SAFETY DATA SHEET

according to the Global Harmonized System

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

Product identifier

Product name PROFORMIC C1000

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

Identified uses Adhesives

Details of the supplier of the safety data sheet

Supplier
VIKO UG (haftungsbeschränkt)
Unterhachingerstr. 95a
D-81737 München/Munich
GERMANY
tel +49 (0) 89 20 94 10 58
fax +49 (0) 89 20 94 70 45
e-mail: info@proformic.com

Emergency telephone number

Emergency telephone number

North America: Chemtrec @ 1-800-424-9300 (24hrs)
International: Chemtrec @ 001-703-527-3887 (24hrs)

2. Hazards identification

Classification of the substance or mixture GHS Classification

Serious Eye Damage/Eye Irritation	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity - single exposure	Category 3
Specific target organ toxicity - repeated exposure	Category 2

Physical hazards None

Classification according to EU Directives 67/548/EEC or 1999/45/EC
The substance/preparation is classified as dangerous in accordance with Directive(s) 67/548/EEC with amendments and/or 1999/45/EC with amendments

Symbol(s) Xn - Harmful

Classification Carc. cat. 3;R40 - Xn;R48/20 - Xn;R20/21/22 - Xi;R41 - Xi;R37

Labelling
Contains 1-vinyl-2-pyrrolidone

Label elements

Signal word **Danger**

Hazard statements
H318 - Causes serious eye damage
H335 - May cause respiratory irritation
H351 - Suspected of causing cancer
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary Statements
P280 - Wear eye protection/ face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/ physician
P281 - Use personal protective equipment as required
P260 - Do not breathe dust or mist

2.3 Other information

General Hazards
None known

3. Composition/information on ingredients

3.1 Substances

Hazardous components
The ingredients listed in this section have been determined to be hazardous and above threshold limits

Hazardous components

Chemical Name	EC-No	CAS-No	Weight percent	Classification (67/548)	GHS Classification

1-vinyl-2-pyrrolidone	201-800-4	88-12-0	20-30	Xn;R20/21/22 Xn;R48/20 Xi;R41 Xi;R37 Carc. Cat.3;R40	STOT SE 3 (H335) STOT RE 2 (H373) Eye Dam. 1 (H318) Carc. 2 (H351) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332)
Photoinitator	Listed	Proprietary	1-5	Xi;R36	Eye Irrit. 2 (H319)
Photoinitiator	Listed	Proprietary	1-5	Xn;22	Acute Tox. 4 (H302)
Visible Photoinitator	Listed	Proprietary	<1	R43 R53	Skin Sens. 1 (H317) Aquatic Chronic 4 (H413)

Non-hazardous ingredients

Chemical Name	EC-No	CAS-No	Weight percent	Classification (67/548)	GHS Classification
Aliphatic Urethane Acrylate	Not Listed	Proprietary	60-70	-	-

For the full text of the R-phrases mentioned in this Section, see Section 16

4. First aid measures

4.1 Description of first aid measures

General advice
IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.

Eye contact
Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists

Skin contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes

Ingestion
Get medical attention

Inhalation
Move to fresh air If symptoms persist, call a physician

Protection of first-aiders
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves

Most important symptoms and effects, both acute and delayed

Main symptoms
None

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician
Treat symptomatically

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use CO2, dry chemical, or foam.

Extinguishing media which shall not be used for safety reasons
Do not use a solid water stream as it may scatter and spread fire

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products
Hazardous decomposition products due to incomplete combustion

Specific hazards arising from the chemical
Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke

Special hazard
vapours may form explosive mixtures with air, Most vapours are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks), Flash back possible over considerable distance.

5.3 Advice for firefighters

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions
Ensure adequate ventilation, Wear protective gloves/clothing and eye/face protection.

