



MM ® SMS Series Expansion Joint

Surface Mount Seismic Slide Plate System

The products listed below along with their corresponding Safety Data Sheets (SDS) are contained in this document:

- LokCrete Bedding Compound
 - Part A Binder
 - o Part B Activator
 - o Part C Aggregate
- Unitex Pro Poxy 300 Fast (Used to set machine screw in anchor)



Safety Data Sheet

LOKCRETE ELASTOMERIC CONCRETE PART A

SDS Number:

Revision Date: 1/3/2015

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1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

MM Systems Corporation 50 MM Way Pendergrass, GA 30567

Phone:

706-824-7500

Fax: Email: 706-824-7501

Web:

info@mmsystemscorp.com www.mmsystemscorp.com

Product Name:

LOKCRETE ELASTOMERIC CONCRETE PART A

Revision Date:

1/3/2015

Transportation emergency phone number: ChemTel Inc. (800)255-3924, +1 (813)248-0585

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HAZARDS IDENTIFICATION

NFPA: HMIS III: Health = 1, Fire = 0, Reactivity = 0 H1/F0/PH0





The product is not classified according to the Globally Harmonized System (GHS). The product is not classified according to the CLP regulation.

H226 Flammable liquid and vapour

H304 May be fatal if swallowed and enters airways



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3	COMPOSITION/INFORMATION ON INGREDIENTS
Ingredients:	
Cas # Percen	tage Chemical Name
7631-86-9 25-50%	Silica
770-35-4 <10%	2-Propanol, 1-phenoxy-
64742-95-6 <10%	Solvent naphtha, petroleum, light arom.
13463-67-7 <10%	Titanium dioxide
1317-61-9 <10%	Iron oxide (Fe304)
50-00-0 <0.1%	Formaldehyde

4 FIRST AID MEASURES

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact:

Clean with water and soap.

If skin irritation continues, consult a doctor.

After eye contact:

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

Most important symptoms and effects, both acute and delayed Gastric or intestinal disorders

Dizziness

Headache

Hazards No further relevant information available.

Indication of any immediate medical attention and special treatment needed Treat skin and mucous membrane with antihistamine and corticoid preparations.



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FIRE FIGHTING MEASURES

Autoignition Temp:

>500 °F / >260 °C

Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam,

For safety reasons unsuitable extinguishing agents: None.

5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Carbon monoxide (CO)

Under certain fire conditions, traces of other toxic gases cannot be excluded.

Advice for firefighters

Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information Cool endangered receptacles with water fog or haze,

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ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation

Environmental precautions: Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste

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HANDLING AND STORAGE

Handling Precautions:

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Information about fire - and explosion protection: No special measures required.

Storage Requirements:

Requirements to be met by storerooms and receptacles:

Avoid storage near extreme heat, ignition sources or open flame.

Store in a cool location.

Information about storage in one common storage facility.

Store away from foodstuffs.

Do not store together with oxidizing and acidic materials.

Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

Keep container tightly sealed.



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EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Ensure compliance yo all relevant OSHA regulations.

Personal Protective Equip:

General protective and hygienic measures: Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation. Use suitable respiratory protective device when aerosol or mist is formed.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the

degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

For the permanent contact gloves made of the following materials are suitable:

Butyl rubber, BR Nitrile rubber, NBR Neoprene gloves

Eye protection: Safety glasses

Body protection: Protective work clothing

Limitation and supervision of exposure into the environment

No further relevant information available.

Risk management measures

No further relevant information available.

Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

DNELs No further relevant information available. PNECs No further relevant information available.



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PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Pigmented Liquid

Physical State:

Liquid

VOC:

Auto-Ignition Temp:

35,6 g/L

>500°F / >260 °C

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STABILITY AND REACTIVITY

Stability:

No decomposition if used and stored according to specifications.

Conditions to Avoid:

Store away from oxidizing agents. Keep away from heat and direct sunlight.

Materials to Avoid:

Reacts with strong acids and alkali,

Hazardous Decomposition:

Hydrocarbons

Carbon monoxide and carbon dioxide Toxic metal oxide smoke

Hazardous Polymerization:

Will not occur.

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TOXICOLOGICAL INFORMATION

LD/LC50 values relevant for classification: 64742-95-6 Solvent naphtha (petroleum), light arom. Oral LD50 >6800 mg/kg (rat) Dermal LD50 >3400 mg/kg (rab) Inhalative LC50/4 h >10,2 mg/l (rat)

Primary irritant effect:

on the skin: Slight irritant effect on skin and mucous membranes.

on the eye: Slight irritant effect on eyes.

