



Caution: Federal Law restricts this material to sale by or on the order of a properly licensed practitioner.

SEE INSIDE FOR MSDS INFORMATION
(All ingredients listed on MSDS)

Parkell, Inc.

AMALGAMBOND® PLUS BONDING AGENT

DEVICE DESCRIPTION:

Amalgambond Plus is a self-cure bonding system for direct amalgam and composite resin restorations.

INTENDED USE/INDICATIONS:

- Retention of direct amalgam and resin composite restorations
- Treatment and prevention of sensitivity
- Capping small vital exposures

CONTRAINDICATIONS:

Not for use on or by persons who have a methacrylate or HEMA sensitivity. Use of protective gloves and a no-touch technique is recommended.

PRECAUTIONS:

Caution: Do not swallow. Not for internal use. Wash immediately if accidentally applied to skin, eyes or soft tissue.

Caution: To prevent amalgam from bonding to the metal matrix band, lubricate the interior of the band with wax or copal varnish before applying.

Caution: Do not use Amalgambond on surfaces that have been contaminated with eugenol (ZOE, etc.) as it will inhibit setting.

Caution: Prior application of Pain-Free, varnishes or liners (copal varnish, $\text{Ca}(\text{OH})_2$ or glass ionomer) is not necessary or recommended, as it will reduce or prevent adhesion.

Caution: Prevent contamination of surfaces being bonded. Whenever possible, use a rubber dam.

Caution: Use of retentive pins in conjunction with Amalgambond is not generally necessary or recommended.

HOW SUPPLIED:

Dentin Activator A Universal Gel - Stock No. S394 - 5ml
Adhesive Agent AA - Stock No. S374 - 8ml
Base B - Stock No. S372 - 5ml
Catalyst - Stock No. S371 - 0.7ml
HPA Powder - Stock No S376 - 2g

DIRECTIONS:

1. Prepare cavity for composite, amalgam or inlay restoration as usual. Severe retentive point angles and undercuts can be eliminated in amalgam or direct composite preparations.

2. Clean and lightly dry preparation.

3. **NEVER USE CAVITY VARNISH OR PAIN-FREE.** $\text{Ca}(\text{OH})_2$ liners are not necessary.

CAUTION: To prevent Amalgambond Plus from adhering to metal matrices, coat the inner aspect with a thin layer of wax, cavity varnish, or mineral oil. Otherwise, amalgam alloy may bond to the metal matrix and fracture the restoration when the band is removed.

4. Dispense 1 or 2 drops of DENTIN ACTIVATOR (A) into mixing well. Apply to exposed dentin for 10 seconds. Wash thoroughly and dry with oil-free, moisture-free air-stream. DENTIN ACTIVATOR can also be used to etch enamel that surrounds composite preparations IF it is left on enamel for 30 seconds before water-rinsing.

5. Brush a thin layer of ADHESIVE AGENT (AA) onto activated dentin surfaces. Blow away "puddles" with a GENTLE air-stream to achieve an even, thin layer of coverage.

VIRTUALLY IMPOSSIBLE SITUATIONS:

For stronger, super-retentive amalgam bonds to teeth whose preparation leave little or no facing walls in a box-form, HPA powder is recommended. To make an HPA mix, dispense 3 drops BASE, 1 drop CATALYST, 1 scoop HPA powder into mixing well and GENTLY STIR. Apply a thin layer of this mixture to the preparation, keeping it away from margins. Condense amalgam while this HPA mixture is still wet. Never use HPA powder with composite.

Leave undisturbed for 30 seconds. It is not necessary to apply ADHESIVE AGENT to etched enamel surfaces, but there is no harm if some overruns onto enamel.

6. If the restoration is an amalgam, begin trituration NOW, so alloy will be ready to condense as soon as the Amalgambond Plus resin mixture of base/catalyst has been applied (alloy condensed while mix is wet.)

7. Dispense 2 drops of BASE (B) and 1 drop of CATALYST (C) into a clean, dry mixing well. Mix thoroughly with GENTLE STIRRING for 3-5 seconds, and brush a thin, even layer onto dentin (and enamel for composite resins). When placing amalgam, begin condensation immediately, before the adhesive resin dries. For composites, allow the adhesive resin to dry before applying the composite.

DIRECTIONS FOR AN ADHESIVE PULP CAP

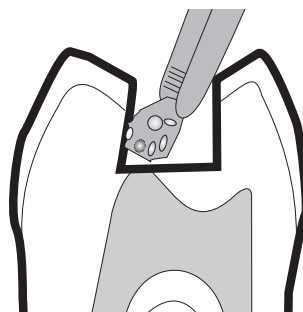
An Amalgambond pulp cap is not an alternative to endodontic therapy. A tooth suffering irreversible pulpitis, or one that has limited recuperative power, requires a root canal.