Environmental precautions

Environmental precautions
Local authorities should be advised if significant spillages cannot be contained, Try to prevent the material from entering drains or water courses.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Methods for containment
Prevent further leakage or spillage if safe to do so

OTHER INFORMATION
See Section 12 for additional information

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling
Handle in accordance with good industrial hygiene and safety practice, Ensure adequate ventilation, Protect from light

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions
Keep container tightly closed in a dry and well-ventilated place Protect from light Store at room temperature in the original container

Specific end uses

Exposure scenario
No information available

8. Exposure controls/personal protection

Control parameters

Exposure limits

.

Chemical Name	European Union	The United Kingdom	France	Spain	Germany
1-vinyl-2-pyrrolidone			TWA 0.1 ppm C3		
Chemical Name	**Italy**	**Portugal**	**The Netherlands**	**Finland**	**Denmark**
1-vinyl-2-pyrrolidone		TWA 0.05 ppm C(A3)		TWA 0.1 ppm TWA 0.5 mg/m^3	
Chemical Name	**Austria**	**Switzerland**	**Poland**	**Norway**	**Ireland**
Aliphatic Urethane Acrylate		S+			
1-vinyl-2-pyrrolidone	H* A2 TWA 0.1 ppm TWA 0.5 mg/m^3	H* TWA 0.1 ppm TWA 0.5 mg/m^3 C3			TWA 0.05 mg/m^3

Derived No Effect Level (DNEL)
No information available

Predicted No Effect Concentration (PNEC)
No information available

Exposure controls

Occupational exposure controls

Engineering measures
Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Hygiene measures
When using, do not eat, drink or smoke, Wear suitable gloves and eye/face protection, Wash hands before breaks and at the end of workday, Wash hands with water as a precaution, Regular cleaning of equipment, work area and clothing is recommended, Avoid breathing vapours, mist or gas.

Personal protective equipment

General Information
Use personal protective equipment in good condition.

Respiratory protection
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Eye protection
Safety glasses with side-shields, If splashes are likely to occur, wear:.

Skin and body protection
Long sleeved clothing, Apron, Impervious gloves.

Hand protection
Nitrile rubber, Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Environmental exposure controls
Do not allow material to contaminate ground water system.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid		
Appearance	transparent	**Odour**	characteristic
Colour	light yellow	**Odour Threshold**	No information available

Property	**Values**	**Remarks - Method**
pH		No information available
Melting/freezing point		No information available
Boiling point/boiling range		No information available
Flash point	94 °C / 201 °F	
Evaporation rate		No information available
Flammability (solid, gas)		No information available
Flammability Limits in Air		No information available
upper flammability limit		
lower flammability limit		
Vapour pressure		No information available
Vapour density		No information available
Relative density		No information available
Specific Gravity		No information available
Water solubility		No information available
Solubility in other solvents		No information available
Partition coefficient: n-octanol/water		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Viscosity, dynamic	150 cP	
Explosive properties		No information available
Oxidizing properties		No information available

Other information	
Softening point	No information available
Molecular Weight	No information available
VOC Content	No information available
Density	No information available

Bulk density No information available

10. Stability and reactivity

Reactivity

Reactivity
No dangerous reaction known under conditions of normal use

Chemical stability

Stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation
None under normal processing

Hazardous reactions
None under normal processing

Conditions to avoid

Conditions to avoid
Heat, flames and sparks, Protect from light.

10.5 Incompatible materials

Materials to avoid
Amines, Oxygen scavengers, Strong oxidizing agents, Strong acids, Strong bases, thiosulfates.

Hazardous decomposition products

Hazardous decomposition products
No decomposition if stored and applied as directed.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product Information
Product does not present an acute toxicity hazard based on known or supplied information.

