



Safety Data Sheet

Seal Bond MA-277

Revision Date: November 19, 2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MA-277 PART A
PRODUCT CODES: MA-277 PART A

MANUFACTURER: Seal Bond
STREET ADDRESS: 14851 Michael Lane
CITY, STATE, ZIP: Spring Lake, MI 49456

INFORMATION PHONE: 616-850-0507
EMERGENCY PHONE: Chemtrec 800-424-9300
FAX PHONE: 616-850-0530

PREPARED BY: Kelly Barnes

Chemical Name or Class: Epoxy Mixture

SECTION 2. HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: Flammable Liquids category 3, Acute toxicity (oral) category 4, Acute inhalation toxicity category 4, Skin corrosion/irritation category 2, Skin sensitizer category 1B, Serious eye damage/irritation category 2A, Specific target organ toxicity – single exposure category 3, Chronic hazards to aquatic environment category 2

GHS Label Elements and Precautionary Statements:



Label Elements:

Hazard Statements:

- Warning: Flammable liquid and vapor.
- Warning: Harmful if swallowed
- Warning: Harmful if inhaled
- Warning: Causes skin irritation
- Warning: May cause an allergic skin reaction

Warning: Causes serious eye irritation

Warning: May cause respiratory irritation

Toxic to aquatic life with long lasting effects

Precautionary statements:

P102 Keep out of reach of children.

P103 Read label before use

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.

P243 Take precautionary measures against static discharge.

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

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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

P271 Use only outdoors or in a well-ventilated area

P304 + P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P272 Contaminated work clothing should not be allowed out of the workplace.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

Response:

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

P370 + P378 In case of fire: Use FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG for extinction.

P301 + P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.

P330 Rinse mouth

P302 + P352 IF ON SKIN: wash with plenty of soap and water.

P333 + P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

P362 + P364 take off contaminated clothing and wash it before reuse.

P305 + P351 + P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

P337 + P313 IF eye irritation persists: Get medical advice/attention

P362 + P364 take off contaminated clothing and wash it before reuse.

P304 + P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P391 Collect spillage.

Storage:

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

P405 Store locked up.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal:

P501 Dispose of contents/container to a waste disposal facility in accordance with local, state, federal or international laws

Other Non-classifiable potential hazards

Carcinogen category 2

HMIS HAZARD CLASSIFICATION

HEALTH: 2 FLAMMABILITY: 2 REACTIVITY: 0 PERSONAL PROTECTIVE EQUIPMENT: G

POTENTIAL HEALTH EFFECTS

EYES:

CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, OR BLURRED VISION.

SKIN:

MAY CAUSE IRRITATION, DEFATTING AND DERMATITIS.

INGESTION:

CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITTING, DIARRHEA AND ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

INHALATION:

CAN CAUSE NAUSEA AND RESPIRATORY IRRITATION, DIZZINESS, WEAKNESS, FATIGUE, HEADACHE AND POSSIBLE UNCONSCIOUSNESS
HEALTH HAZARDS (ACUTE AND CHRONIC):

EPOXY RESINS CAN CAUSE SENSITIZATION BY EXPOSURE THROUGH CONTACT OR HIGH CONCENTRATIONS OF VAPOR. OVER EXPOSURE TO THIS MATERIAL CAN CAUSE CARDIAC ABNORMALITIES, ANEMIA, LIVER ABNORMALITIES, KIDNEY DAMAGE OR EVEN EYE DAMAGE. MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
RESPIRATORY CONDITIONS OR OTHER ALLERGIC RESPONSE.

CARCINOGENICITY

OSHA: NO NTP: yes IARC: yes

ADDITIONAL CARCINOGENICITY INFORMATION:

Some colors may contain carbon black - Explanation Of Carcinogenicity for carbon: IARC MONOGRAPHS ON EVALUATION OF CARCINOGENIC RISK OF CHEMICALS TO MAN, VOL 65, PG 149, 1996: GROUP 2B. Product may contain ethyl benzene as a component of xylene (IARC 2B). IARC has determined that crystalline silica inhaled in the form of quartz is carcinogenic to humans (Group 1- carcinogenic to humans). The NTP classifies respirable crystalline silica as reasonably anticipated to be a carcinogen. Titanium Dioxide is listed by IARC as possibly carcinogenic to humans (group 2B).

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
MODIFIED DIGLYCIDYL ETHER OF					
BISPENOL A	25068-38-6	NONE	NONE	NONE	40-70
ALKYL GLYCIDYL ETHER	68609-97-2	NONE	NONE	NONE	0.1-1
Talc	14807-96-6	20mg/m3	20mg/m3	20mg/m3	10-30
*crystalline silica (as a component of talc)	14808-60-7	10mg/m3	.1mg/m3	.1mg/m3	(<1.0%)
LIMESTONE	1317-65-3	15mg/m3	5MG/M3	NONE	10-30
*XYLENE	1330-20-7	100PPM	100PPM	150PPM	<1.0
*ethyl benzene (as a component of xylene)	100-41-4	100ppm	100ppm	125ppm	<0.1%
Precipitated Silica	112926-00-8	NONE	80mg/m3	NONE	0.1-1
Alky Quarternary Ammonium Bentonite	68953-58-2	50mg/m3	10mg/m3	20mg/m3	1-5
*crystalline silica (as a component of Alky Quarternary Ammonium Bentonite)	14807-60-7	10mg/m3	.1mg/m3	.1mg/m3	(<0.5%)
BENZYL ALCOHOL	100-51-6	NONE	NONE	NONE	3-7
*BUTANOL NORMAL	71-36-3	50PPM	50PPM	NONE	5
COLORS MAY CONTAIN @ 7-13%:					
Titanium Dioxide	13463-67-7	10mg/m3	10mg/m3	5mg/m3	
*CARBON	1333-86-4	3.5PPM	3.4PPM	NONE	<1.0
Silicon Dioxide	7631-86-9	6mg/m3	10mg/m3	NONE	
Ferric Oxide	1309-37-8	10mg/m3	8mg/m3	NONE	
Iron III oxide	20344-49-4	15mg/m3	5mg/m3	NONE	
Yellow Pigment	Not available	NONE	NONE	NONE	
Zinc Sulfate (component of yellow pigment)	1314-98-3	NONE	NONE	NONE	
Barium Sulfate (component of yellow pigment)	7727-43-7	NONE	NONE	NONE	
Pigment yellow 65 (component of yellow pigment)	6528-34-3	NONE	NONE	NONE	
C.I. Pigment Blue	147-14-8	1mg/m3	1mg/m3	NONE	
Aluminum Oxide	1344-28-1	15mg/m3	10mg/m3	NONE	
Iron Oxide Yellow	51274-00-1	15mg/m3	10mg/m3	NONE	
Acrylic polymers (non-hazardous)	trade secret	NONE	NONE	NONE	
C.I. Pigment violet 19	1047-16-1	NONE	NONE	NONE	
Barium Sulfate	7727-43-7	5 mg/m3	10 mg/m3	NONE	
zinc salt of alkyl naphalene sulfonic acid	undisclosed	NONE	NONE	NONE	
solvent naptha	64742-88-7	NONE	NONE	NONE	
polyamine polyester polymer	(non hazardous)	NONE	NONE	NONE	
C.I. Pigment blue 15	147-14-8	NONE	NONE	NONE	
C.I. Pigment Blue	25869-00-5	NONE	NONE	NONE	
C11-C13 isoparaffin	64741-65-7	NONE	NONE	NONE	
C.I. Pigment green 17	1308-38-9	NONE	NONE	NONE	
Alkyl polyether phosphate ester	trade secret	NONE	NONE	NONE	
C.I. Pigment green 7	1328-53-6	NONE	NONE	NONE	
C.I. Pigment green 36	14302-13-7	NONE	NONE	NONE	

C.I. Pigment Yellow	4531-49-1	NONE	NONE	NONE
C.I. Pigment Yellow	5567-15-7	NONE	NONE	NONE
C.I. Pigment yellow 42	51274-00-1	NONE	NONE	NONE
pigment orange	15793-73-4	NONE	NONE	NONE
C.I. Pigment red 101	1309-37-1	NONE	NONE	NONE
C.I. Pigment red 3	2425-85-6	NONE	NONE	NONE
aluminum silicate dehydrate	1332-58-7	NONE	NONE	NONE
mineral spirits	8052-41-3	100ppm	100ppm	NONE
C.I. Pigment red 187	59487-23-9	NONE	NONE	NONE

SECTION 3 NOTES: *Indicates toxic chemical(s) subject to reporting requirements of section 313 of Title III and of 40 CFR 372. XYLENE ACHIH STEL=150PPM

Note: Ingredients listed without percentages, the percentages are considered a trade secret.