However, if the exposure is small, with a fresh hemorrhage such as a pinpoint iatrogenic exposure, Amalgambond and C&B- Metabond can serve as excellent capping materials ... particularly if the patient is young so the pulp has strong recuperative powers.

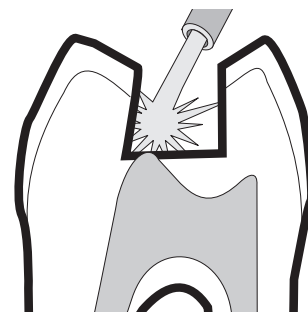
If you intend to bond an amalgam restoration and have good access to the exposure, place your lubricated matrix before beginning the cap. If it is hard to see, however, band the tooth after Step 5.

5.) Allow the adhesive to polymerize. This will seal the exposure.

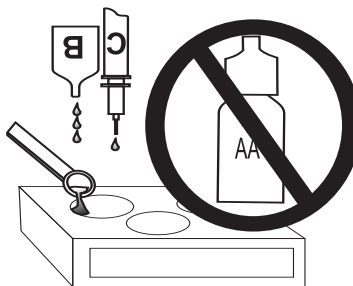
Then proceed to bond the restoration as usual ...



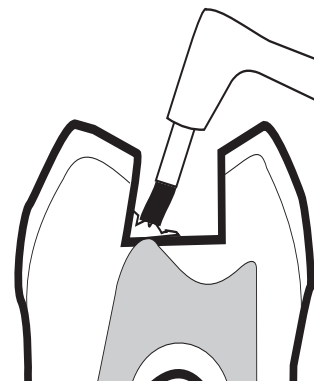
1.) Apply the Green Dentin Activator for 10 seconds to both the exposure and the preparation. (The ferric chloride in the solution should control the bleeding.)



2.) Rinse the tooth thoroughly. Then lightly dry it to eliminate standing water.



3.) Do NOT apply the "AA" solution at this stage. (This 35% aqueous solution of HEMA might irritate the exposed pulp.) Mix Amalgambond-Plus with the HPA powder (3 drops base, 1 drop catalyst, one scoop HPA powder.)



4.) Apply the adhesive to the exposure and the dentin immediately surrounding it.

6.) (Since the etchant has already been applied, skip the green Dentin Activator.) Apply the AA component to the entire preparation. Allow it to sit undisturbed for 30 seconds, then gently blow off any puddles.

7.) Mix the Amalgambond as usual (with or without the HPA powder.)

8.) Brush the mixture onto the preparation.

If you're using composite, allow the adhesive to cure thoroughly (90 seconds) before beginning the buildup.

If you're using amalgam, begin lightly condensing as soon as the adhesive has been applied too the tooth. (Incidentally, the operative word here is "lightly." Do not apply too much pressure or you may disrupt the pulp cap. Since spherical alloys like Tytin® condense easily at low pressure, they're probably a better choice for cases where there have been exposures.)

HELPFUL HINTS:

- Low-viscosity composite resins "wet" adhesively-prepared surfaces better than high-viscosity composites. If high-viscosity restoratives are preferred, apply a thin layer of UNFILLED OR FLOWABLE FILLED RESIN and cure before applying the high-viscosity composite.
- Low-viscosity luting resins are preferred when seating well-fitted inlays or veneers.
- Tightly recap bottles immediately after use. Loosen catalyst screw 1 turn to relieve pressure.

FOR AMALGAMS:

Place and condense as soon as final Amalgambond Plus resin film has been applied and before it dries. For even stronger bonds in virtually impossible cases use HPA (High Performance Additive). See 'Virtually Impossible Situations' box above for HPA use.

FOR ADDITIONS TO OLD AMALGAMS:

Air-blast surface of old filling with an Aeroetcher (Parkell stock No. D670). Use DENTIN ACTIVATOR on adjacent dentin. See above. Apply thin, even layer of ADHESIVE AGENT and Amalgambond Plus resin, and condense new alloy before the adhesive resin dries. For even stronger bonds use HPA powder. See 'Virtually Impossible Situations' box above for HPA use.

FOR DIRECT COMPOSITES OR VENEERS:

Place composite restorative AFTER Amalgambond Plus adhesive resin has dried completely. See above. Cure composite in incremental layers to reduce polymerization contraction. HPA powder is not recommended for direct composites.