Sensitization: No sensitizing effects known.

Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful



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ECOLOGICAL INFORMATION

Aquatic toxicity: No further relevant information available.

Persistence and degradability The product is partially biodegradable. Significant residuals remain.

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Ecotoxical effects

Remark: Due to mechanical actions of the product (e.g. agglutinations) damages may occur.

Additional ecological information:

General notes:

This statement was deduced from products with a similar structure or composition.

The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment

PBT: Not applicable. vPvB: Not applicable.

Other adverse effects No further relevant information available.

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DISPOSAL CONSIDERATIONS

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.



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TRANSPORT INFORMATION

UN-Number DOT, ADR, ADN, IMDG, IATA UN proper shipping name DOT, ADR, ADN, IMDG, IATA Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class Packing group DOT, ADR, IMDG, IATA

Marine pollutant

Special precautions for user

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

UN "Model Regulation"

Polyester Resin Based Coating

N/A

N/A

No

Not applicable.

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REGULATORY INFORMATION

COMPONENT / (CAS/PERC) / CODES

- *Silica (7631869 25-50%) MASS, NJHS, PA, TSCA
- *2-Propanol, 1-phenoxy- (770354 <10%) TSCA
- *Solvent naphtha, petroleum, light arom. (64742956 <10%) TSCA
- *Titanium dioxide (13463677 <10%) MASS, OSHAWAC, PA, TSCA, TXAIR
- *Iron oxide (Fe304) (1317619 <10%) TSCA
- *Formaldehyde (50000 <0.1%) CERCLA, CSWHS, EHS302, EPCRAWPC, HAP, MASS, NJEHS, NJHS, NRC, OSHAHTS, OSHAPSM, PA, PROP65, SARA313, TOXICRCRA, TSCA, TXAIR, TXHWL

REGULATORY KEY DESCRIPTIONS

MASS = MA Massachusetts Hazardous Substances List NJHS = NJ Right-to-Know Hazardous Substances

PA = PA Right-To-Know List of Hazardous Substances

TSCA = Toxic Substances Control Act

OSHAWAC = OSHA Workplace Air Contaminants

TXAIR = TX Air Contaminants with Health Effects Screening Level

CERCLA = Superfund clean up substance

CSWHS = Clean Water Act Hazardous substances

EHS302 = Extremely Hazardous Substance

EPCRAWPC = EPCRA Water Priority Chemicals

HAP = Hazardous Air Pollutants

NJEHS = NJ Extraordinarily Hazardous Substances

NRC = Nationally Recognized Carcinogens

OSHAHTS = OSHA Hazardous and Toxic Substances

OSHAPSM = OSHA Chemicals Requiring process safety management

PROP65 = CA Prop 65

SARA313 = SARA 313 Title III Toxic Chemicals

TOXICRCRA = RCRA Toxic Hazardous Wastes (U-List)

TXHWL = TX Hazardous Waste List



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OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

R10 Flammable.

R65 Harmful: may cause lung damage if swallowed.



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PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

MM Systems Corporation 50 MM Way Pendergrass, GA 30567

Phone:

706-824-7500

Fax:

706-824-7501

Email:

info@mmsystemscorp.com

Web:

www.mmsystemscorp.com

Product Name:

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Revision Date:

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Transportation emergency phone number: ChemTel Inc. (800)255-3924, +1 (813)248-0585

2 HAZARDS IDENTIFICATION

NFPA: HMIS III: Health = 2, Fire = 1, Reactivity = 1 H*2/F1/PH1





GHS Signal Word: DANGER

GHS Hazard Pictograms:





GHS Classifications:

Health, Skin corrosion/irritation, 2

Health, Respiratory or skin sensitization, 1 Skin Health, Serious Eye Damage/Eye Irritation, 2 A

Health, Acute toxicity, 4 Inhalation



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Health, Respiratory or skin sensitization, 1 Respiratory

Health, Specific target organ toxicity - Single exposure, 3

Health, Carcinogenicity, 2

Health, Specific target organ toxicity - Repeated exposure, 2

GHS Phrases:

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H332 - Harmful if inhaled

H334 - May cause allergy or asthma symptoms of breathing difficulties if inhaled

H335 - May cause respiratory irritation

H351 - Suspected of causing cancer

H373 - May cause damage to organs through prolonged or repeated exposure

GHS Precautionary Statements:

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

P273 - Avoid release to the environment.