SECTION 4. FIRST AID MEASURES

EYES:

FLUSH EYES WITH WATER FOR AT LEAST FIFTEEN MINUTES AND CONSULT A PHYSICIAN.

SKIN:

SKIN CONTACT WILL NORMALLY CAUSE NO MORE THAN IRRITATION BUT WASH AFFECTED AREA WITH SOAP AND WATER AND REMOVE CONTAMINATED CLOTHING PROMPTLY.

INGESTION:

LOW IN TOXICITY, INDUCE VOMITING ONLY IF LARGE AMOUNTS OF MATERIAL ARE INGESTED, AND OTHERWISE DO NOT INDUCE VOMITING. IN EITHER CASE CONSULT WITH A PHYSICIAN.

INHALATION:

REMOVE VICTIM TO FRESH AIR AND ADMINISTER OXYGEN IF NECESSARY.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 5. FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: not available
(% by volume) LOWER: not available

FLASH POINT: 140F

METHOD USED:

SETA FLASH

EXTINGUISHING MEDIA:

FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG

SPECIAL FIRE FIGHTING PROCEDURES:

DO NOT ENTER CONFINED AREA WITHOUT FULL BUNKER GEAR INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL ALL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE KNOWN.

SECTION 6. RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

WEAR RESPIRATOR AND PROTECTIVE CLOTHING. SHUT OFF THE SOURCE AT THE LEAK. REMOVE EXCESS WITH VACUUM TRUCK AND TAKE UP THE REMAINDER WITH AN ABSORBENT SUCH AS CLAY AND PLACE IN DISPOSAL CONTAINERS. FLUSH AREA WITH WATER TO REMOVE RESIDUE.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

STORE IN A COOL DRY PLACE. SEAL ALL PARTIALLY USED CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. MIXED MATERIALS CONTAIN THE HAZARDS OF ALL THE COMPONENTS, THEREFORE, READ THE MSDS'S OF ALL THE COMPONENTS PRIOR TO USING MATERIAL. PROPERLY LABEL ALL CONTAINERS

OTHER PRECAUTIONS:

AVOID ALL SKIN CONTACT. AVOID BREATHING VAPORS GENERATED FROM THE MATERIAL. OBSERVE CONDITIONS OF GOOD GENERAL HYGIENE AND SAFE WORKING PRACTICES. CONTAMINATED LEATHER ARTICLES CAN NOT BE CLEANED AND MUST BE DISCARDED IF CONTAMINATED WITH THIS PRODUCT. WASH ALL CONTAMINATED CLOTHING PRIOR TO THE REUSE THEREOF

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

USE A NIOSH APPROVED RESPIRATOR AS REQUIRED TO PREVENT OVER EXPOSURE TO VAPOR IN ACCORDANCE WITH 29 CFR 1910.134. GENERAL EXHAUST IS USUALLY SUFFICIENT IN LIEU OF NIOSH RESPIRATOR

VENTILATION :

GENERAL EXHAUST IS USUALLY SUFFICIENT TO CONTROL VAPORS AND EXPOSURE HAZARDS

PROTECTIVE GLOVES:

IMPERVIOUS GLOVES – NEOPRENE OR RUBBER

EYE PROTECTION:

SPLASH GOGGLES OR GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

WEAR BODY COVERING CLOTHING AND OTHER COVERINGS AS NECESSARY SUCH AS APRON AND APPROPRIATE FOOTWEAR TO AVOID CONTACT WITH MATERIAL.

WORK HYGIENIC PRACTICES:

OBSERVE GOOD GENERAL HYGIENIC PRACTICES.

SEE SECTION THREE FOR OCCPATONAL EXPOSURE LIMIT VALUES.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: LOW VISCOSITY LIQUID IN VARYING COLORS

BOILING POINT OR RANGE: 200 TO 279F

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H₂O = 1): 1.5

EVAPORATION RATE: N/A

SOLUBILITY IN WATER: NEGLIGIBLE

Odor Threshold: N/A

pH: N/A

Melting point/freezing point: N/A

Vapor Pressure: N/A

Auto Ignition Temperature: N/A

Partition Coefficient: n-octanol/water: N/A

Decomposition Temperature: N/A

SECTION 10. STABILITY AND REACTIVITY

STABILITY:

STABLE

CONDITIONS TO AVOID (STABILITY):

AVOID EXCESSIVE HEAT OR OPEN FLAMES.

INCOMPATIBILITY (MATERIAL TO AVOID):

CAN REACT VIGOROUSLY WITH STRONG OXIDIZING AGENTS AND STRONG LEWIS ACIDS OR MINERAL ACIDS.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

CO₂, ALDEHYDES, ACIDS. REACTION WITH SOME CURING AGENTS CAN GENERATE LARGE AMOUNTS OF HEAT.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR.

SECTION 11. TOXICOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component CAS# 25068-38-6: Moderate sensitizer, slight eye irritant, moderate skin irritant, Oral LD50 >5000 mg/kg (rat), Dermal LD50 >6000 mg/kg (rabbit)

Component CAS# 68609-97-2: possible sensitizer, eye and skin irritant, Oral LD50 >10000 mg/kg (rat), Inhalation LD50 – no microscopic changes

Component CAS# 68953-58-2: Carcinogenic effects – this component may contain crystalline silica dust can cause silicosis, a form of progressive pulmonary fibrosis. Inhalable crystalline silica is listed by IARC as a group I carcinogen (lung) based on sufficient evidence in occupationally exposed humans and sufficient evidence in animals. Crystalline Silica is also listed by the NTP as a known human carcinogen. Oral LD50 (rat) > 8g/mg

Component Titanium Dioxide: Inhalation 4 h LC50 > 6.82 mg/l; Oral LD50 > 5000 mg/kg, rat; In February 2006, IARC listed titanium dioxide as possibly carcinogenic to humans Group 2B.

Component CAS# 14807-96-6: Carcinogenic effects – this component may contain crystalline silica dust can cause silicosis, a form of progressive pulmonary fibrosis. Inhalable crystalline silica is listed by IARC as a group I carcinogen (lung) based on sufficient evidence in occupationally exposed humans and sufficient evidence in animals. Crystalline Silica is also listed by the NTP as a known human carcinogen

Component Limestone: LD50 Oral (rat) = 6450 mg/kg. This product contains greater than 0.1% crystalline silica which is listed as a group I carcinogen by IARC, a known carcinogen by NTP, OSHA and as A2 suspected human carcinogen by ACGIH

Component Xylene: Inhalation LC50 26800ppm, Skin LD50 2000 mg/kg, Ingestion LD50 4.3 g/kg. Exposure may effect skin, eye, liver, kidney, nervous system, respiratory system and lungs. High concentrations may lead to nervous system effects. Repeated overexposure has produced toxic effects in developing and young laboratory animals. Aspiration into lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal. Xylene may contain ethyl benzene, and toluene. Ethyl benzene has shown limited evidence of a carcinogenic effect.