FOR COMPOSITE INLAYS:

'Hybrid' composites are recommended for cementation. Their use reduces wear and ditching at margins. Lute composite inlays AFTER Amalgambond Plus resin has dried completely. HPA POWDER is NOT recommended when cementing inlays or veneers.

FOR APICOECTOMY OR ENDO-ACCESS SEALS:

HPA POWDER is NOT recommended. If sealing with amalgam alloy, condense BEFORE Amalgambond Plus resin has dried. If sealing with composite, place restorative AFTER Amalgambond Plus resin has dried (60 seconds).

ADVERSE REACTIONS: Before treatment, inquiry should be made to determine whether the patient has had previous hypersensitivity reactions to any of the ingredients in Amalgambond. Amalgambond Adhesive Agent (AA) and Amalgambond Base contain HEMA (2-hydroxy-ethylmethacrylate), a known contact allergen. A small percentage of the population is known to have an allergic response to methacrylate resins. To reduce the risk of allergic response, minimize exposure to these materials. **Use of protective gloves and a no-touch technique is recommended.**

CAUTION: Do not swallow. Not for internal use. Wash immediately if accidentally applied to skin, eyes or soft tissue. Use in well-ventilated room. Not for use on or by persons allergic to any of the ingredients. See following for MSDS.

MSDS No: S371		MATERIAL SAFETY DATA SHEET	
SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION			
PARKELL, INC. 300 Executive Drive Edgewood, NY 11717		Company Telephone Number: (631) 249-1134 24-Hour Emergency Phone: InfoTrac 1-800-535-5053	
PRODUCT NAME: 4-META UNIVERSAL CATALYST-V		MSDS NO: S371	
SECTION 2 - COMPOSITION INFORMATION ON INGREDIENTS			
HAZARDOUS COMPONENTS tri-n-butylborane (TBB) / partially oxidized (TBB-O) Hydrocarbon	CAS NUMBER 122-56-5 / 688-74-4	PEL	TLV
SECTION 3 - HAZARDS IDENTIFICATION			
EMERGENCY OVERVIEW: Highly flammable liquid & f&A. Reactive with water and air to generate heat and flammable gas.			
POTENTIAL HEALTH EFFECTS			
EYES: May cause irritation, chemical burns and possible corneal injury.			
SKIN: May cause skin irritation.			
INHALATION: Causes respiratory tract irritation. May cause dizziness, dullness, headache. Higher concentration can produce central nervous system depression, narcosis.			
INGESTION: Harmful if swallowed.			
CHRONIC EFFECTS: Not known.			
SIGNS & SYMPTOMS:			
CARCINOGENICITY:			
<input type="checkbox"/> NA <input type="checkbox"/> NTP? <input type="checkbox"/> No <input type="checkbox"/> IARC MONOGRAPHS? <input type="checkbox"/> No <input type="checkbox"/> ACGIH?			
SECTION 4 - FIRST-AID MEASURES			
INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.			
EYES: Immediately flush with flowing water for at least 15 minutes. Get medical attention.			
SKIN: Flush with soap and plenty of water. Get medical attention if irritation develops or persists.			
INGESTION: Promptly drink several glasses of water or milk to dilute. Get medical attention.			
NOTE TO PHYSICIANS:			
SECTION 5 - FIRE-FIGHTING MEASURES			
FLASH POINT (TCC): Unknown FLAMMABLE LIMIT (air, % by vol.) acetone UPPER: 13 % LOWER: 2 %			
FLAMMABILITY CLASSIFICATION (CFR 1910.1200): Flammable Liquid UN No. 1993			
EXTINGUISHING MEDIA: Foam, dry chemical, carbon dioxide or dry sand, water spray.			
FIRE FIGHTING INSTRUCTIONS: During emergency conditions, over-exposure to decom-position products may cause health hazard. Self-contained breathing apparatus should be worn.			
UNUSUAL FIRE & EXPLOSION HAZARDS: Highly flammable liquid, reactive with water and air to generate heat and flammable gases.			
HAZARDOUS COMBUSTION PRODUCTS: Flammable gas and toxic gas may be released by reaction with water or air.			
SECTION 6 - ACCIDENTAL RELEASE MEASURES			
Personal Precaution:			
For skin protection wear impervious protective gloves and clothing. For eye protection use safety goggles or a full-face shield. If the exposure limit is exceeded use an organic vapor respirator.			
Environmental Precautions: May be hazardous to the environment. Methods For Cleaning-Up: In case material is released or spilled, remove all ignition sources, and ventilate the area of leak or spill. Collect spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Contents may develop pressure by decomposition.			
