

# Material Safety Data Sheet

Revision Date: 12.03.2007

(91/155/EWG)

Page 1 of 4

1200-22-03

## 1. Chemical product and company identification

**Product name:**

LuxaBond (Pre-Bond)

**Supplier:**

DMG, Dental-Material Gesellschaft mbH  
D 22531 Hamburg, telephone : (+49) 040 - 84 00 60

## 2. Composition / Information on ingredients

**Common chemical name / Generic name:**

Alcoholic preparation of metal salts of organic acids.  
Contains ethanol, CAS - Nr.: 64-17-5

## 3. Hazards Identification

Flammable

**In case of inhalation:** High concentrations of vapour may irritate respiratory system, and may cause nausea and dimming of consciousness.

**In case of skin contact:** Degreases skin.

**In case of eye contact :** Irritating to eyes.

**In case of ingestion:** Acts on mucous membrane and central nervous system.

## 4. First-aid measures

**In case of inhalation:** Take patient to open air. Let sit down calmly.

**In case of skin contact:** Wash with soap and water.

**In case of eye contact :** Immediately rinse with plenty of water, consult a physician.

**In case of ingestion:** Seek medical advice.

## 5. Fire-fighting measures

**Extinguishing media:** Powder, sand, foam, carbon dioxide, water spray.

**Not suitable extinguishing media:** Direct jet of water.

## 6. Accidental release measures

**Personal precautions:** Remove sources of ignition. Local exhaust.

**Environmental precautions:** Do not empty into drains.

**Methods for cleaning up:** Take up mechanically, with inert fluid-binding material.

# Material Safety Data Sheet

Revision date: 12.03.2007

Trade name: LuxaBond (Pre-Bond)

Page 2 of 4

## 7. Handling and storage

### Handling:

**Technical measures:** Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Keep container in a well-ventilated place.

### Storage:

**Technical measures:** Keep container in a well-ventilated place.

**Storage conditions:** Keep container tightly closed. Keep in a cool place.

**Recommended packaging material:** Container of glass or metal.

**not suitable packaging material:** Vapour-permeable plastics.

## 8. Exposure controls/personal protection

**engineering measures:** Use only in well-ventilated areas.

**Limit values:** MAK-threshold 500 ppm.

### Personal protective equipment:

**respiratory protection:** Do not breathe vapour. Filtermask type A (if TLV is exceeded).

**Hand and skin protection:** Rubber gloves (nitril rubber 0,40 mm).

**eye protection:** Goggles.

**Hygiene measures:** When using do not eat or drink.

## 9. Physical und chemical properties

**Appearance:** Yellowish liquid

**Odour:** Characteristic

**pH-value:** Neutral

### Changes in physical state:

**Melting temperature:** ca. - 120 °C

**Boiling temperature:** ca. 80 °C

**Flashpoint:** > 12 °C

**Ignition temperature:** > 425 °C

**Explosion properties:** lL: 3,4 Vol %; uL: 15 Vol %

**Vapour pressure:** ca. 60 mbar

**rel. vapour density:** > 1

**Density:** ca. 0.8 g/cm<sup>3</sup>

**Solubility in water:** miscible

## 10. Stability and reactivity

**Thermal decomposition:** at ca. 80 °C, (boiling)

**Hazardous reactions:** None, if handled and stored according to directions.

**Conditions to avoid:** Heat.

**Materials to avoid:** Oxidizing agents, peroxides acids.

**Hazardous decomposition products:** Not determined.

# Material Safety Data Sheet

Revision date: 12.03.2007

Trade name:LuxaBond (Pre-Bond)

Page 3 of 4

## 11. Toxicological information

**Acute oral toxicity:** LD<sub>50</sub> (oral, rat) > 6200 mg/kg (Ethanol)  
LD<sub>50</sub> (inhalation: 95.6 mg/l/4 h (Ethanol)

**Irritation of skin :** Irritating on prolonged exposure.

**Irritation of eye:** Irritating.

**Specific effects:** None.

## 12. Ecological information

**Mobility:** No data available.

**Persistence und degradability:** Ethanol easily degradable.

**Ecotoxicity:** Fish-toxicity: *Leuciscus idus* LC<sub>50</sub> > 8140 mg/l / 48 h (Ethanol)  
Daphnia toxicity: *Daphnia magna* EC<sub>50</sub>: 9268 - 14221 mg/l / 48 h

## 13. Disposal considerations

**Waste from residues:** Dispose to an authorised waste collection point. Use proper landfill disposal or incineration in accordance with local, state and federal regulations.