Component Iron III oxide CAS# 20344-49-4: Acute Oral Toxicity LD50 >5000 mg/kg (rat).

Component Carbon: IARC lists carbon as a possible human carcinogen Category 2B. LD50 – Intravenous, mouse = 440 mg/kg

Component Yellow Pigment: Not Hazardous as defined by OSHA HC Standard 29 CFR 1810.1200.. Acute oral value of 20 gm/kg or greater in rats

Component CAS# 112926-00-8: LD50 (rat >5000 mg/kg, LD50 dermal (rat) >2000 mg/kg

Component Butanol CAS# 71-36-3: Acute Oral Toxicity LD50 = 790 mg/kg (rat) 4hr estimated. Acute Dermal Toxicity LD50 = 3400 mg/kg (rabbit) 4hr estimated. Acute toxicity of the Vapor LC50 = 8000 (rat) 4hr estimated

SECTION 12. ECOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component CAS# 25068-38-6: Biodegradability (Modified Sturm Method) 12%, Fish toxicity: Rainbow trout (96hr) LC50 1.5mg/l, Zebra Fish (96hr) LC50 2.4 mg/l. Invertebrate Toxicity: Daphnia Toxicity (24hr) EC 50 3.6 mg/l

Component CAS# 112926-00-8: Ecotoxicity: EC50 (fish) .10000 mg/l (daphnia >10000 mg/l

Component Titanium Dioxide: Pimephales promelas (fathead minnow) < 1000 mg/l @ 96h LC50; Pseudokirchneriella subcapitata (green algae) 61 mg/l @ 72h EC50; Daphnia magna (water flea) > 1000 mg/l @ 48h EC50

Component CAS# 14807-96-6: There is no data that suggests that crystalline silica is toxic to birds, fish, invertebrates, microorganisms or plants.

Component Limestone: inert material

Component Xylene: Acute Toxicity: Fish: Toxic 1 < LCECIC50 < 10mg/l, Aquatic Invertabrates: Toxic 1 < LC/EC/IC50 <10mg/l, Algae: Toxic 1 < LC/EC/IC50 <10 mg/l. Mobility – floats on water. If it enters the soil it will be highly mobile and may contaminate groundwater. Oxidises rapidly by photo-chemical reactions in air.

Component CAS# 68953-58-2: There is no data that suggests that crystalline silica is toxic to birds, fish, invertebrates, microorganisms or plants.

Component Iron III oxide CAS# 20344-49-4: Acute and Prolonged Toxicity to fish LC0 >1000 mg/l (golden Orfe). Toxicity to Microorganisms ECO > 10000mg/l (pseudomonas putida)

Component Yellow Pigment: Not Hazardous as defined by OSHA HC Standard 29 CFR 1810.1200.

Component Butanol CAS# 71-36-3: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. The products of degradation are more toxic.

SECTION 13. WASTE DISPOSAL

WASTE DISPOSAL METHOD:.

DISPOSE OF THE MATERIAL IN A WASTE DISPOSAL SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAW.

SECTION 14. Transport Information

DOT: : UN1993, FLAMMABLE LIQUID N.O.S. (CONTAINS XYLENE, PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, Bisphenol A Diglycidyl Ether Polymer), 3, PG III

IMO/IMDG: UN1993, FLAMMABLE LIQUID N.O.S. (CONTAINS XYLENE, PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, Bisphenol A Diglycidyl Ether Polymer), 3, PG III, Marine Pollutant

SECTION 15. REGULATORY INFORMATION

No data for the product itself.

Component data:

CAS# 25068-38-6: Considered a hazardous chemical; is on the TSCA list; is on the DSL Canada, WHMIS class D2B; Is on the New Jersey Right to Know list; is on the PA Right to Know List;

Component CAS# 68609-97-2: Considered a hazardous chemical; is on the TSCA list; is on the DSL Canada, Is on the New Jersey Right to Know list; is on the PA Right to Know List.

Component CAS# 14807-96-6 may contain Crystalline Silica (Silicon Dioxide) which is on the TSCA list. NTP list as a known human carcinogen, California proposition 65 list as a known carcinogen, Massachusetts Toxic Use Reduction Act list as toxic, Pennsylvania Worker and community right to know Act list as a hazardous substance.

Component Limestone: TSCA listed. Canada Exempt, naturally occurring Substance. EINECS, ECL, ENCS, CIES, PICCS listed. This product contains known to the state of California to cause cancer or reproductive effects.

Component Xylene: Xylene contains EPCRA section 313 chemicals subject to the reporting requirements of the emergency planning and community right to know act of 1968. (Maximum wt % for components of xylene are: M-Xylene CAS# 108-38-3 is 46%, P-Xylene CAS# 106-42-3 is 20%, Ethyl Benzene CAS# 100-41-4 is 19%, O-Xylene CAS# 95-47-6 is 16%). Xylene and its components are on the California Proposition 65 list for developmental toxicity, Reproductive toxicity and carcinogen list. Ingredients are on the TSCA list, DSL Canada, AICS, China, EINECS, ENCS, Korea, New Zealand, Phillipines inventory lists and on the Massachusetts, New Jersey, Pennsylvania right to know lists Ethyl Benzene a component of xylene has been designated by IARC as a possible carcinogen to humans based on increased tumor incidence in laboratory animals. risk phrases R10 Flammable R20/21 Harmful by inhalation and in contact with skin, R38 irritating to skin, S25 Avoid contact with eyes.

Component CAS# 112926-00-8: Is not classified as dangerous. National Chemical Inventory listings include – AICS, DSL, IECSC, EINECS, ENCS, KECI, NZLOC, PICCS, TSCA,

Component CAS# 68953-58-2: may contain Crystalline Silica (Silicon Dioxide) which is on the TSCA list. NTP list as a known human carcinogen, California proposition 65 list as a known carcinogen, Massachusetts Toxic Use Reduction Act list as toxic, Pennsylvania Worker and community right to know Act list as a hazardous substance. Component is on the DSL, EINECS, AICS, ENCS, ECL, PICCS and CLECS lists

Component Titanium Dioxide: Contains Proposition 65 Chemicals, is on the PA Hazardous substance list, is on the NJ right to know Regulated chemical List. Titanium Dioxide is on inventory or in compliance with EINECS, TSCA, AICS, DSL, ENCS (JP), KECI (KR), PICCS (PH) and INV (CN).

Component Carbon: Contains Proposition 65 Chemicals .Carbon: is listed on TSCA and DSL Canada

Component CAS# 7631-86-9: Component is on the Minnesota right to know list. Component is on TSCA list and Canada DSL.

Component CAS# 1309-37-8: Component is on the TSCA list and Canada DSL.

Component Iron III oxide CAS# 20344-49-4: Listed on TSCA Inventory. Potential exposure to all of the California proposition 65 chemicals have been determined to be below the No significant risk level (NSRL). Components are on the Pennsylvania right to know substance list.

Component contains the following chemicals listed on the Pennsylvania RTK special hazardous Substance lists: chromium CAS# 7440-47-3 (0.02%) and nickel CAS# 7440-02-0 (0.015%). Component contains the following ingredients which are on the Massachusetts hazardous substance lists: Chromium CAS# 7440-47-3 (0.02%), arsenic CAS# 7440-38-2 (60ppm), Beryllium CAS# 7440-41-7 (1ppm) and Nickel CAS# 7440-02-0 (0.015%) Component contains the following chemicals on the California Proposition 65 list known to the state of California to be carcinogenic: Nickel CAS# 7440-02-0 (0.015%), arsenic CAS# 7440-38-2 (60ppm), Beryllium CAS# 7440-41-7 (1ppm) and Cobalt CAS# 7440-48-4 (70ppm)..