SECTION 7 - HANDLING AND STORAGE			
HANDLING: Observe normal warehouse handling procedures. Protect against physical damages.			
STORAGE: Store in a dry and dark well-ventilated place at cool (5-30°C) and stable temperature. Store away from ignition sources, flammable solids with large surface area (such as cotton, gauze).			
SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION			
ENGINEERING CONTROLS: Use local exhaust to keep exposures to a minimum.			
EYE/FACE PROTECTION: Use safety glasses. Eye wash station near work area.			
SKIN PROTECTION: Use impervious protective gloves to prevent skin contact.			
RESPIRATORY PROTECTION: None required during normal use of this product.			
EXPOSURE GUIDELINES: Not established.			
SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES			
APPEARANCE AND ODOR: Colorless transparent liquid. Like n-butanol.			
BOILING POINT: 56°C (acetone) SPECIFIC GRAVITY (H2O = 1): approx. 0.8			
VAPOR PRESSURE: Not known PERCENT VOLATILES:			
VAPOR DENSITY (Air = 1): Not known EVAPORATION RATE (Butyl Acetate = 1):			
SOLUBILITY IN WATER: Decomposes, partly soluble PH: Not applicable			
SECTION 10 - STABILITY AND REACTIVITY			
STABILITY: Reactive with air or water. HAZARDOUS POLYMERIZATION: Will not occur.			
CONDITIONS TO AVOID: Heat beyond 30°C. Refrigeration. Fluctuating temperature. Direct sunlight. Ignition sources.			
INCOMPATIBILITY (Materials to avoid): Strong oxidizers or halogenated hydrocarbons. Flammable solids with large surface area (such as gauze, cotton).			
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, butanol, boron oxide, borane.			
SECTION 11 - TOXICOLOGICAL INFORMATION			
Health Hazards (immediate, delayed, acute, chronic) (TBB-O): Not known. Easily decomposed to nbutanol and boric acid (acetone). Irritation of high concentration may cause central nervous system effects characterized by headache, dizziness and unconsciousness.			
Toxicity: LD50: Oral 1,125 mg/Kg (Rat/borane), 2,150 mg/Kg(Mouse/borate), 4,350 mg/Kg (Rat/n-butanol), 2,650 mg/Kg (Rat/boric acid)			
Mutagenicity: Negative (Schmalz G. et al., J. Dent. Res., vol.80, 1234, 2001)			
SECTION 12 - ECOLOGICAL INFORMATION			
General: This substance may be hazardous to the environment.			
Mobility: When released, this substance is expected to decompose quickly by contact with air or water.			
Degradability: Accumulation, Ecotoxicity. Other adverse effects: Not known.			
SECTION 13 - DISPOSABLE CONSIDERATIONS			
Danger in disposal: Highly reactive with water and air. This substance should be handled as hazardous waste.			
Disposal method: Consult federal, state, and local regulations. Do not empty into sewer. This substance should be sent to an approved incinerator.			
SECTION 14 - TRANSPORT INFORMATION (not meant to be all-inclusive)			
PROPER SHIPPING NAME: Flammable liquid, n.o.s.			
DOT HAZARD LABEL: UN1993 - Flammable liquid, n.o.s.			
PRECAUTIONS FOR TRANSPORT: Highly flammable liquid			
IMDG: Class 3.2, PG II			
ICAO/IATA: Class 3, PG II			
SECTION 15 - REGULATORY INFORMATION (not meant to be all-inclusive)			
SECTION 16 - OTHER INFORMATION			
NFPA CODES: HEALTH - FLAMMABILITY - REACTIVITY -			
WORK/HYGIENIC PRACTICES: Wash hands before eating, drinking or smoking.			
DATE PREPARED: 05/01/09 PREPARED BY: R. Burke			
To the best of our knowledge, the information on this MSDS sheet is accurate. However, the information is provided without any warranty, expressed or implied, regarding its correctness or completeness. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This information is not warranted to be whether originating with the company or not.			

The technique and procedures presented here are only suggestions. As a professional, you must make your own decisions concerning the suitability of products in the treatment of your patients. Parkell is not responsible for any damages, attorney fees, or other liabilities that result, or are claimed to result in whole or in part from actual or alleged problems arising out of the use of these products or suggestions. Parkell will replace, at no charge, any defective material for a period of up to one (1) year from date of manufacture if it has been handled and stored properly.

