

Printing date 05/07/2012

Reviewed on 04/01/2012

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

- **Product identifier**
- **Trade name:** CLEARFIL CERAMIC PRIMER
- **Article number:** US117
- **Application of the substance / the preparation** Adhesive, dental ceramic
- **Details of the supplier of the safety data sheet**
- **Manufacturer:**
Kuraray Noritake Dental Inc.
1621 Sakazu, Kurashiki, Okayama 710-0801,
Japan
- **Contact information:**
Kuraray America, Inc.
33 Maiden Lane, 6th Floor, New York,
NY 10038 U.S.A.
Tel: 800-879-1676
Fax: 888-700-5200
Website: www.kuraraydental.com

2 Composition/information on ingredients

- **Chemical characterization:** Single Component
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

64-17-5	ethanol	>80%
	 H225	
2530-85-0	3-trimethoxysilylpropyl methacrylate	< 5%
	 H311;  H315; H319; H335; H227	

- **Other ingredients:** 10-Methacryloyloxydecyl dihydrogen phosphate

3 Hazards identification

- **Classification of the substance or mixture**



GHS02 Flame

H225 Highly flammable liquid and vapour.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Highly flammable

Highly flammable.

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

The product has to be labelled due to the calculation procedure of international guidelines.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Label elements**

- **GHS label elements**

The product is classified and labelled according to the Globally Harmonized System (GHS).

- **Hazard pictograms** GHS02

- **Signal word** Danger

- **Hazard statements**

H225 Highly flammable liquid and vapour.

- **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

(Contd. on page 2)

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: CLEARFIL CERAMIC PRIMER

(Contd. of page 1)

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P240 Ground/bond container and receiving equipment.
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**· **NFPA ratings (scale 0 - 4)**

Health = 0
 Fire = 3
 Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 0
 Fire = 3
 Reactivity = 0

4 First aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
 Do not induce vomiting; immediately call for medical help.
 If symptoms persist consult doctor.

5 Firefighting measures

- **Suitable extinguishing agents:**
 CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Protective equipment:**
 Wear self-contained respiratory protective device.
 Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
 Dilute with plenty of water.
 Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Ensure adequate ventilation.
- **Reference to other sections**
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

USA

(Contd. on page 3)

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: CLEARFIL CERAMIC PRIMER

(Contd. of page 2)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a refrigerator (2-8°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 receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

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

- **Components with limit values that require monitoring at the workplace:**

64-17-5 ethanol

PEL	1900 mg/m ³ , 1000 ppm
REL	1900 mg/m ³ , 1000 ppm
TLV	1880 mg/m ³ , 1000 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Breathing equipment:** 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
- **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

USA

(Contd. on page 4)

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: CLEARFIL CERAMIC PRIMER

(Contd. of page 3)

9 Physical and chemical properties

· General Information	
· Appearance:	
Form:	Liquid
Color:	Colorless
· Odor:	Alcohol-like
· pH-value:	Not applicable
· Change in condition	
Melting point/Melting range:	-114.5 °C (ethanol)
Boiling point/Boiling range:	78 °C (ethanol)
· Flash point:	13 °C (ethanol)
· Ignition temperature:	425.0 °C (ethanol)
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	3.5 Vol % (ethanol)
Upper:	15.0 Vol % (ethanol)
· Vapor pressure:	59.0 hPa (20°C, ethanol)
· Density:	1.1 g/cm ³
· Vapour density	1.6 g/cm ³ (ethanol, air=1)
· Solubility in / Miscibility with	
Water:	Partly miscible.
· Segregation coefficient (n-octanol/water):	-0.32 (ethanol)
· Other information	No further relevant information available.

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

64-17-5 ethanol

Oral	LD50	3450 mg/kg (mouse)
		7060 mg/kg (rat)
Inhalative	LC50/4 h	20000 mg/l (rat)
	LD50	3600 mg/kg (rat - intraperitoneal)

2530-85-0 3-trimethoxysilylpropyl methacrylate

Oral	LD50	22600 mg/kg (rat)
Dermal	LD50	500 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.