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

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

P370 - In case of fire:_

P378 - Use CO2, foam, extinguishing powder for extinction

P403+233 - Store in a well ventilated place. Keep container tightly closed.

P501 - Dispose of contents/container in accordance with local regulation

Persons who suffer from hypersensitivity of the respiratory tract (e.g. asthmatics and chronic bronchitis sufferers) should avoid handling this product. Symptoms affecting the respiratory tract can also occur several hours after overexposure. Dust, vapors and aerosols are the primary risk to the respiratory tract.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas # Percentage	Chemical Name
101-68-8 25-50%	4,4'-Methylenediphenyl diisocyanate
9016-87-9 25-50%	Isocyanic acid, polymethylenepolyphenylene ester
26447-40-5 10-20%	Benzene, 1,1'-methylenebis[isocyanato-



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FIRST AID MEASURES

Inhalation:

Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for

transportation.

Skin Contact:

Immediately wash with water and soap and rinse thoroughly. Immediately remove any clothing soiled by the product.If

skin irritation continues, consult a doctor,

Eye Contact:

Protect unharmed eye. Rinse opened eye for several minutes under running water. Remove contact lenses if worn, if

possible. Rinse opened eye for several minutes under running water. Then consult a doctor.

Ingestion:

Rinse out mouth and then drink plenty of water. Do not induce vomiting; call for medical help immediately,

Most important symptoms and effects, both acute and delayed

Asthma attacks
Allergic reactions
Breathing difficulty
Coughing

Hazards

Danger of impaired breathing.

Danger of pulmonary oedema.

Danger of pneumonia. Danger of convulsion.

Danger of disturbed cardiac rhythm.

Indication of any immediate medical attention and special treatment needed

Contains isocyanates. Consult literature for specific antidotes.

Medical supervision for at least 48 hours.

Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.

Monitor circulation, possible shock treatment.

Later observation for pneumonia and pulmonary oedema.

If necessary oxygen respiration treatment.

Treat skin and mucous membrane with antihistamine and corticoid preparations.



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FIRE FIGHTING MEASURES

Flash Point:

226 °C

Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water.

Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Hydrogen cyanide (HCN)

Carbon monoxide (CO)

Under certain fire conditions, traces of other toxic gases cannot be excluded.

Advice for firefighters

Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information Cool endangered receptacles with water spray.

Fire in vicinity poses risk of pressure build-up and rupture. Containers at risk from fire should be cooled with water and, if possible, removed from the danger area.

Advice for fire-fighters:

During fire-fighting respirator with independent air-supply and airtight garment is required.

Do not allow contaminated extinguishing water to enter the soil, ground-water or surface waters.

Unsuitable extinguishing media: High volume water jet

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ACCIDENTAL RELEASE MEASURES

Isolate area and prevent access.

Remove persons from danger area.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Personal precautions, protective equipment and emergency procedures

Use respiratory protective device against the effects of fumes/dust/aerosol.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to regulations.

Ensure adequate ventilation.

Additional Spill Procedures/Neutralization: Neutralization solutions:

- (1) Colorimetric Laboratories Inc. (CLI) decontamination solution.
- (2) A mixture of 75% water, 20% non-ionic surfactant (e.g. Plurafac SL-62, Tergitol TMN-10) and 5% npropanol.
- (3) A mixture of 80% water, 20% non-ionic surfactant (e.g. Plurafac SL-62, Tergitol TMN-10).
- (4) A mixture of 90% water, 3-8% ammonium hydroxide or concentrated ammonia, and 2% liquid detergent.



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7 HANDLING AND STORAGE

Handling Precautions:

Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Information about fire - and explosion protection: Keep ignition sources away - Do not smoke. Keep respiratory protective device available.

Storage Requirements:

Requirements to be met by storerooms and receptacles:

Provide ventilation for receptacles.

Store in a cool location.

Protect from humidity and water.

Avoid storage near extreme heat, ignition sources or open flame.

Information about storage in one common storage facility:

Store away from water. Store away from foodstuffs.

Do not store together with oxidizing and acidic materials.

Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

Store receptacle in a well ventilated area. Protect from humidity and water. Protect from heat and direct sunlight.

Keep container tightly sealed.



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EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Ensure compliance yo all relevant OSHA regulations.