Component Yellow Pigment: Not Hazardous as defined by OSHA HC Standard 29 CFR 1810.1200.

Component CAS# 147-14-8: Component is on the TSCA List. and not controlled under WHMIS. Component is a CERCLA hazardous substance

Component CAS# 1344-28-1: Component is on the Massachusetts, New Jersey, Pennsylvania right to know lists. Component is on TSCA list and Canada DSL.

Component CAS# 51274-00-1: Component is on the TSCA list and Canada DSL.

Component Butanol CAS# 71-36-3: Sara 313 – 40 CFR 372.65 chemical. CERCLA 40 CFR 302.4 (a) Chemical RQ=5000 pounds. On the TSCA list. On the DSL, AICS, ECL, EINECS, and ENCS lists. Butanol is on the Pennsylvania and New Jersey Right to Know lists

Component acrylic polymers: Listed on TSCA and DSL.

Component Barium Sulfate: : Listed on TSCA and DSL.

Component C.I. Pigment violet 19 CAS# 1047-16-1: Listed on TSCA and DSL.

Component zinc salt of alkyl naphalene sulfonic acid: Listed on TSCA and DSL.
Component solvent naptha CAS# 64742-88-7: Listed on TSCA and DSL.
Component polyamine polyester polymer (non hazardous): Listed on TSCA and DSL.
Component C.I. Pigment blue 15 CAS# 147-14-8: Listed on TSCA and DSL.
Component C.I. Pigment blue CAS# 25869-00-5: Listed on TSCA and DSL.
Component CAS# 164741-65-7: Listed on TSCA and DSL.
Component C.I. Pigment green 17 CAS# 1308-38-9: Listed on TSCA and DSL.
Component Alkyl polyether phosphate ester-trade secret: Listed on TSCA and DSL
Component C.I. Pigment green CAS# 1328-53-6: Listed on TSCA and DSL.
Component C.I. Pigment green 36 CAS# 14302-13-7: : Listed on TSCA and DSL.
Component CAS# 4531-49-1: Listed on TSCA and DSL
Component CAS# 5567-15-7: Listed on TSCA and DSL. Listed on the Pennsylvania, New Jersey right to know lists
Component C.I. Pigment yellow 42 CAS# 51274-00-1 Listed on TSCA and DSL.
Component CAS# 15793-73-4: Listed on TSCA and DSL. Listed on the Pennsylvania, New Jersey right to know lists
Component C.I. Pigment red 101 CAS# 1309-37-1: Listed on TSCA and DSL.
Component C.I. Pigment red 3 CAS# 2425-85-6: Listed on TSCA and DSL.
Component aluminum silicate dehydrate CAS# 1332-58-7: Listed on TSCA and DSL.
Component mineral spirits CAS# 8052-41-3: Listed on TSCA and DSL.
Component C.I. Pigment red 187 CAS# 59487-23-9: Listed on TSCA and DSL.

SECTION 16. OTHER INFORMATION

DISCLAIMER: The information Contained herein is based on the data available and is believed to be accurate, However, the manufacturer makes no warranty expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Accordingly, we assume no responsibility for injury from the use of this product.

N/A = Not Available

See Section 1 for date of preparation



Safety Data Sheet

Seal Bond MA-277

Revision Date: November 19, 2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MA-277 PART B
PRODUCT CODES: MA-277 PART B

MANUFACTURER: Seal Bond
STREET ADDRESS: 14851 Michael Lane
CITY, STATE, ZIP: Spring Lake, MI 49456

INFORMATION PHONE: 616-850-0507
EMERGENCY PHONE: Chemtrec 800-424-9300
FAX PHONE: 616-850-0530

PREPARED BY: Kelly Barnes

Chemical Name or Class: Polyamine and solvent mixture

SECTION 2. HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: Flammable Liquids category 3, Acute toxicity (oral) category 4, Acute inhalation toxicity category 4, Skin corrosion/irritation category 2, Skin sensitizer category 1B, Serious eye damage/irritation category 2A, Specific target organ toxicity – single exposure category 3, Specific target organ toxicity – repeated exposure category 2 Chronic hazards to aquatic environment category 3

GHS Label Elements and Precautionary Statements:



Label Elements:

Hazard Statements:

- Warning: Flammable liquid and vapor.
- Warning: Harmful if swallowed
- Warning: Harmful if inhaled
- Warning: Causes skin irritation
- Warning: May cause an allergic skin reaction

Warning: Causes serious eye irritation

Warning: May cause respiratory irritation.

Warning: May cause damage to organs (auditory system) through prolonged or repeated exposure

Harmful to aquatic life with long lasting effects

Precautionary statements:

P102 Keep out of reach of children.

P103 Read label before use

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.

P243 Take precautionary measures against static discharge.

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

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area

P304 + P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P272 Contaminated work clothing should not be allowed out of the workplace.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

Response:

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

P370 + P378 In case of fire: Use FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG for extinction.

P301 + P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.

P330 Rinse mouth

P302 + P352 IF ON SKIN: wash with plenty of soap and water.

P321 Specific treatment (see ... on this label).

P333 + P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

P362 + P364 take off contaminated clothing and wash it before reuse.

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

P337 + P313 IF eye irritation persists: Get medical advice/attention

P362 + P364 take off contaminated clothing and wash it before reuse.

P304 + P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P314 Get medical advice/attention if you feel unwell.

Storage:

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

P405 Store locked up.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal:

P501 Dispose of contents/container to a waste disposal facility in accordance with local, state, federal or international laws

Other Non-classifiable potential hazards

Carcinogen category 2

HMIS HAZARD CLASSIFICATION

HEALTH: 2 FLAMMABILITY: 3 REACTIVITY: 0 PERSONAL PROTECTIVE EQUIPMENT: G

POTENTIAL HEALTH EFFECTS

EYES:

CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, OR BLURRED VISION.

SKIN:

MAY CAUSE IRRITATION, DEFATTING AND DERMATITIS.

INGESTION:

CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, DIARRHEA, AND ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

INHALATION:

CAN CAUSE NAUSEA AND RESPIRATORY IRRITATION, DIZZINESS, WEAKNESS, FATIGUE NAUSEA, HEADACHE, AND POSSIBLE UNCONSCIOUSNESS.

HEALTH HAZARDS (ACUTE AND CHRONIC):

AMINE RESINS CAN CAUSE SENSITIZATION BY EXPOSURE THROUGH CONTACT OR HIGH CONCENTRATIONS OF VAPOR. OVER-EXPOSURE TO THIS MATERIAL CAN CAUSE CARDIAC ABNORMALITIES, ANEMIA, LIVER ABNORMALITIES, KIDNEY DAMAGE OR EVEN EYE DAMAGE. MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

RESPIRATORY CONDITIONS OR OTHER ALLERGIC RESPONSE.