MATERIAL SAFETY DATA SHEET	PARKELL, INC. 300 EXECUTIVE DRIVE EDGEWOOD, NY 11717	24-HOUR EMERGENCY TELEPHONE 1-800-535-5053
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SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: AMALGAMBOND BASE STOCK NO: S372
DOT HAZARD LABEL: Flammable Liquid UN NUMBER: UN1247
PROPER SHIPPING NAME: Methyl Methacrylate Monomer, Inhibited DATE PREPARED: 05/01/09
NFPA CODES: HEALTH - 2 FLAMMABILITY - 3 REACTIVITY - 2

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	PEL	TLV	%
Methyl Methacrylate	80-62-6	100 ppm	100 ppm	
Polymerizable Methacrylates		NA	NA	

SECTION III - PHYSICAL & CHEMICAL CHARACTERISTICS

BOILING POINT: 101 °C SPECIFIC GRAVITY (H₂O = 1): 0.944
VAPOR PRESSURE: 40 mm HG PERCENT VOLATILES: NA
VAPOR DENSITY (Air = 1): 3.45 EVAPORATION RATE (Butyl Acetate = 1): NA
APPEARANCE AND ODOR: Colorless transparent liquid.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TCC): 10 °C FLAMMABLE LIMIT (air, % by vol.) UPPER: 1.7 % LOWER: 8.2 %
EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.
SPECIAL FIRE FIGHTING PROCEDURES: During emergency conditions, overexposure to thermal decomposition products may cause health hazard. Self contained breathing apparatus should be worn.
UNUSUAL FIRE & EXPLOSION HAZARDS: When exposed to flame, emits toxic fumes and gases.

SECTION V - REACTIVITY DATA (PHYSICAL HAZARDS)

STABILITY: ☒ STABLE ☐ UNSTABLE
CONDITIONS TO AVOID: Heat and light.
INCOMPATIBILITY (Materials to avoid): Polymerization catalysts (peroxides, persulfates, light, heat, nitric acid and other strong oxidizers, ammonia and amines, halogens and halogen compounds.
HAZARDOUS DECOMPOSITION PRODUCTS: Thermal-oxidative degradation can produce toxic and corrosive materials, including carbon monoxide.
HAZARDOUS POLYMERIZATION: ☒ MAY OCCUR ☐ WILL NOT OCCUR
CONDITIONS TO AVOID: Hazardous polymerization may occur, especially when heated or catalyzed.

SECTION VI - HEALTH HAZARD DATA

PRIMARY ROUTE(S) OF ENTRY: ☒ EYES ☒ SKIN ☒ INHALATION ☒ INGESTION
HEALTH HAZARDS (Acute & Chronic): Ingestion may cause headache, dizziness, nausea, tinnitus, dispnea, etc. May cause corrosion after contact is made with human eye. Primary irritant on human skin, repeated prolonged contact can cause irreversible damage to human skin. Inhalation can cause irritation of the upper respiratory tract and mucous membranes, and, at high concentrations can cause symptoms similar to those which may be experienced upon ingestion.
SIGNS & SYMPTOMS OF EXPOSURE: see above.
CARCINOGENECITY: ☐ No ☐ NTP? ☐ No ☐ IARC MONOGRAPHS? ☐ No ☐ OSHA?

EMERGENCY AND FIRST AID PROCEDURES:
INHALATION: Remove victim to fresh air. If cough or other respiratory symptoms develop, consult medical personnel. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Consult medical personnel.
EYES: Immediately flush with copious amounts of water for at least 15 minutes. Get medical attention.
SKIN: Wash skin with copious amounts of soap and water. If irritation exists, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.
INGESTION: Induce vomiting. Get medical attention immediately.

SECTION VII - SPECIAL PRECAUTIONS AND SPILL OR LEAK PROCEDURES

PRECAUTIONS TO BE TAKEN IN HANDLING & STORAGE: Do not store under pure nitrogen or sparge with nitrogen or oxygen-free gas.
OTHER PRECAUTIONS: NE
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: People not wearing protective equipment and clothing should be restricted from areas of spill or leaks until cleanup has been completed. If this material is spilled or leaked, remove all ignition sources and ventilate area of spill or leak. Absorb small quantities on paper towels. Evaporate in safe place such as a fume hood. Allow sufficient time for evaporating vapors to completely clear the hood ductwork. Burn the paper in a suitable location away form combustible materials. Large quantities can be collected and burned in a suitable combustion chamber.
WASTE DISPOSAL METHODS (Consult federal, state, and local regulations): Incinerate liquid and diking material after addition of excess inhibitor, in accordance with Federal, State, and Local regulations.