Personal Protective Equip:

General protective and hygienic measures: Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols. Avoid contact with the eyes and skin.

Respiratory protection:

An air-supplied respirator must be worn during spray applications, during long-term (over 1 hour) exposures when the product is heated or in environments of high concentrations near the TLV, an air-purifying respirator equipped with organic cartridges or canisters and dust filters can be used. However, due to the poor warning properties of this product, proper fit and timely replacement of filter elements must be ensured. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

For the permanent contact gloves made of the following materials are suitable:

Butyl rubber, BR Nitrile rubber, NBR

Eye protection:

Contact lenses should not be worn.

Safety glasses with side shields or face shield strongly suggested.

Body protection: Use protective suit.

Limitation and supervision of exposure into the environment

No further relevant information available.

Risk management measures

Organizational measures should be in place for all activities involving this product.



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Control parameters

Ingredients with limit values that require monitoring at the workplace:

101-68-8 4,4'-methylenediphenyl diisocyanate

PEL (USA) Short-term value: C 0,2 mg/m³, C 0,02 ppm

REL (USA) Short-term value: C 0,2* mg/m³, C 0,02* ppm, Long-term value: 0,05 mg/m³, 0,005 ppm, *10-min

TLV (USA) 0,051 mg/m³, 0,005 ppm

EL (Canada) Short-term value: C 0,01 ppm, Long-term value: 0,005 ppm, Skin; S

EV (Canada) 0,005 ppm

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Boiling Point:

Clear Brown Liquid

Physical State: Spec Grav./Density: Liquid

1.198 kg/m3

208 °C (406 °F)

Odor:

Slightl characteristic

Flash Point: Auto-Ignition Temp: 226 °C

208 °C (406 °F)

10 STABILITY AND REACTIVITY

Stability:

No decomposition if used and stored according to specifications.

Conditions to Avoid:

Keep ignition sources away - Do not smoke.

Moisture.

Keep away from heat and direct sunlight.

Store away from oxidizing agents.

Materials to Avoid:

Reacts with water.

Reacts with oxidizing agents.

Reacts with alkali, amines and strong acids. Contact with acids releases toxic gases.

Reacts with peroxides and other radical forming substances.

Reacts with certain metals.

Hazardous Decomposition:

Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

Hydrogen cyanide (prussic acid) Poisonous gases/vapours

Hazardous Polymerization:

Polymerises at about 200 °C with evolution of CO2.



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TOXICOLOGICAL INFORMATION

LD/LC50 values relevant for classification: 101-68-8 4,4'-methylenediphenyl diisocyanate Oral LD50 2200 mg/kg (mouse)

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization:

Sensitization possible through inhalation.

Sensitization possible through skin contact.

Subacute to chronic toxicity: Toxic and/or corrosive effects may be delayed up to 24 hours.

Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful Irritant

Acute effects (acute toxicity, irritation and corrosivity):

In addition to local irritant manifestations, there is a narcotic effect when inhaling high concentrations, with the danger of central respiratory arrest.

Sensitisation: Sensitization possible by inhalation and/or dermal contact.

Repeated dose toxicity:

May cause damage to organs through prolonged or repeated exposure.

Repeated exposures may result in skin and/or respiratory sensitivity.



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ECOLOGICAL INFORMATION

Aquatic toxicity: The material is harmful to the environment.

Persistence and degradability The product is partly biodegradale. Significant residuals remain.

Bioaccumulative potential Does not accumulate in organisms

Mobility in soil No further relevant information available.

Ecotoxical effects: Remark: Harmful to fish

Additional ecological information:

General notes:

This statement was deduced from the properties of the single components.

Avoid transfer into the environment.

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the

environment can not be excluded.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Harmful to aquatic organisms.

Results of PBT and vPvB assessment

PBT: Not applicable. vPvB: Not applicable.

Other adverse effects No further relevant information available.