CARCINOGENICITY

OSHA: NO NTP: YES IARC: YES

Product may contain ethyl benzene as a component of xylene (IARC 2B). IARC has determined that crystalline silica inhaled in the form of quartz is carcinogenic to humans (Group 1- carcinogenic to humans). The NTP classifies respirable crystalline silica as reasonably anticipated to be a carcinogen.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
TRIETHYLENE TETRAMINE	112-24-3	NONE	NONE	NONE	1-5
Dimer/tofa, reaction products with Teta	68082-29-1	NONE	NONE	NONE	10-30
TRIS-2,4,6-dimethylaminomethylphenol	90-72-2	NONE	NONE	NONE	1-5
Bis(dimethylaminomethyl) phenol	71074-89-0	NONE	NONE	NONE	0.1-1
*Xylene	1330-20-7	100PPM	100PPM	150PPM	11
*ethyl benzene (as a component of xylene)	100-41-4	100ppm	100ppm	125ppm	0-5.0
*toluene (as a component of xylene)	108-88-3	200ppm	20ppm	150ppm	0-0.2
*BUTANOL NORMAL	71-36-3	50PPM	50PPM	NONE	7
BENZYL ALCOHOL	100-51-6	NONE	NONE	NONE	7-13
Talc	14807-96-6	20mg/m3	20mg/m3	20mg/m3	10-30
*crystalline silica (as a component of talc)	14808-60-7	10mg/m3	.1mg/m3	.1mg/m3	(<1.0%)
LIMESTONE	1317-65-3	15mg/m3	5MG/M3	NONE	10-30
Alky Quarternary Ammonium Bentonite	68953-58-2	50mg/m3	10mg/m3	20mg/m3	5-10
*crystalline silica (as a component of Alky Quarternary Ammonium Bentonite)	14807-60-7	10mg/m3	.1mg/m3	.1mg/m3	<0.5%)

SECTION 3 NOTES: *Indicates toxic chemical(s) subject to reporting requirements of section 313 of Title III and of 40 CFR 372.

XYLENE ACHIH STEL=150PPM

Note: Ingredients listed without percentages, the percentages are considered a trade secret.

SECTION 4. FIRST AID MEASURES

EYES:

FLUSH EYES WITH WATER FOR AT LEAST FIFTEEN MINUTES AND CONSULT A PHYSICIAN.

SKIN:

SKIN CONTACT WILL NORMALLY CAUSE NO MORE THAN IRRITATION BUT WASH AFFECTED AREA WITH SOAP AND WATER AND REMOVE CONTAMINATED CLOTHING PROMPTLY.

INGESTION:

DO NOT INDUCE VOMITING, KEEP PERSON WARM AND CONSULT A PHYSICIAN.

INHALATION:

REMOVE VICTIM TO FRESH AIR AND ADMINISTER OXYGEN IF NECESSARY.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 5. FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: 11.2%
(% by volume) LOWER: 1.4%

FLASH POINT: 100F

METHOD USED:

SETA FLASH

EXTINGUISHING MEDIA:

FOAM, ALCOHOL FOAM, CO2, WATER FOG

SPECIAL FIRE FIGHTING PROCEDURES:

DO NOT ENTER CONFINED FIRE AREA WITHOUT FULL BUNKER GEAR INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL ALL FIRE EXPOSED CONTAINERS WITH WATER. PRESENCE OF SOLVENTS IN PRODUCT MAY REQUIRE GROUNDING.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

IF FIRE OCCURS, SOLVENTS MAY PRODUCE EXCESSIVE PRESSURE. SEALED DRUMS MAY RUPTURE AND IGNITE. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND AND IGNITE BY ANY SOURCE OF IGNITION. NEVER USE A CUTTING OR WELDING TORCH NEAR CONTAINERS (EVEN EMPTY). ALL 5 GALLON AND LARGER CONTAINERS SHOULD BE GROUNDED BEFORE TRANSFERRING MATERIAL.

SECTION 6. RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

AVOID CONTACT WITH MATERIAL. WEAR THE APPROPRIATE SAFETY EQUIPMENT. STOP SPILL AT SOURCE, DYKE AREA TO PREVENT SPREADING. PUMP LIQUID TO SALVAGE TANK. TAKE UP REMAINDER WITH CLAY OR OTHER ABSORBENT AND PLACE IN DISPOSAL CONTAINERS.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

AVOID ALL SKIN CONTACT. AVOID BREATHING VAPORS. RESEAL PARTIALLY USED CONTAINERS. PROPERLY LABEL ALL CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. OBSERVE CONDITIONS OF GOOD INDUSTRIAL HYGIENE AND SAFE WORKING PRACTICES.

OTHER PRECAUTIONS:

MIXED MATERIALS CONTAIN THE HAZARDS OF ALL THE COMPONENTS, THEREFORE, READ THE MSDS OF ALL COMPONENTS TO BECOME FAMILIAR WITH ALL HAZARDS PRIOR TO USING THIS PRODUCT.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

NIOSH APPROVED RESPIRATOR PROTECTION REQUIRED IN THE ABSENCE OF PROPER ENVIRONMENTAL CONTROLS. FOR EMERGENCIES A SELF-CONTAINED BREATHING APPARATUS OR A FULL FACE RESPIRATOR IS RECOMMENDED.

VENTILATION:

AVOID BREATHING VAPORS. VENTILATION MUST BE SUFFICIENT TO CONTROL VAPORS.

PROTECTIVE GLOVES:

IMPERVIOUS GLOVES – NEOPRENE OR RUBBER

EYE PROTECTION:

SPLASH GOGGLES OR GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

WEAR BODY COVERING CLOTHING AND OTHER COVERINGS AS NECESSARY SUCH AS APRON AND APPROPRIATE FOOTWEAR TO AVOID CONTACT WITH MATERIAL.

WORK HYGIENIC PRACTICES:

OBSERVE GOOD GENERAL HYGIENIC PRACTICES.

SEE SECTION THREE FOR OCCPATONAL EXPOSURE LIMIT VALUES.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: LIQUID WITH AMINE ODOR AND SOLVENT ODOR

BOILING POINT OR RANGE: 200 TO 401F

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H2O = 1): 1.3

EVAPORATION RATE: N/A

SOLUBILITY IN WATER: NEGLIGIBLE

Odor Threshold: N/A

pH: N/A

Melting point/freezing point: N/A

Vapor Pressure: N/A

Auto Ignition Temperature: N/A

Partition Coefficient: n-octanol/water: N/A

SECTION 10. STABILITY AND REACTIVITY

STABILITY:

STABLE

CONDITIONS TO AVOID (STABILITY):

AVOID EXCESSIVE HEAT OR OPEN FLAMES AS WELL AS ALL SOURCES OF IGNITIONS SUCH AS SPARKS, HEATERS, STATIC DISCHARGES ETC..

INCOMPATIBILITY (MATERIAL TO AVOID):

AVOID EPOXY CURING AGENTS IN UNCONTROLLED AMOUNTS AND STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

MAY FORM TOXIC CHEMICALS, CARBON DIOXIDE, CARBON MONOXIDE AND VARIOUS HYDROCARBONS ETC..

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

SECTION 11. TOXICOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component CAS# 68082-29-1 and CAS# 112-24-3: Acute Oral Toxicity LD50 (rat) >2000 mg/kg (estimate); Acute Dermal Toxicity LD50 (rabbit) >2000 mg/kg (estimate); Component has caused allergic sensitization in humans.

Component CAS# 90-72-2 and CAS# 71074-89-0: Oral LD50 (rat) 1200 mg/kg; Dermal LD50 (rabbit) 1280 mg/kg; Inhalation LC50 (rat) > 0.5 mg/liter/1 hour; Severe irritant to eyes of a rabbit. Severe irritant to the skin of a rabbit. Corrosive to the skin of a rabbit.

Component Xylene: Inhalation LC50 26800ppm, Skin LD50 2000 mg/kg, Ingestion LD50 4.3 g/kg. Exposure may effect skin, eye, liver, kidney, nervous system, respiratory system and lungs. High concentrations may lead to nervous system effects. Repeated overexposure has produced toxic effects in developing and young laboratory animals. Aspiration into lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal. Xylene may contain ethyl benzene, and toluene. Ethyl benzene has shown limited evidence of a carcinogenic effect.