SECTION VII - SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

RESPIRATORY PROTECTION: NIOSH-approved respiratory protection for organic gases if needed.
VENTILATION: Use local exhaust to keep exposures to a minimum.
PROTECTIVE GLOVES: Rubber or PVC Gloves
EYE PROTECTION: Safety glasses or full face shield.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Safety shower and eyewash station.
WORK/HYGIENIC PRACTICES: Wash hands and face before eating, drinking and/or smoking.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

MATERIAL SAFETY DATA SHEET	PARKELL, INC. 300 EXECUTIVE DRIVE EDGEWOOD, NY 11717	24-HOUR EMERGENCY TELEPHONE 1-800-535-5053
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SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: AMALGAMBOND DENTIN ACTIVATOR STOCK NO: S394
DOT HAZARD LABEL: Corrosive UN NUMBER: UN2582
PROPER SHIPPING NAME: Ferric chloride solution DATE PREPARED: 05/01/09
NFPA CODES: HEALTH - 0 FLAMMABILITY - 2 REACTIVITY - 0

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	PEL	TLV	%
Citric acid	77-92-9	NE	NE	
Ferric chloride solution	7705-08-0	NE	NE	7%
Polyvinyl alcohol	9002-89-5	NE	NE	
Water	7732-18-5	NE	NE	73%

SECTION III - PHYSICAL & CHEMICAL CHARACTERISTICS

BOILING POINT: 100° C SPECIFIC GRAVITY (H₂O = 1): NE
VAPOR PRESSURE: NE PERCENT VOLATILES: NE
VAPOR DENSITY (Air = 1): NE EVAPORATION RATE (Butyl Acetate = 1): NE
APPEARANCE AND ODOR: Green-yellow, thick liquid.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT Above 38° C FLAMMABLE LIMIT (air, % by vol.) UPPER: NE LOWER: NE (TCC):
EXTINGUISHER MEDIA: Alcohol foam, carbon dioxide or dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES: During emergency conditions, overexposure to thermal decomposition products may cause health hazard. Self-contained breathing apparatus should be worn.
UNUSUAL FIRE & EXPLOSION HAZARDS: When exposed to flame, emits toxic fumes and gases.

SECTION V - REACTIVITY DATA (PHYSICAL HAZARDS)

STABILITY: ☒ STABLE ☐ UNSTABLE
CONDITIONS TO AVOID: None
INCOMPATIBILITY (Materials to avoid): Bases and strong alkalis.
HAZARDOUS DECOMPOSITION PRODUCTS: NE
HAZARDOUS POLYMERIZATION: ☐ MAY OCCUR ☒ WILL NOT OCCUR
CONDITIONS TO AVOID:

SECTION VI - HEALTH HAZARD DATA

PRIMARY ROUTE(S) OF ENTRY: ☒ EYES ☒ SKIN ☐ INHALATION ☐ INGESTION
HEALTH HAZARDS (Acute & Chronic): Inhalation is not a hazard unless misted or heated at high temperature. Mist inhalation may cause coughing and sneezing. Excessive exposure may result in irritation of the eyes, skin and mucous membrane of the respiratory tract.
SIGNS & SYMPTOMS OF EXPOSURE: Irritation of eyes, skin and mucous membrane.
CARCINOGENECITY: ☐ No ☐ NTP? ☐ No ☐ IARC MONOGRAPHS? ☐ No ☐ OSHA?

EMERGENCY AND FIRST AID PROCEDURES:
INHALATION: Remove victim to fresh air. If cough or other respiratory symptoms develop, consult medical personnel. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention immediately.
EYES: Immediately flush with copious amounts of water, including under eyelids, for at least 15 minutes. If irritation persists, get medical attention.
SKIN: Wash material off the skin with copious amounts of water. If irritation persists, get medical attention.
INGESTION: If substantial quantities are ingested, rinse mouth and give person 2 or 3 glasses of milk or water to drink. Get medical attention.

SECTION VII - SPECIAL PRECAUTIONS AND SPILL OR LEAK PROCEDURES

PRECAUTIONS TO BE TAKEN IN HANDLING & STORAGE: Store in closed containers. Store away from direct sunlight.
OTHER PRECAUTIONS: None
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: For small spills and residues absorb with paper towels. Pick-up and place in polyolefine bottle for disposal. Flush spill area with water.
WASTE DISPOSAL METHODS (Consult federal, state, and local regulations): Dispose of in accordance with Federal, State, and Local regulations.

SECTION VII - SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

RESPIRATORY PROTECTION: Respiratory protection not required for normal work procedures.
VENTILATION: None usually necessary.
PROTECTIVE GLOVES: None required.
EYE PROTECTION: Wear chemical safety goggles or glasses. Do not wear contact lenses.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Provide eyewash station.
WORK/HYGIENIC PRACTICES: Wash hands before eating, drinking or smoking.