(Contd. on page 5)

USA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: CLEARFIL CERAMIC PRIMER

(Contd. of page 4)

- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

12 Ecological information

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (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

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

14 Transport information

- | | |
|---|---------------------------------------|
| · UN-Number | |
| · DOT | UN1170 |
| · ADR, IMDG, IATA | 1170 |
| · UN proper shipping name | |
| · ADR | 1170 ETHANOL (ETHYL ALCOHOL), mixture |
| · IMDG | ETHANOL (ETHYL ALCOHOL), mixture |
| · IATA | ETHANOL, mixture |
| · Transport hazard class(es) | |
| · DOT, IMDG, IATA | |
|  | |
| · Class | 3 Flammable liquids. |
| · Label | 3 |
| · ADR | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | II |

(Contd. on page 6)

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: CLEARFIL CERAMIC PRIMER

(Contd. of page 5)

· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	33
· EMS Number:	F-E,S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	UN1170; ETHANOL (ETHYL ALCOHOL), mixture; 3; II

15 Regulatory information

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

64-17-5 ethanol

· Cancerogenity categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

64-17-5 ethanol

A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

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: 6

· Relevant phrases

Not applicable

(Contd. on page 7)

USA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: CLEARFIL CERAMIC PRIMER

(Contd. of page 6)

H225 Highly flammable liquid and vapour.
H227 Combustible liquid.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

USA

Printing date 05/07/2012

Reviewed on 04/01/2012

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

- **Product identifier**
- **Trade name:** PANAVIA F 2.0 PASTE A
- **Article number:** 089-PA
- **Application of the substance / the preparation** Resin-based dental adhesive cement
- **Details of the supplier of the safety data sheet**
- **Manufacturer:**
Kuraray Noritake Dental Inc.
1621 Sakazu, Kurashiki, Okayama 710-0801,
Japan
- **Contact information:**
Kuraray America, Inc.
33 Maiden Lane, 6th Floor, New York,
NY 10038 U.S.A.
Tel: 800-879-1676
Fax: 888-700-5200
Website: www.kuraraydental.com

2 Composition/information on ingredients

- **Chemical characterization:** Single Component
- **Description:** Mixture of substances listed below with nonhazardous additions.
- **Dangerous components:** Void
- **Other ingredients:**
10-Methacryloyloxydecyl dihydrogen phosphate
Hydrophobic aromatic dimethacrylate
Hydrophobic aliphatic methacrylate
Hydrophilic aliphatic dimethacrylate
Silanated silica filler
Silanated colloidal silica
dl-Camphorquinone
Catalysts
Initiators
Others

3 Hazards identification

- **Classification of the substance or mixture**
The product is not classified according to the Globally Harmonized System (GHS).
 - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
 - **Information concerning particular hazards for human and environment:**
The product does not have to be labelled due to the calculation procedure of international guidelines.
 - **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
-
- **Label elements**
 - **GHS label elements** Void
 - **Hazard pictograms** Void
 - **Signal word** Void
 - **Hazard statements** Void

4 First aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

(Contd. on page 2)

CA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANAVIA F 2.0 PASTE A

(Contd. of page 1)

- **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 Firefighting measures

- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **Reference to other sections** No dangerous substances are released.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** 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.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components 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 that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** 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
- **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.

(Contd. on page 3)

CA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANAVIA F 2.0 PASTE A

(Contd. of page 2)

- **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**
- **Appearance:**
 - Form: Pasty
 - Color: Colored
- **Odor:** Odorless
- **pH-value:** Not applicable
- **Change in condition**
 - Melting point/Melting range: Undetermined.
 - Boiling point/Boiling range: Undetermined.
- **Flash point:** Not applicable.
- **Ignition temperature:** Not applicable
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower: Not applicable
 - Upper: Not applicable
- **Vapor pressure:** Not applicable
- **Density:** 2.2 g/cm³
- **Vapour density:** Not applicable
- **Solubility in / Miscibility with Water:** Insoluble.
- **Segregation coefficient (n-octanol/water):** Not applicable
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous 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.
- **Additional toxicological information:**
The product is not subject to classification according to internally approved calculation methods for preparations:

(Contd. on page 4)

CA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANA VIA F 2.0 PASTE A

(Contd. of page 3)

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · UN proper shipping name | |
| · DOT, ADN, IMDG, IATA | Void |
| · ADR | Void |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | - |

15 Regulatory information

- | |
|--|
| · Section 355 (extremely hazardous substances): |
| All ingredients are listed. |
| · Section 313 (Specific toxic chemical listings): |
| All ingredients are listed. |
| · TSCA (Toxic Substances Control Act): |
| All ingredients are listed. |

(Contd. on page 5)

CA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANAVIA F 2.0 PASTE A

(Contd. of page 4)

· Proposition 65**· Chemicals known to cause cancer:**

All ingredients are listed.