COMPONENT Ethyl Benzene: Acute Oral toxicity LD50: ca. 3500 mg/kg (rat); Acute inhalation LC50: 17.2 mg/l 4h (rat); Acute Dermal Toxicity: 17,800 mg/kg (rabbit); Skin Irritation rabbit Draize exposure time 24h – slightly irritating. Eye Irritation rabbit Draize – severely irritating. Sensitization dermal (human patch test) non-sensitizer. Repeated Dose toxicity 28 days inhalation NOAEL: 3.4 mg/l (rabbit). Mutagenicity Genetic Toxicity in Vitro: Ames: Negative (salmonella typhimurium, metabolic activation with/without). Carcinogenicity: Ethyl benzene was tested by inhalation exposure in mice and rats. In mice, there was an increased incidence of lung adenomas in males and liver adenomas in females. In male rats, there was an increased incidence of renal tubule adenomas and carcinomas. Two Studies of workers potentially exposed to ethyl benzene in a production plant and a styrene polymerization plant, showed no excess cancer incidence and no excess cancer mortality during a 15 year follow-up. Toxicity to Reproduction/Fertility: Inhalation (monkey, male) Reproductive effects have been observed in animal studies, In a generation study, inhalation (rat/female) NOAEL (parental): 100ppm NOAEL (F2): 100ppm. Developmental Toxicity/Teratogenicity rat, female, inhalation, gestation, daily, NOAEL (teratogenicity): 100ppm (maternal): 100ppm. Teratogenic effects seen only with maternal toxicity., Fetotoxicity seen only with maternal toxicity. Rabbit, female, inhalation, gestation, daily, NOAEL (teratogenicity) < 1000 mg/m³, NOAEL (maternal) < 1000 mg/m³.

Component Butanol CAS# 71-36-3: Acute Oral Toxicity LD50 = 790 mg/kg (rat) 4hr estimated. Acute Dermal Toxicity LD50 = 3400 mg/kg (rabbit) 4hr estimated. Acute toxicity of the Vapor LC50 = 8000 (rat) 4hr estimated

Component Benzyl Alcohol: Inhalation LC50 (4hr) >4178 mg/l (rat), Dermal LD50 2000 mg/kg (rabbit) Rats exposed to 800 mg/kg for thirteen weeks exhibited CNS depression and histopathological changes in the brain, thymus and skeletal muscles. The No observed Adverse effect level (NOAEL) was 400 mg/kg. No evidence of carcinogenicity was seen in two year study with rats and mice.

Component CAS# 14807-96-6: Carcinogenic effects – this component may contain crystalline silica dust can cause silicosis, a form of progressive pulmonary fibrosis. Inhalable crystalline silica is listed by IARC as a group I carcinogen (lung) based on sufficient evidence in occupationally exposed humans and sufficient evidence in animals. Crystalline Silica is also listed by the NTP as a known human carcinogen

Component Limestone: LD50 Oral (rat) = 6450 mg/kg. This product contains greater than 0.1% crystalline silica which is listed as a group I carcinogen by IARC, a known carcinogen by NTP, OSHA and as A2 suspected human carcinogen by ACGIH

Component CAS# 68953-58-2: Carcinogenic effects – this component may contain crystalline silica dust can cause silicosis, a form of progressive pulmonary fibrosis. Inhalable crystalline silica is listed by IARC as a group I carcinogen (lung) based on sufficient evidence in occupationally exposed humans and sufficient evidence in animals. Crystalline Silica is also listed by the NTP as a known human carcinogen. Oral LD50 (rat) > 8g/mg

SECTION 12. ECOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component CAS# 90-72-2 and CAS# 71074-89-0: Toxicity: LC50 fish 447.8 mg/l (96 hr). LC50 Crust 28.2 mg/l (48 hr). EC50 alga 34.8 mg/l (96 hr)

Component Xylene: Acute Toxicity: Fish: Toxic 1 < LCECIC50 < 10mg/l, Aquatic Invertebrates: Toxic 1 < LC/EC/IC50 < 10mg/l, Algae: Toxic 1 < LC/EC/IC50 < 10 mg/l. Mobility – floats on water. If it enters the soil it will be highly mobile and may contaminate groundwater. Oxidizes rapidly by photo-chemical reactions in air.

COMPONENT Ethyl Benzene: Biodegradation, Aerobic, 50%, Exposure time 28 days. Biochemical Oxygen demand (BOD) 5 days, 2.8% and 35 days, 1780 mg/g. Bioaccumulation: Cyprinus carpio (Carp), 15 BCF. Acute and Prolonged Toxicity to Fish LC50: 12.1 mg/l (fathead minnow, 96 h). Acute Toxicity to Aquatic Invertebrates EC50: 1.8-2.9 mg/l (water flea, 48 h). Toxicity to Aquatic Plants EC50: 4.6 mg/l (green algae, 72 h). Toxicity to microorganisms EC50: 130 mg/l (activated sludge microorganisms, 48 hr).

Component Butanol CAS# 71-36-3: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. The products of degradation are more toxic.

Component Benzyl Alcohol: EC50 (48hr) 400 mg/l Daphnia Magna, EC50 (72hr) 2600 mg/l Algae, Biodegradation BOD₂ 62. Slightly or not bioaccumulative. Toxicity to fish: LC50 (96 hr) 10 mg/l Bluegill sunfish (*Lepomis macrochirus*), LC50 (96hr) 460 mg/l Fathead minnow (*Pimephales promelas*), Toxicity to Algae: IC50 (72hr) 700 mg/l

Component CAS# 14807-96-6: There is no data that suggests that crystalline silica is toxic to birds, fish, invertebrates, microorganisms or plants.

Component Limestone: inert material

Component CAS# 68953-58-2: There is no data that suggests that crystalline silica is toxic to birds, fish, invertebrates, microorganisms or plants.

SECTION 13. WASTE DISPOSAL

WASTE DISPOSAL METHOD:

DISPOSE OF MATERIAL AS A HAZARDOUS WASTE ACCORDING TO FEDERAL, STATE, AND LOCAL REGULATIONS.

SECTION 14. Transport Information

DOT: UN1993, FLAMMABLE LIQUID N.O.S. (CONTAINS XYLENE, BUTANOLS), 3, PG III,

IMO/IMDG : UN1993, FLAMMABLE LIQUID N.O.S. (CONTAINS XYLENE, BUTANOLS), 3, PG III

SECTION 15. REGULATORY INFORMATION

No data for the product itself.

Component data:

Component CAS# 68082-29-1 and CAS# 112-24-3 are on the TSCA list. OSHA Hazard class – irritant, sensitizer. On the Canadian DSL, on the EINECS master inventory

Component CAS# 90-72-2 and 71074-89-0 EEC symbol – Harmful, harmful if swallowed (R22) Irritating to eyes and skin (R36/38).

Component is on the Canada DSL, TSCA, EINECS, AICS, ENCS, ECL, SEPA, PICCS lists

Component Xylene: Xylene contains EPCRA section 313 chemicals subject to the reporting requirements of the emergency planning and community right to know act of 1968. (Maximum wt % for components of xylene are: M-Xylene CAS# 108-38-3 is 46%, P-Xylene CAS# 106-42-3 is 20%, Ethyl Benzene CAS# 100-41-4 is 19%, O-Xylene CAS# 95-47-6 is 16%.. Xylene and its components are on the California Proposition 65 list for developmental toxicity, Reproductive toxicity and carcinogen list. Ingredients are on the TSCA list, DSL Canada, AICS, China, EINECS, ENCS, Korea, New Zealand, Phillipines inventory lists and on the Massachusetts, New Jersey, Pennsylvania right to know lists Ethyl Benzene a component of xylene has been designated by IARC as a possible carcinogen to humans based on increased tumor incidence in laboratory animals. risk phrases R10 Flammable R20/21 Harmful by inhalation and in contact with skin, R38 irritating to skin, S25 Avoid contact with eyes.

