

Printing date 27.08.2009

Revision: 24.08.2009

**1 Identification of the substance/preparation and of the company/undertaking**

- **Product details**
- **Trade name:** PANAVIA 21 ; CATALYST PASTE (EX, TC, OP)
- **Article number:** 050-PC
- **Application of the substance / the preparation** Resin-based dental adhesive cement
- **Manufacturer:**  
Kuraray Europe GmbH  
Building F821, Hoechst Industrial Park  
65926 Frankfurt am Main  
Germany  
Tel: +49 (0)69 305 35 840  
Fax: +49 (0)69 305 35 640  
E-mail: dental@kuraray.de
- **Supplier:**  
J & S Davis  
Unit 6, Argyle Way Trading Estate,  
Fulton Close, Stevenage,  
Hertfordshire, SG 1 2AF,  
Great Britain  
Tel: +44- (0)1438 735800  
Fax: +44- (0)1438 735801  
E-mail: jsdsales@js-davis.co.uk
- **Further information obtainable from:** Manufacturer or Supplier
- **Information in case of emergency:**  
National Poisons information Service (London Centre)  
Guy's & St. Thomas' Hospital Trust  
Medical Toxicology Unit  
Avonley Road  
LONDON  
SE14 5ER  
Emergency telephone: (local) 0870 600 6266 or +44 20 7771 5394  
Administrative telephone: +44 20 7 771 53 10  
Facsimile number: +44 20 7 771 53 09

**2 Hazards identification**

- **Hazard description:** Not applicable.
- **Information concerning particular hazards for human and environment:**  
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**  
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **GHS label elements** Void

**3 Composition/information on ingredients**

- **Chemical characterization**
- **Description:** Mixture of substances listed below with nonhazardous additions.
- **Dangerous components:** Void
- **Other ingredients:**  
10-Methacryloyloxydecyl dihydrogen phosphate  
Hydrophobic aromatic dimethacrylate  
Hydrophobic aliphatic dimethacrylate  
Silanated silica filler

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**Trade name: PANAVIA 21 ; CATALYST PASTE (EX, TC, OP)**

Colloidal silica  
Catalysts  
Others

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#### 4 First aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

#### 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

#### 6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:** Pick up mechanically.
- **Additional information:** No dangerous substances are released.

#### 7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a refrigerator (2-8°C).
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

#### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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**Trade name: PANAVIA 21 ; CATALYST PASTE (EX, TC, OP)**

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· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Not required.

## 9 Physical and chemical properties

· **General Information**

<b>Form:</b>	Pasty
<b>Colour:</b>	White
<b>Odour:</b>	Odourless

· **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.

· **Flash point:** Not applicable.

· **Ignition temperature:** Not applicable

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

<b>Lower:</b>	Not applicable
<b>Upper:</b>	Not applicable

· **Vapour pressure:** Not applicable

· **Density:** 2.0 g/cm<sup>3</sup>

· **Vapour density** Not applicable

· **Solubility in / Miscibility with water:**

Insoluble.

· **pH-value:** Not applicable

· **Segregation coefficient (n-octanol/water):** Not applicable

## 10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Dangerous reactions** No dangerous reactions known.

· **Dangerous decomposition products:** Carbon monoxide and carbon dioxide

## 11 Toxicological information

· **Acute toxicity:**

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

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**Trade name: PANAVIA 21 ; CATALYST PASTE (EX, TC, OP)**

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· **Additional toxicological information:**

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.  
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

**12 Ecological information**

· **General notes:** Generally not hazardous for water

**13 Disposal considerations**

- **Product:**
- **Recommendation** Smaller quantities can be disposed of with household waste.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

· **Land transport ADR/RID (cross-border)**

· **ADR/RID class:** -

· **Maritime transport IMDG:**

· **IMDG Class:** -

· **Marine pollutant:** No

· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:** -

· **UN "Model Regulation":** -

**15 Regulatory information**

· **Labelling according to EU guidelines:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

· **National regulations:**

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Version:** 3

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

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**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

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**Trade name: PANAVIA 21 ; CATALYST PASTE (EX, TC, OP)**

ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals

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## 1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Trade name:** **PANAVIA 21 ; UNIVERSAL PASTE (EX, TC, OP)**
- **Article number:** 050-PU
- **Application of the substance / the preparation** Resin-based dental adhesive cement
- **Manufacturer:**  
Kuraray Europe GmbH  
Building F821, Hoechst Industrial Park  
65926 Frankfurt am Main  
Germany  
Tel: +49 (0)69 305 35 840  
Fax: +49 (0)69 305 35 640  
E-mail: dental@kuraray.de
- **Supplier:**  
J & S Davis  
Unit 6, Argyle Way Trading Estate,  
Fulton Close, Stevenage,  
Hertfordshire, SG 1 2AF,  
Great Britain  
Tel: +44- (0)1438 735800  
Fax: +44- (0)1438 735801  
E-mail: jsdsales@js-davis.co.uk
- **Further information obtainable from:** Manufacturer or Supplier
- **Information in case of emergency:**  
National Poisons information Service (London Centre)  
Guy's & St. Thomas' Hospital Trust  
Medical Toxicology Unit  
Avonley Road  
LONDON  
SE14 5ER  
Emergency telephone: (local) 0870 600 6266 or +44 20 7771 5394  
Administrative telephone: +44 20 7 771 53 10  
Facsimile number: +44 20 7 771 53 09

## 2 Hazards identification

- **Hazard description:** Not applicable.
- **Information concerning particular hazards for human and environment:**  
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**  
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **GHS label elements** Void

## 3 Composition/information on ingredients

- **Chemical characterization**
- **Description:** Mixture of substances listed below with nonhazardous additions.
- **Dangerous components:** Void
- **Other ingredients:**  
Hydrophobic aromatic dimethacrylate  
Hydrophobic aliphatic dimethacrylate  
Hydrophilic aliphatic dimethacrylate  
Silanated titanium oxide

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**Trade name: PANA VIA 21 ; UNIVERSAL PASTE (EX, TC, OP)**

Silanated barium glass filler  
Catalysts  
Accelerators  
Pigments  
Others

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#### 4 First aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

#### 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

#### 6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:** Pick up mechanically.
- **Additional information:** No dangerous substances are released.

#### 7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a refrigerator (2-8°C).
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

#### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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**Trade name: PANA VIA 21 ; UNIVERSAL PASTE (EX, TC, OP)**

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Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Not required.

## 9 Physical and chemical properties

· **General Information**

<b>Form:</b>	Pasty
<b>Colour:</b>	Coloured
<b>Odour:</b>	Odourless

· **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.

· **Flash point:** Not applicable.

· **Ignition temperature:** Not applicable

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

<b>Lower:</b>	Not applicable
<b>Upper:</b>	Not applicable

· **Vapour pressure:** Not applicable

· <b>Density:</b>	1.9 g/cm <sup>3</sup>
· <b>Vapour density</b>	Not applicable

· **Solubility in / Miscibility with water:** Insoluble.

· **pH-value:** Not applicable

· **Segregation coefficient (n-octanol/water):** Not applicable

## 10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Dangerous reactions** No dangerous reactions known.

· **Dangerous decomposition products:** Carbon monoxide and carbon dioxide

## 11 Toxicological information

· **Acute toxicity:**

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

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**Trade name: PANA VIA 21 ; UNIVERSAL PASTE (EX, TC, OP)**

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- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.  
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

## 12 Ecological information

- **General notes:** Generally not hazardous for water

## 13 Disposal considerations

- **Product:**
- **Recommendation** Smaller quantities can be disposed of with household waste.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **UN "Model Regulation":** -

## 15 Regulatory information

- **Labelling according to EU guidelines:**  
Observe the general safety regulations when handling chemicals.  
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).
- **National regulations:**
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57**

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Version:** 3
- **Abbreviations and acronyms:**  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

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**Trade name: PANAVIA 21 ; UNIVERSAL PASTE (EX, TC, OP)**

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IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GB

## 1 Identification of the substance/preparation and of the company/undertaking

• **Product details**

• **Trade name:** PANAVIA 21 ; ED PRIMER Liquid A

• **Article number:** 050-EA

• **Application of the substance / the preparation** Dental material for tooth surface conditioning

