SAFETY DATA SHEETS

This SDS packet was issued with item:

075217542

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

075217567



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 NEW BOND; UNIVERSAL

· Article number: US022-U

- · Application of the substance / the preparation Dental bonding material
- · 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

♦ H225

>90%

· Other ingredients:

Catalysts Accelerators

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.

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

(Contd. on page 2)



Printing date 05/07/2012 Reviewed on 04/01/2012

Trade name: CLEARFIL NEW BOND; UNIVERSAL

(Contd. of page 1)

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 = 0Fire = 3

REACTIVITY 0

Reactivity = 0

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:

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 respiatory 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 NEW BOND; UNIVERSAL

(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/m³, 1000 ppm
REL	1900 mg/m³, 1000 ppm
TLV	1880 mg/m³, 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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

IIC A

(Contd. on page 4)



Printing date 05/07/2012 Reviewed on 04/01/2012

Trade name: CLEARFIL NEW BOND; UNIVERSAL

(Contd. of page 3)

Physical and chemical proper	ties
· General Information · Appearance:	
Form:	Liquid
Color:	Transparent
· 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/cm³ (ethanol, air=1)
· Solubility in / Miscibility with	
Water:	Fully miscible.
· Segregation coefficient (n-octonol/w	
· 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 et	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 - intraperioneal)	

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

IIS A

(Contd. on page 5)



Printing date 05/07/2012 Reviewed on 04/01/2012

Trade name: CLEARFIL NEW BOND; UNIVERSAL

(Contd. of page 4)

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.

Transport information	
· UN-Number	UN1170
· DOT · ADR, IMDG, IATA	UN1170 1170
· · · · · · · · · · · · · · · · · · ·	1170
· UN proper shipping name	1170 FERMANOL GOLDERON (FERMAL ALGORIO)
· ADR	1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
· IMDG	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION
· IATA	ETHANOL SOLUTION
· Transport hazard class(es)	
· DOT, IMDG, IATA	
PLAMMALE LOUD	
· Class	3 Flammable liquids.
· Label	3
· ADR	
· Class	3 Flammable liquids
· Label	3
· Packing group · DOT, ADR, IMDG, IATA	П
· Environmental hazards:	
· Environmental nazards: · Marine pollutant:	No

US



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Trade name: CLEARFIL NEW BOND; UNIVERSAL

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Warning: Flammable liquids · Special precautions for user

· Danger code (Kemler): · 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 SOLUTION (ETHYL ALCOHOL

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:

All ingredients are listed.

· 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)

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

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administation)

None of the ingredients is listed.

16 Other information

64-17-5 ethanol

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

· Relevant phrases

Not applicable

H225 Highly flammable liquid and vapour.

A4



Printing date 08/09/2017 Version 4 Reviewed on 08/01/2017

1 Identification

· Product identifier

Trade name: CLEARFIL NEW BOND; UNIVERSAL

· Article number: US022-U

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

No further relevant information available.

- · Application of the substance / the mixture Dental bonding material
- 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

Emergency telephone number:

For chemical emergency spill, leak, fire, exposure or accident

Call CHEMTREC day and night

Within USA and Canada: 1-800-424-9300 CCN706984 or

+1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Carc. 1A H350 May cause cancer.

- · Label elements
- · GHS label elements

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

- · Hazard pictograms GHS02, GHS08
- · Signal word Danger
- · Hazard-determining components of labeling:

ethanol

· Hazard statements

H225 Highly flammable liquid and vapor.

H350 May cause cancer.

Precautionary statements

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

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

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

P242 Use only non-sparking tools.

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

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Trade name: CLEARFIL NEW BOND; UNIVERSAL

(Contd. of page 1)

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/

shower.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

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

regulations.

· Other hazards

· Results of PBT and vPvB assessment

PBT: Not applicable.vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

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

· Dangerous components:

64-17-5 ethanol

♠ Flam. Liq. 2, H225; ♦ Carc. 1A, H350

>90%

Other ingredients:

Catalysts Accelerators

4 First-aid measures

- Description of 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:

Do not induce vomiting; immediately call for medical help.

If symptoms persist consult doctor.

- · Information for doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- · 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.
- Advice for firefighters
- · 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.