COMPONENT Ethyl Benzene: US EPA CERCLA Hazardous Substances (40 CFR 302): Ethyl Benzene reportable quantity 1000 lbs. US EPA Emergency Planning and Community Right to Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.5) components, Ethyl Benzene. California Prop 65: This product contains chemicals known to the State of California to be carcinogenic: Ethyl Benzene CAS# 100-41-4 @ 1-5%.

Massachusetts, New York, Pennsylvania Right to Know list includes the following components: Ethyl Benzene CAS# 100-41-4.

Massachusetts, New York, Pennsylvania Special hazardous Substance includes the following components: Ethyl Benzene CAS# 100-41-4

Component Butanol CAS# 71-36-3: Sara 313 – 40 CFR 372.65 chemical. CERCLA 40 CFR 302.4 (a) Chemical RQ=5000 pounds. On the TSCA list. On the DSL, AICS, ECL, EINECS, and ENCS lists. Butanol is on the Pennsylvania and New Jersey Right to Know lists

Component Benzyl Alcohol: E20/22 Harmful by inhalation and if swallowed. On TSCA list, on DSL Canada

Component CAS# 14807-96-6 may contain Crystalline Silica (Silicon Dioxide) which is on the TSCA list. NTP list as a known human carcinogen, California proposition 65 list as a known carcinogen, Massachusetts Toxic Use Reduction Act list as toxic, Pennsylvania Worker and community right to know Act list as a hazardous substance.

Component Limestone: TSCA listed. Canada Exempt, naturally occurring Substance. EINECS, ECL, ENCS, CIES, PICCS listed. This product contains trace amounts of chemicals known to the state of California to cause cancer or reproductive effects.

Component CAS# 68953-58-2: may contain Crystalline Silica (Silicon Dioxide) which is on the TSCA list. NTP list as a known human carcinogen, California proposition 65 list as a known carcinogen, Massachusetts Toxic Use Reduction Act list as toxic, Pennsylvania Worker and community right to know Act list as a hazardous substance. Component is on the DSL, EINECS, AICS, ENCS, ECL, PICCS and CLECS lists

SECTION 16. OTHER INFORMATION

DISCLAIMER: The information Contained herein is based on the data available and is believed to be accurate, However, the manufacturer makes no warranty expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Accordingly, we assume no responsibility for injury from the use of this product.

N/A = Not Available

See Section 1 for date of preparation



Safety Data Sheet

Seal Bond MA-277

Revision Date: November 19, 2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MA-277 PART C
PRODUCT CODES: MA-277 PART C

MANUFACTURER: Seal Bond
STREET ADDRESS: 14851 Michael Lane
CITY, STATE, ZIP: Spring Lake, MI 49456

INFORMATION PHONE: 616-850-0507
EMERGENCY PHONE: Chemtrec 800-424-9300
FAX PHONE: 616-850-0530

PREPARED BY: Kelly Barnes

Chemical Name or Class: Sand and aluminum oxide mixture

SECTION 2. HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: Carcinogenicity category 1, Specific target organ toxicity following repeated exposure category 1, Specific target organ toxicity (single exposure) category 3

GHS Label Elements and Precautionary Statements:



Label Elements:

Hazard Statements:

DANGER: May cause cancer

DANGER: Causes damage to organs through prolonged or repeated exposures (lungs, respiratory system)

WARNING: May cause respiratory irritation.

Precautionary statements:

P102 Keep out of reach of children.

P103 Read label before use

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves/protective clothing/eye protection/face protection
 P260 Do not breathe dust/fume/gas/mist/vapours/spray. P264 Wash hands thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray P271 Use only outdoors or in a well-ventilated area.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P314 Get medical advice/attention if you feel unwell

P304 + P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:

P405 Store locked up

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal:

P501 Dispose of contents/container to a waste disposal facility in accordance with local, state, federal or international laws

HMIS HAZARD CLASSIFICATION

HEALTH: 2 FLAMMABILITY: 0 REACTIVITY: 0 PERSONAL PROTECTIVE EQUIPMENT: E

POTENTIAL HEALTH EFFECTS

EYES:

MAY CAUSE REDDENING OF THE EYES OR EYE IRRITATION FROM AIRBORNE PARTICLES.

SKIN:

NONE KNOWN

INGESTION:

NONE KNOWN

INHALATION:

PROLONGED EXPOSURE TO RESPIRABLE CRYSTALLINE QUARTZ MAY CAUSE DELAYED LUNG INJURY (SILICOSIS). ACUTE OR RAPIDLY DEVELOPING SILICOSIS MAY OCCUR IN A SHORT PERIOD OF TIME IN HEAVY EXPOSURE IN SOME APPLICATIONS SUCH AS SAND BLASTING.

HEALTH HAZARDS (ACUTE AND CHRONIC):

MAY CAUSE DELAYED SILICOSIS OR RAPID SILICOSIS IN SOME OCCUPATIONS SUCH AS SANDBLASTING, SILICOSIS IS A FORM OF A DISABLING PULMONARY FIBROSIS WHICH CAN BE PROGRESSIVE AND COULD LEAD TO DEATH. INHALATION MAY LEAD TO LUNG SCARRING AND MASSIVE FIBROSIS WHICH COULD BE ACCOMPANIED BY RIGHT HEART ENLARGEMENT, HEART FAILURE, OR PULMONARY FAILURE, SMOKING AGGRAVATES THE EFFECTS OF EXPOSURE.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

RESPIRATORY CONDITIONS OR OTHER ALLERGIC AILMENTS CAN BE AGGRAVATED BY EXPOSURE

CARCINOGENICITY

OSHA: NO NTP: YES IARC: YES

ADDITIONAL CARCINOGENICITY INFORMATION:

IARC HAS DETERMINED THAT CRYSTALLINE SILICA INHALED IN THE FORM OF QUARTZ IS CARCINOGENIC TO HUMANS (GROUP 1- CARCINOGENIC TO HUMANS). THE NTP CLASSIFIES RESPIRABLE CRYSTALLINE SILICA AS REASONABLY ANTICIPATED TO BE A CARCINOGEN.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
SILICON DIOXIDE	14808-60-7	10mg/m3	.1mg/m3	.1mg/m3	50
ALUMINUM OXIDE	1344-28-1	10mg/m3	10mg/m3	20mg/m3	30-60

No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present.

FOLLOW OSHA HAZARD COMMUNICATION RULE 29CFR SECTIONS 1910.1200, 1915.99, 1917.28, 1918.9, 1926.59, AND STATE AND LOCAL COMMUNITY RIGHT TO KNOW LAWS. WE RECOMMEND THAT SMOKING BE PROHIBITED IN AREAS WHERE RESPIRATORS MUST BE USED.

Note: Ingredients listed without percentages, the percentages are considered a trade secret.

SECTION 4. FIRST AID MEASURES

EYES:

FLUSH EYES WITH WATER FOR AT LEAST FIFTEEN MINUTES AND CONSULT A PHYSICIAN IF CONDITIONS WARRANT.

SKIN:

SKIN CONTACT WILL NORMALLY CAUSE NO HEALTH RISKS

INGESTION:

IF INGESTED, CONSULT A PHYSICIAN

INHALATION:

REMOVE VICTIM TO FRESH AIR AND ADMINISTER OXYGEN IF NECESSARY.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 5. FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: not available
(% by volume) LOWER: not available

FLASH POINT⁰ F: N/A

METHOD USED:

N/A

EXTINGUISHING MEDIA:

OTHER

SPECIAL FIRE FIGHTING PROCEDURES:

CRYSTALLINE SILICA IS NEITHER A FIRE NOR AN EXPLOSION HAZARD

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE KNOWN.