· Chemicals known to cause reproductive toxicity for females:

All ingredients are listed.

· Chemicals known to cause reproductive toxicity for males:

All ingredients are listed.

· Chemicals known to cause developmental toxicity:

All ingredients are listed.

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

All ingredients are listed.

· OSHA-Ca (Occupational Safety & Health Administration)

All ingredients are listed.

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: 1**· Relevant phrases** Not applicable

CA

Printing date 11/05/2012

Reviewed on 04/01/2012

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

- **Product identifier**
- **Trade name:** PANAVIA 21 ; OXYGUARD II
- **Article number:** CA050-O
- **Application of the substance / the preparation** Dental material for curing promotion and surface protection
- **Details of the supplier of the safety data sheet**
- **Manufacturer:**
Kuraray Noritake Dental Inc.
1621 Sakazu, Kurashiki, Okayama 710-0801,
Japan
- **Contact information:**
Kuraray America, Inc.
33 Maiden Lane, 6th Floor, New York,
NY 10038 U.S.A.
Tel: 800-879-1676
Fax: 888-700-5200
Website: www.kuraraydental.com

2 Composition/information on ingredients

- **Chemical characterization:** Single Component
- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

56-81-5	glycerol	H303	50-70%
---------	----------	------	--------

· Other ingredients:

Polyethyleneglycol
Catalysts
Accelerators
Dyes

3 Hazards identification

- **Classification of the substance or mixture**
The product is not classified according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void

4 First aid measures

- **General information:** No special measures required.
- **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 Firefighting measures

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.

(Contd. on page 2)

CA

Printing date 11/05/2012

Reviewed on 04/01/2012

Trade name: PANAVIA 21 ; OXYGUARD II

(Contd. of page 1)

- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
 - Dilute with plenty of water.
 - Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
 - No dangerous substances are released.
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** 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:**
 - Store in cool, dry conditions in well sealed receptacles.
 - Keep receptacle tightly sealed.
 - Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components 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 that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** 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
- **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.

(Contd. on page 3)

CA

Printing date 11/05/2012

Reviewed on 04/01/2012

Trade name: PANAVIA 21 ; OXYGUARD II

(Contd. of page 2)

- **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**
- **Appearance:**
 - Form: Gel
 - Color: Green
- **Odor:** Odorless
- **pH-value:** Not applicable
- **Change in condition**
 - Melting point/Melting range: 18.2 °C (glycerol)
 - Boiling point/Boiling range: 290 °C (glycerol)
- **Flash point:** 160 °C (glycerol)
- **Ignition temperature:** 400.0 °C (glycerol)
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower: 0.9 Vol % (glycerol)
 - Upper: Not applicable
- **Vapor pressure:** 0.1 hPa (20°C, glycerol)
- **Density:** Not determined.
- **Vapour density:** Not applicable
- **Solubility in / Miscibility with Water:** Fully miscible.
- **Segregation coefficient (n-octanol/water):** Not applicable
- **Other information:** No further relevant information available.

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous 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.

CA

(Contd. on page 4)

Printing date 11/05/2012

Reviewed on 04/01/2012

Trade name: PANA VIA 21 ; OXYGUARD II

(Contd. of page 3)

12 Ecological information

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (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

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · UN proper shipping name | |
| · DOT, ADN, IMDG, IATA | Void |
| · ADR | Void |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | - |

15 Regulatory information

- | |
|--|
| · Section 355 (extremely hazardous substances): |
| None of the ingredient is listed. |
| · Section 313 (Specific toxic chemical listings): |
| None of the ingredients is listed. |
| · TSCA (Toxic Substances Control Act): |
| All ingredients are listed. |

(Contd. on page 5)

CA

Printing date 11/05/2012

Reviewed on 04/01/2012

Trade name: PANAVIA 21 ; OXYGUARD II

(Contd. of page 4)