**Contaminated packaging:** Rinse, ventilate thoroughly.

## 14. Transport information

### Regulations for land (road/railroad):

GGVSE: Class 3, II

ADR/RID: Class 3, II

### Regulations for inland waterways:

Not tested

### Regulations for sea:

IMDG/GGVSee-Code: Class 3; II

EmS: F-E S-D

### Regulations for air:

CAO, PAX

ICAO/IATA-DGR: Class 3, II

**UN-number:** 1170

### Additional information:

Proper shipping name: Ethyl alcohol, solution

# Material Safety Data Sheet

Trade name:LuxaBond (Pre-Bond)

Revision date: 12.03.2007

Page 4 of 4

## 15. Regulatory information

Labelling according international regulations:

F



Highly flammable

**R-Phrases:**

R11 Highly flammable.

**S-Phrases:**

S7 Keep container tightly closed.

S16 Keep away from sources of ignition - No smoking.

## 16. Other information

None.

The data given here is based on current knowledge and experience. The data does not signify any warranty with regard to the product's properties.

# Material Safety Data Sheet

Revision Date: 12.03.2007

(91/155/EWG)

Page 1 of 3

2223-21-02

## 1. Chemical product and company identification

**Product name:**

LuxaBond (Bond A)

**Supplier:**

DMG, Dental-Material Gesellschaft mbH  
D 22531 Hamburg, telephone : (+49) 040 - 84 00 60

## 2. Composition / Information on ingredients

**Common chemical name / Generic name:**

Aqueous preparation of acrylic resin.  
Contains aromatic dimethacrylate, monomethacrylate.

## 3. Hazards Identification

None, if handled according to directions.  
Irritating to eyes, respiratory system and skin.  
May cause sensitization by skin contact.

## 4. First-aid measures

**In case of inhalation:** In case of prolonged exposure take patient to open air.  
**In case of skin contact:** Wash with soap and water.  
**In case of eye contact :** Rinse with plenty of water, consult a physician.  
**In case of ingestion:** Immediately seek medical advice.

## 5. Fire-fighting measures

**Extinguishing media:** Powder, sand, foam, carbon dioxide, water spray.  
**Not suitable extinguishing media:** direct jet of water

## 6. Accidental release measures

**Personal precautions:** Use only in well-ventilated areas.  
**Environmental precautions:** Do not empty into drains.  
**Methods for cleaning up:** Take up mechanically, with inert fluid-binding material.

## 7. Handling and storage

**Handling:**

**Technical measures:** Keep container tightly closed.  
**Safe handling advice:** Wear suitable gloves. Avoid contact with eyes.

**Storage:**

**Technical measures:** Keep container in a well-ventilated place.  
**Storage conditions:** Keep container tightly closed. Keep in a dark, cool place.  
**Recommended packaging material:** Container of glass, metal or solvent-stable plastics.