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Printing date 08/09/2017 Version 4 Reviewed on 08/01/2017

Trade name: CLEARFIL NEW BOND; UNIVERSAL

(Contd. of page 2)

· 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.
- · Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

- · Conditions for safe storage, including any incompatibilities
- 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.
- · Control parameters

· Components with limit values that require monitoring at the workplace:

64-17-5 ethanol

PEL	1900 mg/m³, 1000 ppm
REL	1900 mg/m ³ , 1000 ppm 1880 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.
- · Exposure controls
- · 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.

(Contd. on page 4)



Printing date 08/09/2017 Version 4 Reviewed on 08/01/2017

Trade name: CLEARFIL NEW BOND; UNIVERSAL

(Contd. of page 3)

· 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.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

 Information on basic ph 	ysical and chemical	properties
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· General Information

· Appearance:

Form: Liquid
Color: Transparent
Odor: Alcohol-like

• **pH-value:** Not determined.

· Change in condition

Melting point/Melting range:
Boiling point/Boiling range:
-114.5 °C (ethanol)
78 °C (ethanol)

*Flash point:
13°C (ethanol)

• **Ignition temperature:** 425.0 °C (ethanol)

• **Decomposition temperature:** Not determined.

• 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)
Oxidizing properties Not determined

· **Vapor pressure:** 59.0 hPa (20 °C, ethanol)

• Density: 1.1 g/cm³
• Relative density Not determined.
• Vapor density: 1.6 g/cm³ (other)

· Vapor density 1.6 g/cm³ (ethanol, air=1)

• Evaporation rate Not determined.

Solubility in / Miscibility with

Water: Fully miscible.

· Partition coefficient (n-octanol/water): -0.32 (ethanol)

· Viscosity: Not determined

• Other information No further relevant information available.

10 Stability and reactivity

- Reactivity No further relevant information available.
- · Chemical stability
- · Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

· Possibility of hazardous reactions No dangerous reactions known.

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Trade name: CLEARFIL NEW BOND; UNIVERSAL

(Contd. of page 4)

• Conditions to avoid No further relevant information available.

· LD/LC50 values that are relevant for classification:

- **Incompatible materials:** No further relevant information available.
- · Hazardous decomposition products: Carbon monoxide and carbon dioxide

11 Toxicological information

- Information on toxicological effects
- **Acute toxicity:**

64-17-5 et	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 - intraperioneal)

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

- on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

NTP (National Toxicology Program)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- 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.
- · Mobility in soil 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.

- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.
- · Other adverse effects No further relevant information available.

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.

(Contd. on page 6)



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Trade name: CLEARFIL NEW BOND; UNIVERSAL

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• Recommended cleansing agent: Water, if necessary with cleansing agents.

Transport information	
-	
· UN-Number	10.11170
· DOT · ADR, IMDG, IATA	UN1170 1170
	1170
· UN proper shipping name	1170 ETHANOL COLUTION (ETHAL ALCOHOL
· ADR	1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
· IMDG	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION
·IATA	ETHANOL SOLUTION
· Transport hazard class(es)	
· DOT	
DO1	
LAWRED DONO	
3	
·Class	3 Flammable liquids
· Label	3
· ADR, IMDG, IATA	
A	
3/	
· 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":	UN1170; ETHANOL SOLUTION (ETHYL ALCOHOL
on mountagulation .	SOLUTION); 3; II

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara
- Section 355 (extremely hazardous substances):

None of the ingredient is listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

(Contd. on page 7)



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Trade name: CLEARFIL NEW BOND; UNIVERSAL

(Contd. of page 6)

· TSCA (Toxic Substances Control Act):

Proposition 65

All ingredients are listed.

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:

All ingredients are listed.

Cancerogenity categories

· EPA (Environmental Protection Agency)

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.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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.

· Relevant phrases

H225 Highly flammable liquid and vapor.

H350 May cause cancer.

NFPA ratings (scale 0 - 4)



Health = 0Fire = 3Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = 1Fire = 3

Abbreviations and acronyms:

Flam. Liq. 2: Flammable liquids - Category 2 Carc. 1A: Carcinogenicity - Category 1A

* Data compared to the previous version altered.