• **Manufacturer:**

Kuraray Europe GmbH  
Building F821, Hoechst Industrial Park  
65926 Frankfurt am Main  
Germany  
Tel: +49 (0)69 305 35 840  
Fax: +49 (0)69 305 35 640  
E-mail: dental@kuraray.de

• **Supplier:**

J & S Davis  
Unit 6, Argyle Way Trading Estate,  
Fulton Close, Stevenage,  
Hertfordshire, SG 1 2AF,  
Great Britain  
Tel: +44- (0)1438 735800  
Fax: +44- (0)1438 735801  
E-mail: jsdsales@js-davis.co.uk

• **Further information obtainable from:** Manufacturer or Supplier

• **Information in case of emergency:**

National Poisons information Service (London Centre)  
Guy's & St. Thomas' Hospital Trust  
Medical Toxicology Unit  
Avonley Road  
LONDON  
SE14 5ER  
Emergency telephone: (local) 0870 600 6266 or +44 20 7771 5394  
Administrative telephone: +44 20 7 771 53 10  
Facsimile number: +44 20 7 771 53 09

## 2 Hazards identification

• **Hazard description:**



Xi Irritant

• **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 36/38 Irritating to eyes and skin.

R 43 May cause sensitisation by skin contact.

• **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

• **GHS label elements**



Warning

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

H317 - May cause an allergic skin reaction.

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**Trade name: PANA VIA 21 ; ED PRIMER Liquid A**

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**Prevention:**

- P264 Wash thoroughly after handling.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P321 Specific treatment (see on this label).
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P362 Take off contaminated clothing and wash before reuse.

### 3 Composition/information on ingredients

**Chemical characterization**

**Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

CAS: 868-77-9	2-hydroxyethyl methacrylate	Xi; R 36/38-43	30-50%
EINECS: 212-782-2		Warning: 3.2/2, 3.3/2, 3.4.S/1	

**Other ingredients:**

- I0-Methacryloyloxydecyl dihydrogen phosphate
- N-Methacryloyl-5-aminosalicylic acid
- Water
- Accelerators

### 4 First aid measures

**After inhalation:**

- Supply fresh air and to be sure call for a doctor.
- In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:**

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

**After swallowing:**

- Do not induce vomiting; call for medical help immediately.
- If symptoms persist consult doctor.

### 5 Fire-fighting measures

**Suitable extinguishing agents:**

- CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Protective equipment:**

- Wear self-contained respiratory protective device.
- Wear fully protective suit.

### 6 Accidental release measures

**Person-related safety precautions:** Not required.

**Measures for environmental protection:**

- Dilute with plenty of water.
- Do not allow to enter sewers/ surface or ground water.

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**Trade name: PANA VIA 21 ; ED PRIMER Liquid A**

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- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

## 7 Handling and storage

- **Handling:**
- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a refrigerator (2-8°C).
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **Protection of hands:**  
Protective gloves  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Tightly sealed goggles

## 9 Physical and chemical properties

### · General Information

<b>Form:</b>	Liquid
<b>Colour:</b>	Transparent
<b>Odour:</b>	Odourless

### · Change in condition

<b>Melting point/Melting range:</b>	-12 °C (2-hydroxyethyl methacrylate)
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**Trade name: PANA VIA 21 ; ED PRIMER Liquid A**

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<b>Boiling point/Boiling range:</b>	205 °C (2-hydroxyethyl methacrylate)
<b>Flash point:</b>	97 °C (2-hydroxyethyl methacrylate)
<b>Ignition temperature:</b>	Not applicable
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
Lower:	Not applicable
Upper:	Not applicable
<b>Vapour pressure:</b>	Not applicable
<b>Density:</b>	1.1 g/cm <sup>3</sup>
<b>Vapour density</b>	Not applicable
<b>Solubility in / Miscibility with water:</b>	Partly miscible.
<b>pH-value:</b>	Not applicable
<b>Segregation coefficient (n-octanol/water):</b>	Not applicable

## 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** Carbon monoxide and carbon dioxide

## 11 Toxicological information

### · Acute toxicity:

#### · LD/LC50 values relevant for classification:

**868-77-9 2-hydroxyethyl methacrylate**

Oral	LD50	4680 mg/kg (guinea pig)
		3275 mg/kg (mouse)
		5050 mg/kg (rat)

### · Primary irritant effect:

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.

### · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

- **Sensitisation** May cause sensitisation by skin contact.

## 12 Ecological information

### · General notes:

Water hazard class I (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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**Trade name: PANA VIA 21 ; ED PRIMER Liquid A**

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### 13 Disposal considerations

- **Product:**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **UN "Model Regulation":** -

### 15 Regulatory information

- **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- **Code letter and hazard designation of product:**  
 Xi Irritant
- **Hazard-determining components of labelling:**  
2-hydroxyethyl methacrylate
- **Risk phrases:**  
36/38 Irritating to eyes and skin.  
43 May cause sensitisation by skin contact.
- **Safety phrases:**  
24 Avoid contact with skin.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
28 After contact with skin, wash immediately with plenty of soap and water.  
37 Wear suitable gloves.  
60 This material and its container must be disposed of as hazardous waste.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Version:** 3

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**Trade name: PANAVIA 21 ; ED PRIMER Liquid A**

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**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

GB

Printing date 27.08.2009

Revision: 24.08.2009

**1 Identification of the substance/preparation and of the company/undertaking**

- **Product details**
- **Trade name:** PANAVIA 21 ; ED PRIMER Liquid B
- **Article number:** 050-EB
- **Application of the substance / the preparation** Dental material for tooth surface conditioning
- **Manufacturer:**  
Kuraray Europe GmbH  
Building F821, Hoechst Industrial Park  
65926 Frankfurt am Main  
Germany  
Tel: +49 (0)69 305 35 840  
Fax: +49 (0)69 305 35 640  
E-mail: dental@kuraray.de
- **Supplier:**  
J & S Davis  
Unit 6, Argyle Way Trading Estate,  
Fulton Close, Stevenage,  
Hertfordshire, SG 1 2AF,  
Great Britain  
Tel: +44- (0)1438 735800  
Fax: +44- (0)1438 735801  
E-mail: jsdsales@js-davis.co.uk
- **Further information obtainable from:** Manufacturer or Supplier
- **Information in case of emergency:**  
National Poisons information Service (London Centre)  
Guy's & St. Thomas' Hospital Trust  
Medical Toxicology Unit  
Avonley Road  
LONDON  
SE14 5ER  
Emergency telephone: (local) 0870 600 6266 or +44 20 7771 5394  
Administrative telephone: +44 20 7 771 53 10  
Facsimile number: +44 20 7 771 53 09

**2 Hazards identification**

- **Hazard description:** Not applicable.
- **Information concerning particular hazards for human and environment:**  
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**  
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **GHS label elements** Void

**3 Composition/information on ingredients**

- **Chemical characterization**
- **Description:** Mixture of substances listed below with nonhazardous additions.
- **Dangerous components:** Void
- **Other ingredients:**  
N-Methacryloyl-5-aminosalicylic acid  
Water  
Catalysts

(Contd. on page 2)

GB

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**Trade name: PANA VIA 21 ; ED PRIMER Liquid B**

Accelerators

(Contd. of page 1)

#### 4 First aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

#### 5 Fire-fighting measures

- **Suitable extinguishing agents:** CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

#### 6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** Dilute with plenty of water.
- **Measures for cleaning/collecting:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

#### 7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a refrigerator (2-8°C).
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

#### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:** The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:** The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:** Not required.
- **Protection of hands:** The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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Printing date 27.08.2009

Revision: 24.08.2009

**Trade name: PANA VIA 21 ; ED PRIMER Liquid B**

(Contd. of page 2)

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Goggles recommended during refilling

## 9 Physical and chemical properties

· **General Information**

<b>Form:</b>	Liquid
<b>Colour:</b>	Transparent
<b>Odour:</b>	Odourless

· **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.

· **Flash point:** Not applicable.

