

Click Bond - CB394A – Safety Data Sheet

Section 1: Product and company identification

Product Name: CB394A

Product type: Adhesive for the Aerospace Industry

Restriction of use: None identified

Company: Click Bond, Inc.
Address: 2151 Lockheed Way
Carson City, NV 89706

Information Phone: (775) 885-8000
24 Hour Emergency Phone: (800) 255-3924 (CHEM•TEL)
Outside North America Phone: (813) 248-0585 Call Collect
Website: <http://www.clickbond.com>

Section 2: Hazards identification

EMERGENCY OVERVIEW

WARNING: CAUSES SKIN IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE DROWSINESS OR DIZZINESS.

Hazard Class	Hazard Category
SKIN IRRITATION	2
EYE IRRITATION	2A
SKIN SENSITIZATION	1
SPECIFIC TARGET ORGAN TOXICITY- SINGLE EXPOSURE	3

PICTOGRAM(S)



Precautionary Statements

Prevention: Avoid breathing vapors, mist, or spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear eye and face protection. Wear protective gloves.

Response: IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Call a poison control center or physician if you feel unwell. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information

Section 3: Composition/information on ingredients

Hazardous Component(s)	CAS Number	Percentage*
Aluminum	7429-90-5	30 – 60
Tetraglycidyl diaminodiphenylmethane	28768-32-3	30 – 60
Epoxy resin	Proprietary	10 – 30
Modified epoxy resin	Unknown	5 – 10
Treated fumed silica	67762-90-7	1 - 5

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

Section 4: First aid measures

Inhalation:	If inhaled, immediately remove the affected person to fresh air. If symptoms develop and persist, get medical attention.
Skin contact:	Remove contaminated clothing and footwear. Immediately wash skin thoroughly with soap and water. If symptoms develop and persist, get medical attention.
Eye contact:	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
Ingestion:	Get medical attention. Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions.
Symptoms:	See Section 11.
Notes to physician:	Treat symptomatically and supportively.

Section 5: Firefighting measures

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear full protective clothing. Wear self-contained breathing apparatus.
Unusual fire or explosion hazards:	May liberate large quantities of dense, foul-smelling smoke which may contain unidentified toxic gasses.
Hazardous combustion products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Oxides of nitrogen.

Section 6: Accidental release measures

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways.
Clean-up methods:	Absorb spill with inert material. Shovel material into appropriate container for disposal. Dispose of according to Federal, State and local governmental regulations.

Section 7: Handling and storage

Handling:	Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. For the Part A plus Part B adhesive mixture, follow curing schedule as recommended in product literature. Do not heat Part A at temperatures greater than 80°C (176°F). This material may self-react at higher temperatures and cause an exotherm. The exotherm has the potential for release of excessive energy and toxic gasses. Empty containers retain product residue, so obey hazard warnings and handle empty containers as if they were full.
Storage:	Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

Section 8: Exposure controls/personal protection

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Aluminum	1 mg/m ³ TWA Respirable fraction.	5 mg/m ³ PEL (as Al) Respirable dust. 15 mg/m ³ PEL (as Al) Total dust.	None	None
Tetraglycidyl	None	None	None	None
Epoxy resin	None	None	None	None
Modified epoxy resin	None	None	None	None
Treated fumed silica	10 mg/m ³ TWA Inhalable dust. 3 mg/m ³ TWA Respirable fraction.	15 mg/m ³ TWA Total dust. 5 mg/m ³ TWA Respirable fraction.	None	None

Engineering controls:	Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.
Respiratory protection:	If ventilation is not sufficient to effectively prevent buildup of aerosols, mists or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.
Eye/face protection:	Wear safety glasses; chemical goggles (if splashing is possible).
Skin protection:	Wear impervious gloves for prolonged contact. Use of impervious apron and boots are recommended.

Section 9: Physical and chemical properties

Physical state:	Liquid
Color:	Gray
Odor:	Mild
Odor threshold:	Not available.
pH:	Neutral
Vapor pressure:	Nil
Boiling point/range:	Not determined
Melting point/ range:	Not determined
Specific gravity:	1.49
Vapor density:	>1
Flash point:	> 93°C (> 199.4°F)
Flammable/Explosive limits - lower:	Not determined
Flammable/Explosive limits - upper:	Not determined
Autoignition temperature:	Not determined
Evaporation rate:	Not determined
Solubility in water:	Negligible
Partition coefficient (n-octanol/water):	Not determined
VOC content:	< 10 g/l per SCAQMD Rule 1124 [EPA Test Method 24/304-91] (estimated)
Viscosity:	Not available.
Decomposition temperature:	Not available.

Section 10: Stability and reactivity

Stability:	Stable at normal conditions.
Hazardous reactions:	May occur.
Hazardous decomposition products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Oxides of nitrogen.
Incompatible materials:	Strong acids and oxidizing agents. Amines.
Reactivity:	Not available.
Condition to avoid:	To avoid thermal decomposition, do not overheat.