SECTION 6. RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

WEAR RESPIRATOR AND USE DUSTLESS HANDLING EQUIPMENT TO CLEAN UP LARGE SPILLS, PLACE IN SUITABLE CONTAINERS FOR DISPOSAL. FLUSH AREA WITH WATER AFTER PICKUP OF MATERIAL.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

STORE IN COOL DRY PLACE. PROPERLY LABEL ALL CONTAINERS AND RESEAL ALL PARTIALLY USED CONTAINERS. AVOID CREATING ANY DUST WHEN WORKING WITH THIS MATERIAL.

OTHER PRECAUTIONS:

AVOID BREATHING DUST GENERATED FROM THE MATERIAL. OBSERVE CONDITIONS OF GOOD GENERAL HYGIENE AND SAFE WORKING PRACTICES. PROVIDE TRAINING FOR YOUR EMPLOYEES RELATING TO OCCUPATIONAL EXPOSURE TO QUARTZ DUST. SEE ASTM STANDARD E1132-86 STANDARD PRACTICE FOR HEALTH REQUIREMENTS RELATING TO EXPOSURE TO QUARTZ DUST. IF BETTER THAN 500 X PEL USE A SELF CONTAINED BREATHING APPARATUS. IF SANDBLASTING, USE ANY TYPE CE SUPPLIED AIR RESPIRATOR WITH FULL FACE PIECE OR HOOD.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

USE A NIOSH APPROVED RESPIRATOR AS REQUIRED TO PREVENT OVER-EXPOSURE TO QUARTZ DUST. PROVIDE SUFFICIENT EXHAUST TO KEEP EXPOSURE LEVELS BELOW THE ACGIH PEL.

VENTILATION:

USE EXHAUST SUFFICIENT TO MAINTAIN AIRBORNE PARTICULATES BELOW THE ACGIH PEL LIMITS ESTABLISHED.

PROTECTIVE GLOVES:

N/A

EYE PROTECTION:

SPLASH GOGGLES OR GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

PROVIDE ANY EQUIPMENT NECESSARY TO PREVENT THE INHALATION OF QUARTZ DUST.

WORK HYGIENIC PRACTICES:

OBSERVE GOOD GENERAL HYGIENIC PRACTICES.

SEE SECTION THREE FOR OCCPATONAL EXPOSURE LIMIT VALUES.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: WHITE OF TAN SAND GRANULAR CRUSHED OR GROUND- NO ODOR
BOILING POINT OR RANGE ° F: N/A
VAPOR DENSITY (AIR = 1): N/A
SPECIFIC GRAVITY (H2O = 1): 2.6
EVAPORATION RATE: N/A
SOLUBILITY IN WATER: INSOLUBLE IN WATER

Odor Threshold: N/A
pH: N/A
Melting point/freezing point: N/A
Vapor Pressure: N/A
Auto Ignition Temperature: N/A
Partition Coefficient: n-octanol/water: N/A
Decomposition Temperature: N/A

SECTION 10. STABILITY AND REACTIVITY

STABILITY:
STABLE
CONDITIONS TO AVOID (STABILITY):
CONTACT WITH POWERFUL OXIDIZING AGENTS SUCH AS FLUORINE, CHLORINE, TRIFLUORIDE, MANGANESE TRIOXIDE, OXYGEN TRIFLUORIDE
INCOMPATIBILITY (MATERIAL TO AVOID):
CAN REACT VIGOROUSLY WITH STRONG OXIDIZING AGENTS- SEE CONDITIONS TO AVOID
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:
SILICA WILL DISSOLVE IN HYDROCHLORIC ACID TO FORM A CORROSIVE GAS- SILICON TETRAFLUORIDE
HAZARDOUS POLYMERIZATION:
WILL NOT OCCUR.

SECTION 11. TOXICOLOGICAL INFORMATION

No data for the product itself.

Component data:

Silicon dioxide: Inhalation and retention of respirable crystalline silica can cause silicosis in several forms, chronic, accelerated or acute. Acute silicosis can occur with exposures to high concentrations of respirable crystalline silica over a very short time period, the symptoms of acute silicosis include progressive shortness of breath, fever, cough, and weight loss. Acute silicosis can be fatal. IARC concluded that there was sufficient evidence in humans for the carcinogenicity of crystalline silica in the form of quartz (Group 1). Exposure to respirable crystalline silica can also be associated with autoimmune disease, tuberculosis, kidney damage, non-malignant respiratory disease. For further information, thr NIOSH Hazard Review- Occupational Effects of Occupational Exposure to Respirable Crystalline Silica published in April of 2002 should be reiewed.

Component Aluminum Oxide CAS# 1334-28-1: Special Remarks on Chronic Effects on Humans: May cause cancer (tumorigenic) according to animal data. No human data found. Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: Nuisance Dust. Dust may cause mechanical eye irritation. Inhalation: Nuisance Dust. Material is irritating to mucous membranes and upper respiratory tract. May cause lung injury. Ingestion: May be harmful if swallowed. Ingestion of large amounts mat cause gastrointestinal tract irritation. It is expected to be a low hazard for normal industrial handling.

SECTION 12. ECOLOGICAL INFORMATION

No data for the product itself.

Component data:

Silicon Dioxide: There is no data that suggests that crystalline silica is toxic to birds, fish, invertebrates, microorganisms or plants.

Component Aluminum Oxide CAS# 1334-28-1: Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

SECTION 13. WASTE DISPOSAL

WASTE DISPOSAL METHOD:

DISPOSE OF THE MATERIAL IN A WASTE DISPOSAL SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS.

SECTION 14. Transport Information

DOT: Not Regulated

IMO/IMDG Not regulated

SECTION 15. REGULATORY INFORMATION

No data for the product itself.

Component data:

Silicon Dioxide: risk phrases: R 48/20 Harmful – Danger of serious damage to health by prolonged exposure through inhalation. Safety Phrases: S 22 – Do not breathe dust and S 38 – In case of insufficient ventilation, wear suitable respiratory equipment

Crystalline Silica (Silicon Dioxide) is on the TSCA list. NTP list as a known human carcinogen, California proposition 65 list as a known carcinogen, Massachusetts Toxic Use Reduction Act list as toxic, Pennsylvania Worker and community right to know Act list as a hazardous substance.

Crystalline Silica (Silicon Dioxide) is on the Canada DSL – WHMIS Classification D2A

Crystalline Silica is on the Australian Inventory of Chemicals Substances list, Japan Ministry of International Trade and Industry list, Korea Existing Chemicals Inventory with registry number 9212-5667 and the Phillipines Inventory of Chemicals and Chemical Substances list.

Component Aluminum Oxide CAS# 1334-28-1: Federal and State Regulations: Illinois toxic substances disclosure to employee act:

Aluminum oxide Rhode Island RTK hazardous substances: Aluminum oxide Minnesota: Aluminum oxide Massachusetts RTK: Aluminum oxide New Jersey: Aluminum oxide New Jersey spill list: Aluminum oxide California Director's list of Hazardous Substances: Aluminum oxide TSCA 8(b) inventory: Aluminum oxide

SARA 313 toxic chemical notification and release reporting: Aluminum oxide Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances. Other Classifications: WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC): R36/38- Irritating to eyes and skin. S2- Keep out of the reach of children. S46- If swallowed, seek medical advice immediately

SECTION 16. OTHER INFORMATION

DISCLAIMER: The information Contained herein is based on the data available and is believed to be accurate, However, the manufacturer makes no warranty expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Accordingly, we assume no responsibility for injury from the use of this product.

N/A = Not Available

See Section 1 for date of preparation