· **Ignition temperature:** Not applicable

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

<b>Lower:</b>	Not applicable
<b>Upper:</b>	Not applicable

· **Vapour pressure:** Not applicable

· <b>Density:</b>	1.0 g/cm <sup>3</sup>
· <b>Vapour density</b>	Not applicable

· **Solubility in / Miscibility with water:** Fully miscible.

· **pH-value:** Not applicable

· **Segregation coefficient (n-octanol/water):** Not applicable

## 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** Carbon monoxide and carbon dioxide

## 11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

(Contd. on page 4)

Printing date 27.08.2009

Revision: 24.08.2009

Trade name: PANA VIA 21 ; ED PRIMER Liquid B

(Contd. of page 3)

**Additional toxicological information:**

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.  
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

**12 Ecological information**

General notes: Generally not hazardous for water

**13 Disposal considerations**

- Product:
- Recommendation: Smaller quantities can be disposed of with household waste.
- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agents: Water, if necessary together with cleansing agents.

**14 Transport information**

- Land transport ADR/RID (cross-border)
- ADR/RID class: -

- Maritime transport IMDG:
- IMDG Class: -
- Marine pollutant: No

- Air transport ICAO-TI and IATA-DGR:
- ICAO/IATA Class: -

- UN "Model Regulation": -

**15 Regulatory information**

- Labelling according to EU guidelines:  
Observe the general safety regulations when handling chemicals.  
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Version: 3****Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals



## 1 Identification of the substance/preparation and of the company/undertaking

• **Product details**

• **Trade name:** PANAVIA 21 ; OXYGUARD II

• **Article number:** 050-O

• **Application of the substance / the preparation** Dental material for curing promotion and surface protection

• **Manufacturer:**

Kuraray Europe GmbH  
Building F821, Hoechst Industrial Park  
65926 Frankfurt am Main  
Germany  
Tel: +49 (0)69 305 35 840  
Fax: +49 (0)69 305 35 640  
E-mail: dental@kuraray.de

• **Supplier:**

J & S Davis  
Unit 6, Argyle Way Trading Estate,  
Fulton Close, Stevenage,  
Hertfordshire, SG 1 2AF,  
Great Britain  
Tel: +44- (0)1438 735800  
Fax: +44- (0)1438 735801  
E-mail: jsdsales@js-davis.co.uk

• **Further information obtainable from:** Manufacturer or Supplier

• **Information in case of emergency:**

National Poisons information Service (London Centre)  
Guy's & St. Thomas' Hospital Trust  
Medical Toxicology Unit  
Avonley Road  
LONDON  
SE14 5ER  
Emergency telephone: (local) 0870 600 6266 or +44 20 7771 5394  
Administrative telephone: +44 20 7 771 53 10  
Facsimile number: +44 20 7 771 53 09

## 2 Hazards identification

• **Hazard description:** Not applicable.

• **Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

• **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

• **GHS label elements**

Safety data sheet available on request.

## 3 Composition/information on ingredients

• **Chemical characterization**

• **Description:** Mixture of substances listed below with nonhazardous additions.

• **Dangerous components:**

CAS: 56-81-5	glycerol	50-70%
EINECS: 200-289-5		

• **Other ingredients:**

Polyethyleneglycol

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**Trade name: PANA VIA 21 ; OXYGUARD II**

Catalysts  
Accelerators  
Dyes  
Others

(Contd. of page 1)

#### 4 First aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

#### 5 Fire-fighting measures

- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Protective equipment:** No special measures required.

#### 6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

#### 7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a refrigerator (2-8°C).
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

#### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

· **Ingredients with limit values that require monitoring at the workplace:**

56-81-5 glycerol

WEL Long-term value: 10 mg/m<sup>3</sup>

- **Additional information:** The lists valid during the making were used as basis.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

· **Respiratory protection:** Not required.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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**Trade name: PANA VIA 21 ; OXYGUARD II**

(Contd. of page 2)

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Goggles recommended during refilling

## 9 Physical and chemical properties

· **General Information**

<b>Form:</b>	Gel
<b>Colour:</b>	Green
<b>Odour:</b>	Odourless

· **Change in condition**

<b>Melting point/Melting range:</b>	18.2 °C (glycerol)
<b>Boiling point/Boiling range:</b>	290 °C (glycerol)