Section 11: Toxicological information

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms

Inhalation: May cause respiratory tract irritation.

Skin contact: This product may cause irritation to the skin. Repeated or prolonged skin contact may result in allergic sensitization.

Eye contact: This product may cause irritation to the eyes.

Ingestion: Ingestion of this product may cause nausea, vomiting and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Aluminum	None	Central nervous system, Irritant, Lung
Tetraglycidyl diaminodiphenylmethane	None	Allergen, Blood, Central nervous system, Gastrointestinal, Irritant, Kidney, Liver, Mutagen, Nervous System
Epoxy resin	None	Allergen, Irritant
Modified epoxy resin	None	No Data
Treated fumed silica	None	Irritant

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Aluminum	No	No	No
Tetraglycidyl diaminodiphenylmethane	No	No	No
Epoxy resin	No	No	No
Modified epoxy resin	No	No	No
Treated fumed silica	No	No	No

Section 12: Ecological information

Ecological information: Toxic to aquatic organisms

Section 13: Disposal considerations

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA.

Section 14: Transport information

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.
(Tetraglycidyl diaminodiphenylmethane, Bisphenol-A Epichlorhydrin resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Tetraglycidyl diaminodiphenylmethane, Bisphenol-A Epichlorhydrin resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Tetraglycidyl diaminodiphenylmethane, Bisphenol-A Epichlorhydrin resin
Exceptions: Classified per IMDG Amendment 34; Effective Jan 1, 2010.

Section 15: Regulatory information

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None above reporting de minimis
CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Aluminum not powder, dust or fume (CAS# 7429-90-5).
California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDL Status: One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.

Section 16: Other information

DISCLAIMER: The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

Click Bond - CB394B – Safety Data Sheet

Section 1: Product and company identification

Product Name: CB394B

Product type: Epoxy Hardener Adhesive for the Aerospace Industry

Restriction of use: None identified

Company: Click Bond, Inc.
Address: 2151 Lockheed Way
Carson City, NV 89706

Information Phone: (775) 885-8000
24 Hour Emergency Phone: (800) 255-3924 (CHEM•TEL)
Outside North America Phone: (813) 248-0585 Call Collect
Website: <http://www.clickbond.com>

Section 2: Hazard identification

EMERGENCY OVERVIEW

WARNING: HARMFUL IN CONTACT WITH SKIN. CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. MAY CAUSE AN ALLERGIC SKIN REACTION.

Hazard Class	HAZARD CATEGORY
ACUTE TOXICITY DERMAL	4
SKIN CORROSION	1C
SERIOUS EYE DAMAGE	1
SKIN SENSITIZATION	1

PICTOGRAM(S)



Precautionary Statements

Prevention:	Do not breathe dust or fumes. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection.
Response:	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Immediately call a poison control center or physician. If skin irritation or rash occurs: Get medical attention. Wash contaminated clothing before reuse.
Storage:	Store locked up.
Disposal:	Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information

Section 3: Composition/information on ingredients

Hazardous Component(s)	CAS Number	Percentage*
Tetraethylene pentamine	112-57-2	30 - 60
Substituted piperazine	Proprietary	30 - 60
Silica, amorphous, fumed, crystal-free	112945-52-5	5 - 10
Triethylenetetramine	112-24-3	1 - 5
Carbon black	1333-86-4	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

Section 4: First aid measures

Inhalation:	If inhaled, immediately remove the affected person to fresh air. If symptoms develop and persist, get medical attention.
Skin Contact:	Remove contaminated clothing and footwear. Immediately wash skin thoroughly with soap and water. If symptoms develop and persist, get medical attention.
Eye Contact:	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
Ingestion:	Get medical attention. Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions.
Symptoms:	See Section 11.
Notes to Physician:	Treat symptomatically and supportively.

Section 5: Firefighting measures

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear full protective clothing. Wear self-contained breathing apparatus.
Unusual fire or explosion hazards:	In case of fire, keep containers cool with water spray. Closed containers may rupture (due to buildup of pressure) when exposed to extreme heat.
Hazardous combustion products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Oxides of nitrogen.

Section 6: Accidental release measures

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways.
Clean-up methods:	Scrape up spilled material and place in a closed container for disposal. Dispose of according to Federal, State and local governmental regulations.