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MATERIAL SAFETY DATA SHEET	PARKELL, INC. 300 EXECUTIVE DRIVE EDGEWOOD, NY 11717	24-HOUR EMERGENCY TELEPHONE 1-800-535-5053
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SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: AMALGAMBOND ADHESIVE AGENT **STOCK NO:** S374
DOT HAZARD LABEL: None **UN NUMBER:** None
PROPER SHIPPING NAME: None **DATE PREPARED:** 05/01/09
NFPA CODES: HEALTH - 2 FLAMMABILITY - 0 REACTIVITY - 1

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	PEL	TLV	%
HEMA	868-77-9	NE	NE	
MEHQ	150-76-5	5 mg/m ³	5 mg/m ³	.025%

SECTION III - PHYSICAL & CHEMICAL CHARACTERISTICS

BOILING POINT: NE **SPECIFIC GRAVITY (H₂O = 1):** 1.074
VAPOR PRESSURE: 0.1 mm HG **PERCENT VOLATILES:** <1%
VAPOR DENSITY (Air = 1): >1 **EVAPORATION RATE (Butyl Acetate = 1):** >1
APPEARANCE AND ODOR: Clear, water white liquid. Mild and pleasant odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT >300°C **FLAMMABLE LIMIT (air, % by vol.)** UPPER: NA LOWER: NA (TCC):
EXTINGUISHER MEDIA: Chemical foam, carbon dioxide, dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self contained breathing apparatus, and full protective gear. Use water spray to cool containers. Fight fire from protected location.
UNUSUAL FIRE & EXPLOSION HAZARDS: Vapors may travel to source of ignition and flash back. Heat can cause polymerization with rapid release of energy which may rupture container explosively. (Spontaneous polymerization may occur on prolonged storage.)

SECTION V - REACTIVITY DATA (PHYSICAL HAZARDS)

STABILITY: ☐ STABLE ☒ UNSTABLE
CONDITIONS TO AVOID: Heat and sources of ignition, aging and contamination.
INCOMPATIBILITY (Materials to avoid): Reducing and oxidizing agents and UV light.
HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon.
HAZARDOUS POLYMERIZATION: ☒ MAY OCCUR ☐ WILL NOT OCCUR
CONDITIONS TO AVOID: Temperatures above 40°C, oxidizing or reducing agents, peroxides, amines.

SECTION VI - HEALTH HAZARD DATA

PRIMARY ROUTE(S) OF ENTRY: ☒ EYES ☒ SKIN ☒ INHALATION ☐ INGESTION
HEALTH HAZARDS (Acute & Chronic): Liquid or high vapor concentration can irritate eyes and respiratory system and cause skin rashes. Prolonged exposure can lead to headaches, nausea, drowsiness and unconsciousness.
SIGNS & SYMPTOMS OF EXPOSURE: See above.
CARCINOGENECITY: ☐ NTP? ☐ IARC MONOGRAPHS? ☐ OSHA?
EMERGENCY AND FIRST AID PROCEDURES:
INHALATION: Remove to fresh air. Get medical help if discomfort persists.
EYES: Flush with water for 15 minutes, including under eyelids.
SKIN: Wash with soap and water.
INGESTION: Induce vomiting. Obtain immediate medical attention.

SECTION VII - SPECIAL PRECAUTIONS AND SPILL OR LEAK PROCEDURES

PRECAUTIONS TO BE TAKEN IN HANDLING & STORAGE: Store in cool dry place. Ground all metal containers when transferring. Use explosion proof equipment. Check inhibitor levels every three months.
OTHER PRECAUTIONS: NA
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Evacuate area. Eliminate sources of ignition. Use self-contained breathing apparatus and protective clothing. Dike and absorb with inert material. Transfer to proper containers for disposal, use non-sparking tools. Keep spills out of sewers and open bodies of water.
WASTE DISPOSAL METHODS (Consult federal, state, and local regulations): Incinerate liquid and diking material after addition of excess inhibitor, in accordance with Federal, State, and Local regulations.