<b>Flash point:</b>	160 °C (glycerol)
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<b>Ignition temperature:</b>	400.0 °C (glycerol)
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<b>Danger of explosion:</b>	Product does not present an explosion hazard.
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· **Explosion limits:**

<b>Lower:</b>	0.9 Vol % (glycerol)
<b>Upper:</b>	Not applicable

<b>Vapour pressure:</b>	0.1 hPa (20°C, glycerol)
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<b>Density:</b>	Not determined.
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<b>Vapour density</b>	Not applicable
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<b>Solubility in / Miscibility with water:</b>	Fully miscible.
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<b>pH-value:</b>	Not applicable
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<b>Segregation coefficient (n-octanol/water):</b>	Not applicable
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## 10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Dangerous reactions** No dangerous reactions known.

· **Dangerous decomposition products:** Carbon monoxide and carbon dioxide

## 11 Toxicological information

· **Acute toxicity:**

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

(Contd. on page 4)

Printing date 27.08.2009

Revision: 24.08.2009

**Trade name: PANA VIA 21 ; OXYGUARD II**

(Contd. of page 3)

- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.  
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

## 12 Ecological information

- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## 13 Disposal considerations

- **Product:**
- **Recommendation** Smaller quantities can be disposed of with household waste.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## 14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **UN "Model Regulation":** -

## 15 Regulatory information

- **Labelling according to EU guidelines:**  
Observe the general safety regulations when handling chemicals.  
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).
- **Special labelling of certain preparations:**  
Safety data sheet available for professional user on request.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Version:** 3

(Contd. on page 5)

Printing date 27.08.2009

Revision: 24.08.2009

**Trade name: PANAVIA 21 ; OXYGUARD II**

(Contd. of page 4)

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GB

## 1 Identification of the substance/preparation and of the company/undertaking

· **Product details**

· **Trade name:** PANAVIA ; ETCHING AGENT V

· **Article number:** 031-EV

· **Application of the substance / the preparation** Dental etching composite

· **Manufacturer:**

Kuraray Europe GmbH  
Building F821, Hoechst Industrial Park  
65926 Frankfurt am Main  
Germany  
Tel: +49 (0)69 305 35 840  
Fax: +49 (0)69 305 35 640  
E-mail: dental@kuraray.de

· **Supplier:**

J & S Davis  
Unit 6, Argyle Way Trading Estate,  
Fulton Close, Stevenage,  
Hertfordshire, SG 1 2AF,  
Great Britain  
Tel: +44- (0)1438 735800  
Fax: +44- (0)1438 735801  
E-mail: jsdsales@js-davis.co.uk

· **Further information obtainable from:** Manufacturer or Supplier

· **Information in case of emergency:**

National Poisons information Service (London Centre)  
Guy's & St. Thomas' Hospital Trust  
Medical Toxicology Unit  
Avonley Road  
LONDON  
SE14 5ER  
Emergency telephone: (local) 0870 600 6266 or +44 20 7771 5394  
Administrative telephone: +44 20 7 771 53 10  
Facsimile number: +44 20 7 771 53 09

## 2 Hazards identification

· **Hazard description:**



C Corrosive

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 34 Causes burns.

· **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· **GHS label elements**



Danger

H314 - Causes severe skin burns and eye damage.

· **Prevention:**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

(Contd. on page 2)



Printing date 27.08.2009

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**Trade name: PANA VIA ; ETCHING AGENT V**

(Contd. of page 1)

P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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.

P321 Specific treatment (see on this label).

P363 Wash contaminated clothing before reuse.