Section 7: Handling and storage

Handling:	For the Part A plus Part B adhesive mixture, follow curing schedule as recommended in product literature. Do not heat Part B at temperatures greater than 100°C (212°F). This material may self-react at higher temperatures and cause an exotherm. The exotherm has the potential for release of excessive energy and toxic gasses. Empty containers retain product residue, so obey hazard warnings and handle empty containers as if they were full. Do not cut, grind, weld, or drill on or near this container.
Storage:	Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

Section 8: Exposure controls/personal protection

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Tetraethylene pentamine	None	None	(SKIN) Aerosol. 1 ppm (5 mg/m ³) TWA Aerosol. (Skin sensitizer)	None
Substituted piperazine	None	None	None	None
Silica, amorphous, fumed, crystal-free	10 mg/m ³ TWA Inhalable dust. 3 mg/m ³ TWA Respirable fraction.	20 MPPCF TWA 0.8 mg/m ³ TWA	None	None
Triethylenetetramine	None	None	1 ppm (6 mg/m ³) TWA (SKIN)	None
Carbon black	3 mg/m ³ TWA Inhalable fraction.	3.5 mg/m ³ PEL	None	None

Engineering controls:

Ventilation should effectively remove and prevent buildup of any dust generated from the handling of this product.

Respiratory protection:

When dusts or thermal processing fumes are generated and ventilation is not sufficient to effectively remove them, appropriate NIOSH/MSHA approved respiratory protection must be provided.

Eye/face protection:

Safety goggles or safety glasses with side shields.

Skin protection:

Wear impervious gloves for prolonged contact. Use of impervious apron and boots are recommended.

Section 9: Physical and chemical properties

Physical state:	Solid
Color:	Brown
Odor:	Amine
Odor threshold:	Not available.
pH:	Not applicable
Vapor pressure:	< 0.1 mm hg
Boiling point/range:	340°C (644°F)
Melting point/ range:	Not determined
Specific gravity:	1.0
Vapor density:	8.6
Flash point:	> 93°C (> 199.4°F)
Flammable/Explosive limits - lower:	Not determined
Flammable/Explosive limits - upper:	Not determined
Autoignition temperature:	Not determined
Evaporation rate:	Not determined
Solubility in water:	Complete
Partition coefficient (n-octanol/water):	Not determined
VOC content:	< 10 g/l per SCAQMD Rule 1124 [EPA Test Method 24/304-91] (estimated)
Viscosity:	Not available.
Decomposition temperature:	Not available.

Section 10: Stability and reactivity

Stability:	Stable at normal conditions.
Hazardous reactions:	May occur.
Hazardous decomposition products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Oxides of nitrogen.
Incompatible materials:	Keep away from strong oxidizing agents, strong Lewis or mineral acids.
Reactivity:	Not available.

Condition to avoid: Avoid mixing resin (Part A) and curing agent (Part B) unless you plan to use immediately. Do not heat mixed adhesive unless curing surfaces to be bonded. Failure to observe these precautions may result in excessive heat build-up causing an exotherm. The exotherm has the potential for release of toxic gasses.

Section 11: Toxicological information

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms

Inhalation: Can cause severe irritation and burns to the respiratory tract. May cause allergic respiratory reaction.

Skin contact: This product is severely irritating to the skin and may cause burns. Repeated or prolonged skin contact may result in allergic sensitization. This product may be harmful if it is absorbed through the skin.

Eye contact: This product is severely irritating to the eyes and may cause eye burns.

Ingestion: Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Tetraethylene pentamine	Oral LD50 (RAT) = 3.99 g/kg Oral LD50 (RAT) = 2.1 g/kg Dermal LD50 (RABBIT) = 0.66 g/kg	Irritant, Mutagen, Allergen
Substituted piperazine	None	No Records
Silica, amorphous, fumed, crystal-free	None	Nuisance dust
Triethylenetetramine	None	Allergen, Corrosive, Developmental, Irritant, Mutagen
Carbon black	Oral LD50 (RAT) 8,000 mg/kg	Respiratory, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Tetraethylene pentamine	No	No	No
Substituted piperazine	No	No	No
Silica, amorphous, fumed, crystal-free	No	No	No
Triethylenetetramine	No	No	No
Carbon black	No	Group 2B	No

Section 12: Ecological information

Ecological information: Not available.

Section 13: Disposal considerations

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: This product, if discarded, may be characterized as a RCRA corrosive waste, D002. Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

Section 14: Transport information

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Amines, solid, corrosive, n.o.s.
(Tetraethylene pentamine, Substituted piperazine)

Hazard class or division: 8

Identification number: UN 3259

Packing group: III

International Air Transportation (ICAO/IATA)

Proper shipping name: Amines, solid, corrosive, n.o.s.
(Tetraethylene pentamine, Substituted piperazine)

Hazard class or division: 8

Identification number: UN 3259

Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name:	AMINES, SOLID, CORROSIVE, N.O.S. (Tetraethylene pentamine, Substituted piperazine)
Hazard class or division:	8
Identification number:	UN 3259
Packing group:	III
Marine pollutant:	Tetraethylene pentamine

Section 15: Regulatory information

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification:	None above reporting de minimis
CERCLA/SARA Section 302 EHS:	None above reporting de minimis
CERCLA/SARA Section 311/312:	Immediate Health, Delayed Health
CERCLA/SARA Section 313:	None above reporting de minimis
California Proposition 65:	This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
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Section 16: Other information

DISCLAIMER: The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.