# Material Safety Data Sheet

Revision date: 12.03.2007

Trade name: LuxaBond (Bond A)

Page 2 of 3

2223-21-02

## 8. Exposure controls/personal protection

**Engineering measures:** Use only in well-ventilated areas.

**Personal protective equipment:**

**Respiratory protection:** Do not breathe vapour.

**Hand and skin protection:** Rubber gloves.

**Eye protection:** Goggles.

**Hygiene measures:** When using do not eat or drink.

## 9. Physical und chemical properties

**Appearance:** Yellowish liquid

**Odour:** esterlike, weak

**pH-value:** ca. 7

**Changes in physical state:**

**Boiling temperature:** ca. 250 °C

**Decomposition temperature:** > ca. 200 °C

**Flashpoint:** > 93 °C

**Explosion properties:** not established

**Vapour pressure:** < 1 mbar / 20 °C

**Rel. vapour density:** not established

**Density:** ca. 1.1 g/cm<sup>3</sup>

**Solubility in water:** ca. 50 %

## 10. Stability and reactivity

**Thermal decomposition:** at ca. 200 °C

No decomposition, if handled according to directions.

**Hazardous reactions:** None, if handled and stored according to directions.

Cures on exposure to visible or UV-light.

**Conditions to avoid:** Heat, light.

**Materials to avoid:** Free radicals, reducing agents, heavy metal ions.

**Hazardous decomposition products:** In case of fire acrid acrylic fumes.

## 11. Toxicological information

**Acute oral toxicity:** Not completely tested.

For components: LD<sub>50</sub> (Ratte) > 5000 mg/kg

**Irritation of skin :** Irritating on prolonged exposure.

**Irritation of eye:** Irritating.

**Specific effects:** Allergic reactions to methacrylates are possible.

May cause sensitization by skin contact.

## 12. Ecological information

Do not discharge into drains or the environment.

**Persistence und degradability:** Up to 50 % biologically degradable.

**Ecotoxicity:** Fish toxicity LC<sub>50</sub> > 230 mg/l / 96 h.

# Material Safety Data Sheet

Revision date: 12.03.2007

Trade name: LuxaBond (Bond A)

Page 3 of 3

2223-21-02

## 13. Disposal considerations

**Waste from residues:** Use proper landfill disposal or incineration in accordance with local, state and federal regulations.

## 14. Transport information

**Additional information:** Not dangerous cargo.

## 15. Regulatory information

**Labelling according international regulations:** Xi, Irritant. Contains methacrylic ester.

**Symbols of danger:**

Xi



Irritant

**R-Phrases:** 36/37/38 - 43

Irritating to eyes, respiratory system and skin.

May cause sensitization by skin contact.

**S-Phrases:** 26 - 28 - S36/37/39

In case of contact with eyes rinse immediately with plenty of water and seek medical advice.

After contact with skin wash immediately with plenty of water and soap.

Wear suitable protective clothing, gloves and eye/face protection.

## 16. Other information

None.

The data given here is based on current knowledge and experience. The data does not signify any warranty with regard to the product's properties.

# Material Safety Data Sheet

Revision Date: 12.03.2007

(91/155/EWG)

Page 1 of 3

2225-23-05

## 1. Chemical product and company identification

**Product name:**

LuxaBond (Bond B)

**Supplier:**

DMG, Dental-Material Gesellschaft mbH  
D 22531 Hamburg, telephone : (+49) 040 - 84 00 60

## 2. Composition / Information on ingredients

**Common chemical name / Generic name:**

Aqueous preparation of acrylic resin.

Contains aromatic dimethacrylate, mono-, dimethacrylate, carboxylic methacrylate.

## 3. Hazards Identification

None, if handled according to directions.

Irritating to eyes, respiratory system and skin.

May cause sensitization by skin contact.

## 4. First-aid measures

**In case of inhalation:** In case of prolonged exposure take patient to open air.

**In case of skin contact:** Wash with soap and water.

**In case of eye contact :** Rinse with plenty of water, consult a physician.

**In case of ingestion:** Immediately seek medical advice.

## 5. Fire-fighting measures

**Extinguishing media:** Powder, sand, foam, carbon dioxide, water spray.

**Not suitable extinguishing media:** direct jet of water

## 6. Accidental release measures

**Personal precautions:** Use only in well-ventilated areas.

**Environmental precautions:** Do not empty into drains.

**Methods for cleaning up:** Take up mechanically, with inert fluid-binding material.

## 7. Handling and storage

**Handling:**

**Technical measures:** Keep container tightly closed.

**Safe handling advice:** Wear suitable gloves. Avoid contact with eyes.

**Storage:**

**Technical measures:** Keep container in a well-ventilated place.

**Storage conditions:** Keep container tightly closed. Keep in a dark, cool place.

**Recommended packaging material:** Container of glass or solvent-stable plastics.

# Material Safety Data Sheet

Revision date: 12.03.2007

Trade name:LuxaBond (Bond B)