· Proposition 65**· Chemicals known to cause cancer:**

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

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: 1

CA

Printing date 05/07/2012

Reviewed on 04/01/2012

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

- **Product identifier**
- **Trade name:** PANAVIA F 2.0 ED PRIMER 2 B
- **Article number:** 070-B
- **Application of the substance / the preparation** Dental material for tooth surface conditioning
- **Details of the supplier of the safety data sheet**
- **Manufacturer:**
Kuraray Noritake Dental Inc.
1621 Sakazu, Kurashiki, Okayama 710-0801,
Japan
- **Contact information:**
Kuraray America, Inc.
33 Maiden Lane, 6th Floor, New York,
NY 10038 U.S.A.
Tel: 800-879-1676
Fax: 888-700-5200
Website: www.kuraraydental.com

2 Composition/information on ingredients

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

3 Hazards identification

- **Classification of the substance or mixture**
The product is not classified according to the Globally Harmonized System (GHS).
 - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
 - **Information concerning particular hazards for human and environment:**
The product does not have to be labelled due to the calculation procedure of international guidelines.
 - **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
-
- **Label elements**
 - **GHS label elements** Void
 - **Hazard pictograms** Void
 - **Signal word** Void
 - **Hazard statements** Void

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.

CA

(Contd. on page 2)

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANAIA F 2.0 ED PRIMER 2 B

(Contd. of page 1)

5 Firefighting measures

- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections** No dangerous substances are released.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** 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.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components 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 that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** 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
- **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.

(Contd. on page 3)

CA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANAVIA F 2.0 ED PRIMER 2 B

(Contd. of page 2)

- **Eye protection:** Goggles recommended during refilling.

9 Physical and chemical properties

- **General Information**

- **Appearance:**

Form:	Liquid
Color:	Transparent
Odor:	Odorless

- **pH-value:** Not applicable

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

- **Flash point:** Not applicable.

- **Ignition temperature:** Not applicable

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

- **Explosion limits:**

Lower:	Not applicable
Upper:	Not applicable

- **Vapor pressure:** Not applicable

- **Density:** 1.0 g/cm³

- **Vapour density:** Not applicable

- **Solubility in / Miscibility with**

Water:	Fully miscible.
--------	-----------------

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

- **Other information:** No further relevant information available.

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous 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.

- **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

CA

(Contd. on page 4)

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANA VIA F 2.0 ED PRIMER 2 B

(Contd. of page 3)

12 Ecological information

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · UN proper shipping name | |
| · DOT, ADN, IMDG, IATA | Void |
| · ADR | Void |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | - |

15 Regulatory information

- | |
|--|
| · Section 355 (extremely hazardous substances): |
| None of the ingredient is listed. |
| · Section 313 (Specific toxic chemical listings): |
| None of the ingredients is listed. |
| · TSCA (Toxic Substances Control Act): |
| All ingredients are listed. |

(Contd. on page 5)

CA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANAVIA F 2.0 ED PRIMER 2 B

(Contd. of page 4)

· **Proposition 65**· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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:** 1· **Relevant phrases** Not applicable

CA

Printing date 05/07/2012

Reviewed on 04/01/2012

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

- **Product identifier**
- **Trade name:** PANAVIA 21 ED PRIMER A
- **Article number:** 050-EA
- **Application of the substance / the preparation** Dental material for tooth surface conditioning
- **Details of the supplier of the safety data sheet**
- **Manufacturer:**
Kuraray Noritake Dental Inc.
1621 Sakazu, Kurashiki, Okayama 710-0801,
Japan
- **Contact information:**
Kuraray America, Inc.
33 Maiden Lane, 6th Floor, New York,
NY 10038 U.S.A.
Tel: 800-879-1676
Fax: 888-700-5200
Website: www.kuraraydental.com

2 Composition/information on ingredients

- **Chemical characterization:** Single Component
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

868-77-9	2-hydroxyethyl methacrylate	 Xi R36/38-43  H315; H319; H317	25-50%
----------	-----------------------------	---	--------

- **Other ingredients:**
10-Methacryloyloxydecyl dihydrogen phosphate
N-Methacryloyl-5-aminosalicylic acid
Water
Accelerators

3 Hazards identification

- **Classification of the substance or mixture**



GHS07

- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H317 May cause an allergic skin reaction.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xi; Irritant

R36/38-43: Irritating to eyes and skin. May cause sensitisation by skin contact.

- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of international guidelines.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Label elements**

- **GHS label elements**

The product is classified and labelled according to the Globally Harmonized System (GHS).

- **Hazard pictograms** GHS07

- **Signal word** Warning

(Contd. on page 2)

CA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANA VIA 21 ED PRIMER A

(Contd. of page 1)

· Hazard-determining components of labelling:

2-hydroxyethyl methacrylate

· Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

· Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/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.

P321 Specific treatment (see on this label).

P362 Take off contaminated clothing and wash before reuse.

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

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; immediately call for medical help.

If symptoms persist consult doctor.

5 Firefighting measures**· Suitable extinguishing agents:**CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**· Special hazards arising from the substance or mixture** No further relevant information available.**· Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures**· Personal precautions, protective equipment and emergency procedures** Not required.**· Environmental precautions:**

Dilute with plenty of water.

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

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

CA

(Contd. on page 3)

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANA VIA 21 ED PRIMER A

(Contd. of page 2)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** 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 receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components 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 that were valid during the creation 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.
- **Breathing equipment:** 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**
- **Appearance:**
- **Form:** Liquid

(Contd. on page 4)

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANAVIA 21 ED PRIMER A

(Contd. of page 3)

· Color:	Transparent
· Odor:	Odorless
· pH-value:	Not applicable
· Change in condition	
Melting point/Melting range:	-12 °C (2-hydroxyethyl methacrylate)
Boiling point/Boiling range:	205 °C (2-hydroxyethyl methacrylate)
· Flash point:	97 °C (2-hydroxyethyl methacrylate)
· Ignition temperature:	Not applicable
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not applicable
Upper:	Not applicable
· Vapor pressure:	Not applicable
· Density:	1.1 g/cm ³
· Vapour density	Not applicable
· Solubility in / Miscibility with Water:	Partly miscible.
· Segregation coefficient (n-octanol/water):	Not applicable
· Other information	No further relevant information available.

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are 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 internally approved calculation methods for preparations:
Irritant

12 Ecological information

- **Aquatic toxicity:** No further relevant information available.

(Contd. on page 5)

CA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANA VIA 21 ED PRIMER A

(Contd. of page 4)

- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (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

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

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · UN proper shipping name | |
| · DOT, ADN, IMDG, IATA | Void |
| · ADR | Void |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | - |

15 Regulatory information

- | |
|--|
| · Section 355 (extremely hazardous substances): |
| None of the ingredient is listed. |
| · Section 313 (Specific toxic chemical listings): |
| None of the ingredients is listed. |
| · TSCA (Toxic Substances Control Act): |
| All ingredients are listed. |
| · Proposition 65 |
| · Chemicals known to cause cancer: |
| None of the ingredients is listed. |

(Contd. on page 6)

CA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANAVIA 21 ED PRIMER A

(Contd. of page 5)

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

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: 1**· Relevant phrases**

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

R36/38 Irritating to eyes and skin.

R43 May cause sensitisation by skin contact.

CA

Printing date 05/07/2012

Reviewed on 04/01/2012

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

- **Product identifier**
- **Trade name:** ALLOY PRIMER
- **Article number:** US054
- **Application of the substance / the preparation** Adhesive, dental metal
- **Details of the supplier of the safety data sheet**
- **Manufacturer:**
Kuraray Noritake Dental Inc.
1621 Sakazu, Kurashiki, Okayama 710-0801,
Japan
- **Contact information:**
Kuraray America, Inc.
33 Maiden Lane, 6th Floor, New York,
NY 10038 U.S.A.
Tel: 800-879-1676
Fax: 888-700-5200
Website: www.kuraraydental.com

2 Composition/information on ingredients

- **Chemical characterization:** Single Component
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

67-64-1 acetone	 H225;  H319; H336	>90%
-----------------	--	------

· **Other ingredients:**

6-(4-Vinylbenzyl-N-propyl)amino-1,3,5-triazine-2,4-dithione
10-Methacryloyloxydecyl dihydrogen phosphate

3 Hazards identification

- **Classification of the substance or mixture**



GHS02 Flame

H225 Highly flammable liquid and vapour.



GHS07

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Irritant

Irritating to eyes.



Highly flammable

Highly flammable.

Vapours may cause drowsiness and dizziness.