Inhalation	There is no data available for this product
Eye contact	There is no data available for this product
Skin contact	There is no data available for this product
Ingestion	There is no data available for this product

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation

1-vinyl-2-pyrrolidone	830 mg/kg (Rat)	1040 mg/kg (Rat) 560 mg/kg (Rabbit)	3.07 mg/L (Rat) 4 h
Photoinitiator	>1700 mg/kg (Rat)	6929 mg/kg (Rat)	
Stablizer	2000 mg/kg (Rat)		
2-Propenoic acid, 2-hydroxyethyl ester	540 mg/kg (Rat)	1010 mg/kg (Rabbit)	
4-Methoxyphenol	1600 mg/kg (Rat)		
2-Pyrrolidone	3200 mg/kg (Rat)		
Fluorescent Agent	>10000 mg/kg (Rat)	>2,000 mg/kg (Rat)	> 1.8 mg/L (Rat)
Stabilizer	2,000 mg/kg (Rat)	9400 mg/kg (Rabbit)	200 mg/L (Rat) 1 h

Chronic toxicity

Carcinogenic effects

Chemical Name	European Union
1-vinyl-2-pyrrolidone	Category 3

Subchronic toxicity

Corrosivity No information available
Sensitisation No information available
Neurological effects No information available
Reproductive Toxicity No information available
Mutagenic effects No information available
Developmental Toxicity No information available
Teratogenicity No information available
Target Organ Effects No information available.
Specific target organ systemic toxicity (single exposure) No information available
Specific target organ systemic toxicity (repeated exposure) No information available
Other adverse effects No information available
Aspiration hazard No information available

12. Ecological information

Toxicity

Ecotoxicity effects
Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants

Acute aquatic toxicity

Product Information
No information available

Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
1-vinyl-2-pyrrolidone	780 mg/L EC50 72 h (Desmodesmus subspicatus)			EC50 = 45 mg/L 48 h
Visible Photoinitator	EC50 > 0.26 mg/l 72 h (Scenedesmus sp.)	LC50 > 0.09 mg/l 96 h (Brachydanio rerio)	EC50 > 100 mg/l 3 h (Activated sludge)	EC50 > 1.175 mg/l 48 h (Daphnia magna)

Persistence and degradability
No information available

Bioaccumulative potential
Component Information

Chemical Name	log Pow
1-vinyl-2-pyrrolidone	0.4

Mobility in soil
No information available

Results of PBT and vPvB assessment
No information available

Other adverse effects
None

Endocrine Disruptor Information
This product does not contain any known or suspected endocrine disruptors

13. Disposal considerations

13.1 Waste treatment methods

Waste from residues / unused products
Should not be released into the environment, Dispose of in accordance with the European Directives on waste and hazardous waste.

Contaminated packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal

OTHER INFORMATION
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used

14. Transport information

ADR/RID not regulated

IMDG/IMO not regulated

ICAO/IATA not regulated

15. Regulatory information

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

International Inventories
The components of this product are included on the following inventories or exempt from listing:

TSCA	Complies
KECL	Complies
IECSC	Complies
AICS	Complies
EINECS/ELINCS	Complies

DSL/NDSL	Complies
ENCS	Complies
PICCS	Not Listed

Legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
KECL - Korean Existing and Evaluated Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
AICS - Australian Inventory of Chemical Substances
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

15.2 Chemical Safety Assessment
No information available

16. Other information

Full text of H-Statements referred to under sections 2 and 3
H317 - May cause an allergic skin reaction
H413 - May cause long lasting harmful effects to aquatic life
H302 - Harmful if swallowed
H335 - May cause respiratory irritation
H373 - May cause damage to organs (a,b,c) through prolonged or repeated exposure if inhaled
H318 - Causes serious eye damage
H351 - Suspected of causing cancer if inhaled
H312 - Harmful in contact with skin
H332 - Harmful if inhaled
H319 - Causes serious eye irritation

Full text of R-phrases referred to under sections 2 and 3
R40 - Limited evidence of a carcinogenic effect
R37 - Irritating to respiratory system
R41 - Risk of serious damage to eyes
R36 - Irritating to eyes
R43 - May cause sensitisation by skin contact
R53 - May cause long-term adverse effects in the aquatic environment
R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed
R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation

Revision Date 2013-04-08

Revision Note Not applicable.

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

Disclaimer
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End of Safety Data Sheet