash point**	12°C Method: c.c. (ethanol)
Lower explosion limit	3.5% (V) (ethanol)	**Upper explosion limit**	15% (V) (ethanol)
Vapour pressure	59 hPa at 20°C	**Relative Density:**	1,6
Density	0,790-0,793 g/cm³ at 20°C	**Water solubility**	At 20°C completely miscible
Partition coefficient: noctanol/water	Method: (experimental) (Lit.) (anhydrous substance) No bioaccumulation is to be expected (log Pow <1).		

10. STABILITY AND REACTIVITY

Conditions to avoid Heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.

Materials to avoid Risk of explosion with: Risk of ignition or formation of inflammable gases or vapors with:
Alkali metals, Alkaline earth metals, alkali oxides, Strong oxidizing agents, halogen-halogen compounds, chromyl chloride, Ethylene oxide, Fluorine, perchlorates, potassium permanganate, sulphuric acid, perchloric acid, permanganic acid, Oxides of phosphorus, Nitric acid, nitrogen dioxide, uranium hexafluoride, hydrogen peroxide, chromium(VI) oxide

Hazardous decomposition products no information available

Further information unsuitable working materials: various plastics, rubber
Vapours may form explosive mixture with air.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL TOXICITY LD50 (rat) Dose: 6.200 mg/kg (IUCLID) (ethanol) Symptoms: Nausea, Vomiting
Acute inhalation toxicity LC50 rat Dose: 95,6 mg/l, 4 h (RTECS) (ethanol) Symptoms: slight mucosal irritations absorption

Skin irritation : rabbit Result: No irritation
Method: OECD Test Guideline 404 (ethanol) Drying-out effect resulting in rough and chapped skin.
Possible damages: Dermatitis
Eye irritation : rabbit Result: No eye irritation
Method: OECD Test Guideline 405 (anhydrous substance)

Sensitisation : Sensitisation test (Magnusson and Kligman): Result: negative
(IUCLID) (anhydrous substance)

Genotoxicity in vitro Ames test Salmonella typhimurium Result: negative
(National Toxicology Program) (anhydrous substance)

Further information
Systemic effects: euphoria
After absorption of large quantities:
Dizziness, inebriation, narcosis, respiratory paralysis
Further data:
Handle in accordance with good industrial hygiene and safety practice.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Toxicity to fish
LC50 Species: Leuciscus idus (Golden orfe) Dose: 8.140 mg/l Exposure time: 48 h
(IUCLID) (calculated on the pure substance)

Toxicity to daphnia and other aquatic invertebrates.
EC5 Species: E.sulcatum Dose: 65 mg/l Exposure time: 72 h
(maximum permissible toxic concentration) (Lit.) (calculated on the pure substance)

EC50 Species: Daphnia magna (Water flea) Dose: 9.268 - 14.221 mg/l Exposure time: 48 h
(IUCLID) (calculated on the pure substance)

Toxicity to algae
IC5 Species: Scenedesmus quadricauda (Green algae) Dose: 5.000 mg/l Exposure time: 7 d
(maximum permissible toxic concentration) (Lit.) (calculated on the pure substance)
Toxicity to bacteria
EC5 Species: Pseudomonas putida Dose: 6.500 mg/l Exposure time: 16 h
(maximum permissible toxic concentration) (IUCLID) (calculated on the pure substance)

Persistence and degradability
Biodegradability Result: Readily biodegradable. 94 %
Method: OECD Test Guideline 301E (anhydrous substance)

Biochemical Oxygen Demand (BOD)
930 - 1.670 mg/g (5 d) (Lit.) (anhydrous substance)

Chemical Oxygen Demand (COD)
1.990 mg/g (IUCLID) (anhydrous substance)

Theoretical oxygen demand (ThOD)
2.100 mg/g (Lit.) (anhydrous substance)
Ratio BOD/ThBOD BOD5 74 % (IUCLID)
Ratio COD/ThBOD 90 % (Lit.), (anhydrous substance)

Partition coefficient: n-octanol/water
log Pow: -0,31
Method: (experimental) (Lit.) (anhydrous substance) No bioaccumulation is to be expected (log Pow <1).
Additional ecological information
Do not allow to enter waters, waste water, or soil

13. DISPOSAL CONSIDERATIONS

Product
Chemicals must be disposed of in compliance with the respective national regulations.
Packaging
Mega product packaging must be disposed of in compliance with the local specific regulations.

14. TRANSPORT INFORMATION

GENERAL Not classified as hazardous for transport
No Transport warning sign required.

15. REGULATORY INFORMATION

NOT CLASSIFIED

16. OTHER INFORMATION

INFORMATION SOURCES:

DATE: 19/09/2017

RISK PHRASES IN FULL
None.

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy him/her as to the suitability of such information for his/her own particular use.