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

The product has to be labelled due to the calculation procedure of international guidelines.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

(Contd. on page 2)

USA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: ALLOY PRIMER

(Contd. of page 1)

· **Label elements**· **GHS label elements**

The product is classified and labelled according to the Globally Harmonized System (GHS).

· **Hazard pictograms** GHS02, GHS07· **Signal word** Danger· **Hazard statements**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

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

· **Classification system:**· **NFPA ratings (scale 0 - 4)**

Health = 1

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 1

Fire = 3

Reactivity = 0

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:** Generally the product does not irritate the skin.· **After eye contact:**

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

· **After swallowing:**

Do not induce vomiting; immediately call for medical help.

If symptoms persist consult doctor.

5 Firefighting measures· **Suitable extinguishing agents:**

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

· **Special hazards arising from the substance or mixture** No further relevant information available.· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

USA

(Contd. on page 3)

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: ALLOY PRIMER

(Contd. of page 2)

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **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 receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

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

- **Components with limit values that require monitoring at the workplace:**

67-64-1 acetone

PEL	2400 mg/m ³ , 1000 ppm
REL	590 mg/m ³ , 250 ppm
TLV	Short-term value: 1782 mg/m ³ , 750 ppm Long-term value: 1188 mg/m ³ , 500 ppm
BEI	

- **Additional information:** The lists that were valid during the creation 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.
- **Breathing equipment:** Use suitable respiratory protective device in case of insufficient ventilation.

(Contd. on page 4)

USA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: ALLOY PRIMER

(Contd. of page 3)

· **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

· **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**· **Appearance:**

Form: Liquid
Color: Transparent
Odor: Acetone-like

· **pH-value:** Not applicable

· **Change in condition**

Melting point/Melting range: 94.7 °C (acetone)
Boiling point/Boiling range: 55°C (131 °F) (acetone)

· **Flash point:** -19°C (-2 °F) (acetone)

· **Ignition temperature:** 465.0°C (869 °F) (acetone)

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/ vapor mixtures are possible.

· **Explosion limits:**

Lower: 2.6 Vol % (acetone)
Upper: 13.0 Vol % (acetone)

· **Vapor pressure at 20°C (68 °F):** 233.0 hPa (175 mm Hg) (acetone)

· **Density:** 0.79 g/cm³ (acetone)

· **Vapour density:** 2.0 g/cm³ (acetone, air=1)

· **Solubility in / Miscibility with**

Water: Partly miscible.

· **Segregation coefficient (n-octanol/water):** -0.24 (acetone)

· **VOC content:** 99.0 %

· **Other information:** No further relevant information available.

USA

(Contd. on page 5)

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: ALLOY PRIMER

(Contd. of page 4)

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

67-64-1 acetone

Oral	LD50	5800 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

12 Ecological information

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (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

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

14 Transport information

- | | |
|----------------------------------|------------------------|
| · UN-Number | |
| · DOT | UN1090 |
| · ADR, IMDG, IATA | 1090 |
| · UN proper shipping name | |
| · ADR | 1090 ACETONE, solution |

(Contd. on page 6)

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: ALLOY PRIMER

(Contd. of page 5)

· IMDG, IATA	ACETONE, solution
· Transport hazard class(es)	
· DOT, IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· ADR	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT, ADR, IMDG, IATA	II
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	33
· EMS Number:	F-E,S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	UN1090; ACETONE, solution; 3; II

15 Regulatory information

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

(Contd. on page 7)

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: ALLOY PRIMER

(Contd. of page 6)

· **Cancerogenity categories**· **EPA (Environmental Protection Agency)**

67-64-1 acetone

I

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

67-64-1 acetone

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **GHS label elements** Not determined**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:** 4· **Relevant phrases**

Not applicable

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

USA

Printing date 05/07/2012

Reviewed on 04/01/2012

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

- **Product identifier**
- **Trade name:** PANAVIA F 2.0 PASTE B
- **Article number:** 089-PB
- **Application of the substance / the preparation** Resin-based dental adhesive cement
- **Details of the supplier of the safety data sheet**
- **Manufacturer:**
Kuraray Noritake Dental Inc.
1621 Sakazu, Kurashiki, Okayama 710-0801,
Japan
- **Contact information:**
Kuraray America, Inc.
33 Maiden Lane, 6th Floor, New York,
NY 10038 U.S.A.
Tel: 800-879-1676
Fax: 888-700-5200
Website: www.kuraraydental.com