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### 3 Composition/information on ingredients

**Chemical characterization**

**Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

CAS: 7664-38-2 phosphoric acid

EINECS: 231-633-2

C; R 34

Danger: 3.2/1B

30-40%

**Other ingredients:**

Polyvinylpyrrolidone

Colloidal silica

Water

Dyes

### 4 First aid measures

**General information:** Immediately remove any clothing soiled by the product.

**After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.

### 5 Fire-fighting measures

**Suitable extinguishing agents:**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

### 6 Accidental release measures

**Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.

**Measures for environmental protection:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

(Contd. on page 3)

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**Trade name: PANA VIA ; ETCHING AGENT V**

(Contd. of page 2)

- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

## 7 Handling and storage

- **Handling:**
- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location (2-25°C).
- **Information about storage in one common storage facility:**  
Store away from oxidizing agents.  
Store away from reducing agents.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

### Ingredients with limit values that require monitoring at the workplace:

#### 7664-38-2 phosphoric acid

WEL	Short-term value: 2 mg/m <sup>3</sup>
	Long-term value: 1 mg/m <sup>3</sup>

- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **Protection of hands:**  
Protective gloves  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 4)

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**Trade name: PANA VIA ; ETCHING AGENT V**

· **Eye protection:** Tightly sealed goggles

(Contd. of page 3)

## 9 Physical and chemical properties

### · General Information

<b>Form:</b>	Liquid
<b>Colour:</b>	Red
<b>Odour:</b>	Odourless

### · Change in condition

<b>Melting point/Melting range:</b>	42.4 °C (phosphoric acid)
<b>Boiling point/Boiling range:</b>	Undetermined.

· **Flash point:** Not applicable.

· **Ignition temperature:** Not applicable

· **Danger of explosion:** Product does not present an explosion hazard.

### · Explosion limits:

<b>Lower:</b>	Not applicable
<b>Upper:</b>	Not applicable

· **Vapour pressure:** Not applicable

· **Density:** Not determined.

· **Vapour density** Not applicable

· **Solubility in / Miscibility with water:**

Partly miscible.

· **pH-value:** 1.8

· **Segregation coefficient (n-octanol/water):** Not applicable

## 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** Carbon monoxide and carbon dioxide

## 11 Toxicological information

### · Acute toxicity:

#### · LD/LC50 values relevant for classification:

##### 7664-38-2 phosphoric acid

Oral	LD50	1250 mg/kg (mouse)
		1250 mg/kg (rat)
Dermal	LD50	2740 mg/kg (rabbit)

### · Primary irritant effect:

· **on the skin:** Caustic effect on skin and mucous membranes.

· **on the eye:** Strong caustic effect.

· **Sensitization:** No sensitizing effects known.

### · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

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**Trade name: PANA VIA ; ETCHING AGENT V**

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

(Contd. of page 4)

## 12 Ecological information

### · General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

## 13 Disposal considerations

### · Product:

### · Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

### · Uncleaned packaging:

### · Recommendation: Disposal must be made according to official regulations.

### · Recommended cleansing agents: Water, if necessary together with cleansing agents.

## 14 Transport information

### · Land transport ADR/RID (cross-border)

· ADR/RID class: 8 Corrosive substances.

· Danger code (Kemler): 80

· UN-Number: 1805

· Packaging group: III

· Hazard label: 8

· Description of goods: 1805 PHOSPHORIC ACID, SOLUTION

### · Maritime transport IMDG:

· IMDG Class: 8

· UN Number: 1805

· Label: 8

· Packaging group: III

· EMS Number: F-A,S-B

· Marine pollutant: No

· Proper shipping name: PHOSPHORIC ACID, SOLUTION

### · Air transport ICAO-TI and IATA-DGR:

· ICAO/IATA Class: 8

· UN/ID Number: 1805

· Label: 8

· Packaging group: III

· Proper shipping name: PHOSPHORIC ACID, SOLUTION

· UN "Model Regulation": UN1805; PHOSPHORIC ACID, SOLUTION; 8; III

GB

(Contd. on page 6)

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Printing date 27.08.2009

Revision: 24.08.2009

**Trade name: PANA VIA ; ETCHING AGENT V**

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**15 Regulatory information**

· **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· **Code letter and hazard designation of product:**



C Corrosive

· **Hazard-determining components of labelling:**

phosphoric acid

· **Risk phrases:**

34 Causes burns.

· **Safety phrases:**

- 20 When using do not eat or drink.
- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
- 45 In case of accident or if you feel unwell, seek medical advice immediately.
- 60 This material and its container must be disposed of as hazardous waste.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Version: 3**

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
 ICAO: International Civil Aviation Organization  
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent