



SAFETY DATA SHEET

Issue Date 01-Mar-2012

Revision Date 17-Jul-2012

Version 2

Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1. Product identifier

Product Name VUTEk® QS Pro Series 1 Ink

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

Recommended Use Printing Ink.

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Importer EFI-B.V. Boeing Avenue 201/207 1119PD Schiphol-Rijk The Netherlands	Company Name EFI-VUTEK One VUTEk Place Meredith, NH 03253 603-279-4635 USA
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For further information, please contact

Email address ehs@efi.com

1.4. Emergency telephone number

Chemtrec +1-800-424-9300

Emergency Telephone - 24 Hour Emergency Phone Number

Chemtrec International +1-703-527-3887

Europe	112
Netherlands	+31 (0)20 658 8000

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Classification according to 67/548/EEC The preparation is classified as dangerous in accordance with Directive 1999/45/EC

Classification

Full text of R-phrases: see section 16

R-code(s)

Xn;R22 - Xi;R37/38 - Xi;R41 - R43 - R52-53

Most Important Hazards

Harmful if swallowed

Risk of serious damage to eyes

May cause sensitization by skin contact

Irritating to respiratory system and skin

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

2.2. Label elements



Classification

Xn - Harmful

R-Phrases

R22 - Harmful if swallowed

R41 - Risk of serious damage to eyes

R43 - May cause sensitization by skin contact

R37/38 - Irritating to respiratory system and skin

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S phrases

S24 - Avoid contact with skin

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S37/39 - Wear suitable gloves and eye/face protection

Contains Trimethylolpropane Triacrylate (TMPTA).

Contains Phosphine oxide, phenylbis(2,4,6-trimethyl benzoyl), Vinyl caprolactam

2.3. Other hazards

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not Applicable

3.2 Mixtures

Chemical Name	EC No	CAS No	Weight-%	Classification according to 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Vinyl caprolactam	218-787-6	2235-00-9	25-35	Xn; R22-41	H302; H318	No data available
THFA	219-268-7	2399-48-6	10-20	Xi; R36/37/38	H315; H319	No data available
Cyclic Trimethylolpropane Formal Acrylate	266-380-7	66492-51-1	10-20	Xi; R36/38	H315; H319	No data available
Aliphatic Urethane Acrylate	-	52404-33-8	10-20	Xi; R36/38	H315; H319	No data available
Isobornyl Acrylate	227-561-6	5888-33-5	5-15	Xi; R36/37/38 N; R51-53	H315; H319; H335; H411	No data available
Trimethylbenzoyldiphenyl Phosphine Oxide (TPO)	278-355-8	75980-60-8	1-5	N; R51/53, R62	H361; H411	No data available
Oligo[2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone]	402-990-3	163702-01-0	1-5	Xn; R62	H361	No data available
Phosphine oxide, phenylbis(2,4,6-trimethyl benzoyl)	423-340-5	162881-26-7	1-5	Xi; R43, R53	H317	No data available
Trimethylolpropane Triacrylate (TMPTA)	239-701-3	15625-89-5	0.5-1	Xi; R36/38, R43	H315; H317; H319	01-2119489896-11

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye contact	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. (Get medical attention immediately if irritation persists.).
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Ingestion	If swallowed, call a poison control center or physician immediately. Do NOT induce vomiting.
Inhalation	Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician.

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

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

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Carbon dioxide (CO₂). Foam. Water. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

No information available.

5.2. Special hazards arising from the substance or mixture

Special Hazard

Thermal decomposition can lead to release of toxic/corrosive gases and vapors.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

In the event of fire and/or explosion do not breathe fumes.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ventilate affected area. Avoid breathing vapors or mists. Evacuate personnel to safe areas.

See Section 12: ECOLOGICAL INFORMATION.

6.2. Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas.

6.3. Methods and material for containment and cleaning up

Dike to collect large liquid spills.

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4. Reference to other sections

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Use only with adequate ventilation. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat. Incompatible with oxidizing agents.

7.3. Specific end use(s)

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available

8.2. Exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

- Eye/face protection** Wear safety glasses with side shields (or goggles). Avoid contact with eyes.
- Hand Protection** All personal protection equipment should be chosen according to the CEN standards. Wear protective nitrile rubber gloves. or. Latex gloves are recommended.
- Body Protection** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
- Respiratory protection** In case of inadequate ventilation wear respiratory protection.

General Hygiene Considerations Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Environmental exposure controls No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	liquid	Odor	No information available
Appearance	viscous	Odor threshold	No information available
Color	Multiple colors		
Property	Values	pH	
No information available		Melting point/freezing point	
No information available		Boiling point / boiling range	
No information available		Flash point	>93 °C

No information available		Evaporation rate
No information available		Flammability (solid, gas)
No information available		Flammability Limits in Air
No information available		Upper flammability limits
Lower flammability limit		
Vapor pressure		No information available
Vapor density		No information available
Relative density	1.087	No information available
Water solubility		No information available
Solubility(ies)		No information available
Partition Coefficient (n-octanol/water)		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	0.05
Density	No information available
Bulk density	No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Incompatible with oxidizing agents.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Section 11: TOXICOLOGY INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Product Information	Mixture classified as an irritant based on OECD 404 test data.
Inhalation	No data available.
Eye contact	No data available.
Skin Contact	Irritating to skin.
Ingestion	Harmful if swallowed.
Oral LD50	Vinyl caprolactam; 1400 mg/kg (Rat)
<u>Chronic toxicity</u>	
Sensitization	No information available
Target Organ Effects	No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
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Section 14: TRANSPORT INFORMATION

Note: Not regulated

IMDG

RID

ADR

ICAO (air)

IATA

Section 15: REGULATORY INFORMATION

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

International Inventories

TSCA	Complies
EINECS/ELINCS	Complies
DSL/NDSL	-
PICCS	-
ENCS	-
IECSC	-
AICS	-
KECL	-

MAL Code (1993): 3-5.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

AICS - Australian Inventory of Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

15.2. Chemical safety assessment Chemical Safety Report

No information available

Section 16: OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R22 - Harmful if swallowed

R41 - Risk of serious damage to eyes

R62 - Possible risk of impaired fertility

R43 - May cause sensitization by skin contact

R36/37/38 - Irritating to eyes, respiratory system and skin

R36/38 - Irritating to eyes and skin

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

R37/38 - Irritating to respiratory system and skin

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H361 - Suspected of damaging fertility or the unborn child

H411 - Toxic to aquatic life with long lasting effects

Issue Date 01-Mar-2012

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Revision Note New SDS Format.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

End of Safety Data Sheet