2 Composition/information on ingredients

- **Chemical characterization:** Single Component
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

7681-49-4	sodium fluoride	 T R25;  Xi R36/38 R32	<10%
		 H301;  H315; H319	

- **Other ingredients:**
Hydrophobic aromatic dimethacrylate
Hydrophobic aliphatic methacrylate
Hydrophilic aliphatic dimethacrylate
Silanated barium glass filler
Catalysts
Accelerators
Pigments
Others

3 Hazards identification

- **Classification of the substance or mixture**



GHS07

H302 Harmful if swallowed.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xn; Harmful

R22: Harmful if swallowed.

R31: Contact with acids liberates toxic gas.

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

The product has to be labelled due to the calculation procedure of international guidelines.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

(Contd. on page 2)

CA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANAVIA F 2.0 PASTE B

(Contd. of page 1)

- **Label elements**
- **GHS label elements**
The product is classified and labelled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS07
- **Signal word** Warning
- **Hazard-determining components of labelling:**
sodium fluoride
- **Hazard statements**
H302 Harmful if swallowed.
- **Precautionary statements**
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

4 First aid measures

- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **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:** Immediately call a doctor.

5 Firefighting measures

- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Protective equipment:**
Mouth respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Prevent formation of dust.
- **Information about protection against explosions and fires:** No special measures required.

(Contd. on page 3)

CA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANAVIA F 2.0 PASTE B

(Contd. of page 2)

- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a refrigerator (2-8°C).
- **Information about storage in one common storage facility:**
 - Do not store together with acids.
 - Store away from oxidizing agents.
 - Store away from reducing agents.
- **Further information about storage conditions:**
 - Keep receptacle tightly sealed.
 - Store in cool, dry conditions in well sealed receptacles.
 - Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components 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 that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **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
- **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 | |
| · Appearance: | |
| Form: | Pasty |
| Color: | Colored |
| · Odor: | Odorless |
| · pH-value: | Not applicable |
| · Change in condition | |
| Melting point/Melting range: | 1012 °C (sodium fluoride) |
| Boiling point/Boiling range: | 1704 °C (sodium fluoride) |
| · Flash point: | Not applicable. |

(Contd. on page 4)

CA

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANAVIA F 2.0 PASTE B

(Contd. of page 3)

· Ignition temperature:	Not applicable
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not applicable
Upper:	Not applicable
· Vapor pressure:	Not applicable
· Density:	2.0 g/cm ³
· Vapour density	Not applicable
· Solubility in / Miscibility with Water:	Insoluble.
· Segregation coefficient (n-octanol/water):	Not applicable
· Other information	No further relevant information available.

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

7681-49-4 sodium fluoride

Oral	LD50	44 mg/kg (mouse)
		52 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful

12 Ecological information

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (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.

CA

(Contd. on page 5)

Printing date 05/07/2012

Reviewed on 04/01/2012

Trade name: PANA VIA F 2.0 PASTE B

(Contd. of page 4)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · UN proper shipping name | |
| · DOT, ADN, IMDG, IATA | Void |
| · ADR | Void |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | - |

15 Regulatory information

- | |
|--|
| · Section 355 (extremely hazardous substances): |
| None of the ingredient is listed. |
| · Section 313 (Specific toxic chemical listings): |
| None of the ingredients is listed. |
| · TSCA (Toxic Substances Control Act): |
| All ingredients are listed. |
| · Proposition 65 |
| · Chemicals known to cause cancer: |
| None of the ingredients is listed. |
| · Chemicals known to cause reproductive toxicity for females: |
| None of the ingredients is listed. |
| · Chemicals known to cause reproductive toxicity for males: |
| None of the ingredients is listed. |
| · Chemicals known to cause developmental toxicity: |
| None of the ingredients is listed. |

(Contd. on page 6)

CA

Trade name: PANAVIA F 2.0 PASTE B

(Contd. of page 5)

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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:** 1

· **Relevant phrases**

Not applicable

H301 Toxic if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

R25 Toxic if swallowed.

R32 Contact with acids liberates very toxic gas.

R36/38 Irritating to eyes and skin.