SECTION VII - SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

RESPIRATORY PROTECTION: Use self- contained breathing apparatus when needed.
VENTILATION: Use local explosion-proof ventilation with a minimum capture velocity of 100 ft/min. (30 m/min.) at point of monomer release. Local exhaust ventilation is preferred since it prevents contamination dispersion into the work area by controlling it at its source.
PROTECTIVE GLOVES: Impervious, neoprene
EYE PROTECTION: Safety glasses or goggles.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Provide eyewash and safety shower.
WORK/HYGIENIC PRACTICES: Wash hands before eating, drinking or smoking.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

MATERIAL SAFETY DATA SHEET	PARKELL, INC. 300 EXECUTIVE DRIVE EDGEWOOD, NY 11717	24-HOUR EMERGENCY TELEPHONE 1-800-535-5053
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SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: AMALGAMBOND HPA POWDER **STOCK NO:** S376
DOT HAZARD LABEL: None **UN NUMBER:** None
PROPER SHIPPING NAME: None **DATE PREPARED:** 05/01/09
NFPA CODES: HEALTH - 0 FLAMMABILITY - 0 REACTIVITY - 0

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	PEL	TLV	%
Poly methyl methacrylate	9011-14-7	NA	NA	

SECTION III - PHYSICAL & CHEMICAL CHARACTERISTICS

BOILING POINT: NA **SPECIFIC GRAVITY (H₂O = 1):** 1.19
VAPOR PRESSURE: NA **PERCENT VOLATILES:** NA
VAPOR DENSITY (Air = 1): NA **EVAPORATION RATE (Butyl Acetate = 1):** NA
APPEARANCE AND ODOR: Fine beige powder. Faint odor in bulk.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TCC): NA **FLAMMABLE LIMIT (air, % by vol.)** UPPER: NA LOWER: NA
EXTINGUISHER MEDIA: Water fog, foam, dry chemical, carbon dioxide.
SPECIAL FIRE FIGHTING PROCEDURES: During emergency conditions, overexposure to thermal decomposition products may cause health hazard. Self-contained breathing apparatus should be worn.
UNUSUAL FIRE & EXPLOSION HAZARDS: Polymer dust is combustible. The explosive limits of the polymer particles suspended in air are approximately those of coal dust. Firefighters should wear self-contained breathing apparatus.

SECTION V - REACTIVITY DATA (PHYSICAL HAZARDS)

STABILITY: ☒ STABLE ☐ UNSTABLE
CONDITIONS TO AVOID: Heating above 300 °C
INCOMPATIBILITY (Materials to avoid): None
HAZARDOUS DECOMPOSITION PRODUCTS: Toxic gases and vapors (such as carbon dioxide and carbon monoxide) may be released in a fire.
HAZARDOUS POLYMERIZATION: ☐ MAY OCCUR ☒ WILL NOT OCCUR
CONDITIONS TO AVOID: None

SECTION VI - HEALTH HAZARD DATA

PRIMARY ROUTE(S) OF ENTRY: ☒ EYES ☐ SKIN ☒ INHALATION ☐ INGESTION
HEALTH HAZARDS (Acute & Chronic): OSHA classifies this material as Particulate, Not Otherwise Classified. Eyes, Skin and Respiratory Tract may be irritated by gross overexposure to Particulate, Not Otherwise Classified, no matter how they are generated. Avoid inhalation of dust. Keep dust out of eyes to prevent possible irritation.
SIGNS & SYMPTOMS OF EXPOSURE: NA
CARCINOGENECITY: ☐ NTP? ☐ IARC MONOGRAPHS? ☐ OSHA?
EMERGENCY AND FIRST AID PROCEDURES:
INHALATION: Remove to fresh air. Get medical help if discomfort persists.
EYES: Immediately flush for 15 minutes with copious amounts of water, including under eyelids. If redness, itching or a burning sensation develops, have eyes examined and treated by medical personnel.
SKIN: Wash material off the skin with water.
INGESTION: Physiologically inert. Rinse mouth out with water. No treatment required.

SECTION VII - SPECIAL PRECAUTIONS AND SPILL OR LEAK PROCEDURES

PRECAUTIONS TO BE TAKEN IN HANDLING & STORAGE: Store in cool, dry place. Keep container closed to prevent water absorption and contamination.
OTHER PRECAUTIONS: NA
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Sweep up to avoid slipping hazard. Keep airborne particulate at a minimum when cleaning up spills.
WASTE DISPOSAL METHODS (Consult federal, state, and local regulations): May be disposed of in landfill or incinerated. Follow Federal, State, and Local regulations for disposal.

SECTION VII - SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

RESPIRATORY PROTECTION: Nuisance dust type if needed.
VENTILATION: None normally needed.
PROTECTIVE GLOVES: None normally needed.
EYE PROTECTION: Use safety glasses or goggles.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: None.
WORK/HYGIENIC PRACTICES: Wash hands before eating, drinking or smoking.
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