Page 2 of 3

2225-23-05

## 8. Exposure controls/personal protection

**Engineering measures:** Use only in well-ventilated areas.

**Personal protective equipment:**

**Respiratory protection:** Do not breathe vapour.

**Hand and skin protection:** Rubber gloves.

**Eye protection:** Goggles.

**Hygiene measures:** When using do not eat or drink.

## 9. Physical und chemical properties

**Appearance:** Yellowish liquid

**Odour:** esterlike, weak

**pH-value:** ca. 3,5

**Changes in physical state:**

**Boiling temperature:** ca. 100 °C (water)

**Decomposition temperature:** > ca. 200 °C

**Flashpoint:** > 100 °C

**Explosion properties:** not established

**Vapour pressure:** < 23 mbar / 20 °C (water)

**Rel. vapour density:** > 1 (methacrylates)

**Density:** ca. 1.1 g/cm<sup>3</sup>

**Solubility in water:** ca. 50 %

## 10. Stability and reactivity

**Thermal decomposition:** at ca. 200 °C

No decomposition, if handled according to directions.

**Hazardous reactions:** None, if handled and stored according to directions.

Cures on exposure to visible or UV-light.

**Conditions to avoid:** Heat, light.

**Materials to avoid:** Free radicals, reducing agents, heavy metal ions.

**Hazardous decomposition products:** In case of fire acrid acrylic fumes.

## 11. Toxicological information

**Acute oral toxicity:** Not completely tested.

For components: LD<sub>50</sub> (rat) > 5000 mg/kg

**Irritation of skin :** Irritating on prolonged exposure.

**Irritation of eye:** Irritating.

**Specific effects:** Allergic reactions to methacrylates are possible.

May cause sensitization by skin contact.

## 12. Ecological information

Do not discharge into drains or the environment.

**Persistence und degradability:** Up to 50 % biologically degradable.

**Ecotoxicity:** Fish toxicity LC<sub>50</sub> > 230 mg/l / 96 h.

# Material Safety Data Sheet

Revision date: 12.03.2007

Trade name: LuxaBond (Bond B)

Page 3 of 3

2225-23-05

## 13. Disposal considerations

**Waste from residues:** Use proper landfill disposal or incineration in accordance with local, state and federal regulations.

## 14. Transport information

**Additional information:** Not dangerous cargo.

## 15. Regulatory information

**Labelling according international regulations:** Xi, Irritant. Contains methacrylic ester.

**Symbols of danger:**

Xi



Irritant

**R-Phrases:** 36/37/38 - 43

Irritating to eyes, respiratory system and skin.

May cause sensitization by skin contact.

**S-Phrases:** 26 - 28 - S36/37/39

In case of contact with eyes rinse immediately with plenty of water and seek medical advice.

After contact with skin wash immediately with plenty of water and soap.

Wear suitable protective clothing, gloves and eye/face protection.

## 16. Other information

None.

The data given here is based on current knowledge and experience. The data does not signify any warranty with regard to the product's properties.

# Material Safety Data Sheet

Revision Date: 09.03.2007

(91/155/EWG)

Page 1 of 3

6100-23-04

## 1. Chemical product and company identification

**Product name:**

Etching Gel

**Supplier:**

DMG, Dental-Material Gesellschaft mbH  
D 22531 Hamburg, telephone : (+49) 040 - 84 00 60

## 2. Composition / Information on ingredients

**Common chemical name / Generic name:**

Preparation based on aqueous phosphoric acid.

## 3. Hazards Identification

None, if handled according to directions.

Causes burns.

## 4. First-aid measures

**In case of inhalation:** Not applicable.

**In case of skin contact:** Wash with soap and water.

**In case of eye contact :** Immediately rinse with plenty of water, consult a physician.

**In case of ingestion:** Let patient drink plenty of water, seek medical advice.

## 5. Fire-fighting measures

Not flammable.

**Extinguishing media:** Not applicable.

**Not suitable extinguishing media:** Not applicable.

## 6. Accidental release measures

**Personal precautions:** Wear suitable protective clothing.

**Environmental precautions:** Avoid pollution of water and sewage.

**Methods for cleaning up:** Take up mechanically, with inert fluid-binding material.

Neutralize (e.g. with lime water).

## 7. Handling and storage

**Handling:**

**Technical measures:** Keep container tightly closed.

**Safe handling advice:** Wear suitable gloves. Avoid contact with eyes.

**Storage:**

**Technical measures:** No special precautions necessary.

**Storage conditions:** Keep container tightly closed.

**Incompatible products:** Alkali, usual non-precious metals.

**Recommended packaging material:** Container of glass, special metals or acid-stable plastics.

# Material Safety Data Sheet

Revision date: 09.03.2007

Trade name: Etching Gel

Page 2 of 3

6100-23-04

## 8. Exposure controls/personal protection

**Engineering measures:** No special precautions necessary. Avoid splashing.

**Personal protective equipment:**

**Respiratory protection:** Not volatile.

**Hand and skin protection:** Rubber gloves. Suitable: Butyl or Nitril rubber (protection against chemicals Cat. III, EN 374)

**Eye protection:** Goggles.

**Hygiene measures:** When using do not eat or drink.

## 9. Physical und chemical properties

**Appearance:** Blue gel.

**Odour:** none

**pH-value:** ca. 1

**Changes in physical state:**

**Boiling temperature:** > 100 °C (water)

**Flashpoint:** not applicable.

**Ignition temperature:** not applicable.

**Explosion properties:** not applicable.

**Vapour pressure:** ca. 20 mbar/23 °C

**rel. vapour density:** < 1

**Density:** ca. 1.4 g/cm<sup>3</sup>

**Solubility in water:** miscible

## 10. Stability and reactivity

**Thermal decomposition:** None, if handled and stored according to directions.

**Hazardous reactions:** None, if handled and stored according to directions.

**Materials to avoid:** Alkali.

**Hazardous decomposition products:** None.

## 11. Toxicological information

**Acute oral toxicity:** LD<sub>50</sub> (Ratte) > 810 mg/kg.

**Irritation of skin :** May cause burns.

**Irritation of eye:** Causes burns.

## 12. Ecological information

Do not discharge into drains or the environment.

**Mobility:** No data available.

**Persistence und degradability:** No data available for the preparation.

## 13. Disposal considerations

**Waste from residues:** Dispose to an authorised waste collection point. Use proper landfill disposal or incineration in accordance with local, state and federal regulations.

# Material Safety Data Sheet

Revision date: 09.03.2007

Trade name: Etching Gel

Page 3 of 3

6100-23-04

## 14. Transport information

### Regulations for land (road/railroad):

GGVS: Class 8, III

ADR: Class 8,III

GGVE: Class 8, III

RID: Class 8, III

### Regulations for sea:

IMDG/GGVSee-Code: 8 Class III

EmS: F-A, S-B

### Regulations for air:

ICAO/IATA-DGR: Class 8

**UN-number:** 1805

### Additional information:

Proper shipping name: contains Phosphoric acid, liquid.

## 15. Regulatory information

**Labelling according to international regulations:** C, Corrosive.

Contains phosphoric acid.

**Symbols of danger:** Drop symbol.

**R-Phrases:** 34

Causes burns.

**S-Phrases:** 26

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

## 16. Other information

Change in section: 8, 14

The data given here is based on current knowledge and experience. The data does not signify any warranty with regard to the product's properties.