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DISPOSAL CONSIDERATIONS

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

Can be disposed of with household garbage with prior chemical-physical or biological treatment following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agents: Solvent naphtha

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TRANSPORT INFORMATION

UN-Number DOT, ADR, ADN, IMDG, IATA

UN proper shipping name DOT, ADR, ADN, IMDG, IATA

Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class

Packing group DOT, ADR, IMDG, IATA

Marine pollutant

Special precautions for user

N/A

Aromatic Isocyanate Prepolymer

N/A

N/A

No

Not applicable.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

UN "Model Regulation"



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REGULATORY INFORMATION

COMPONENT / (CAS/PERC) / CODES

*4,4'-Methylenediphenyl diisocyanate (101688 25-50%) CERCLA, HAP, MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

*Isocyanic acid, polymethylenepolyphenylene ester (9016879 25-50%) SARA313, TSCA

*Benzene, 1,1'-methylenebis[isocyanato- (26447405 10-20%) TSCA

REGULATORY KEY DESCRIPTIONS

CERCLA = Superfund clean up substance HAP = Hazardous Air Pollutants

 $ext{MASS} = ext{MA}$ Massachusetts Hazardous Substances List $ext{NJHS} = ext{NJ}$ Right-to-Know Hazardous Substances

OSHAWAC = OSHA Workplace Air Contaminants

PA = PA Right-To-Know List of Hazardous Substances

SARA313 = SARA 313 Title III Toxic Chemicals

TSCA = Toxic Substances Control Act

TXAIR = TX Air Contaminants with Health Effects Screening Level

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OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

SAFETY DATA SHEET

CONTACT INFORMATION

ADDRESS: MM Systems Corporation

50 MM Way, P.O. Box 98 Pendergrass, GA 30567

INFORMATION TELEPHONE: Toll Free Domestic: 800-241-3460 International 1-706-824-7500

For Chemical Emergency

Spill, Leak, Fire, Exposure, or Accident

Call CHEMTREC Day or Night

Within USA and Canada: 800-424-9300

Outside USA and Canada: +1 703-527-3887 (Collect Calls Accepted)

I. PRODUCT IDENTIFICATION

PRODUCT NAME:

LOKCRETE® ELASTOMERIC CONCRETE AGGREGATE PART C

CHEMICAL FAMILY: Cristalline Silica

OSHA HAZARD COMMUNICATION:

May cause eye and skin irritation. Harmful if inhaled. May cause lung

damage or possibly cancer. May cause silicosis with prolonged and

repeated overexposure to dust.

II. HAZARDOUS INGREDIENTS

COMPONENTS: CAS No: PEL (OSHA) TLV (ACGIH)

Silica Sand, crystalline 14808-60-7 10 0.05 mg/M3 (respirable)

%Si0 2+2

Other Limits: National Institute for Occupational Safety and Health (NIOSH). Recommended standard maximum permissible concentration = 0.05 mg/M3 (respirable free silica) as determined by a full-shift sample up to 10-hour working day, 40 hour work week.

III. PHYSICAL / CHEMICAL CHARACTERISTICS

BOILING POINT: N/A SPECIFIC GRAVITY: 2.76

VAPOR PRESSURE: N/A MELTING POINT: N/A

VAPOR DENSITY: N/A EVAPORATION RATE: N/A

SOLUBILITY IN WATER: Zero APPEARANCE AND ODOR: Angular, White, Buff

IV. FIRE & EXPLOSION HAZARD DATA

FLASH POINT: No Flash Point.

FLAMMABLE LIMITS: None LEL: N/A UEL: N/A

EXTINGUISHING MEDIA: None Required; Sand may be used as extinguishing media for Class A &

Class B fires

SPECIAL FIRE FIGHTING PROCEDURES: None Required

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

V. REACTIVITY DATA

STABLE: N/A UNSTABLE: N/A

CONDITIONS TO AVOID: None

INCOMPATIBILITY: Contact with powerful oxidizing agents such as flouirne, chlorine, trifluoride, manganese trioxide, oxygen difluoride, may cause fires

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas – silicon tetrafluoride

HAZARDOUS POLYMERIZATION - MAY OCCUR: N/A WILL NOT OCCUR: N/A

CONDITIONS TO AVOID: None

VI. HEALTH HAZARD DATA

ROUTES OF ENTRY – INHALATION Yes SKIN N/A INGESTION N/A

HEALTH HAZARDS: Health = N/A Flammability = N/A Reactivity = N/A

CARCINOGENCY: NTP: Known carcinogen IARC MONOGRAPHS: N/A

OSHA REGULATED: Not listed as a carcinogen

SIGNS & SYMPTOMS OF EXPOSURE: Undue breathlessness, wheezing, cough, and sputum

production

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pulmonary function may be reduced by inhalation of respirable crystalline silica.

EMERGENCY & FIRST AID PROCEDURES: For early

EMERGENCY & FIRST AID PROCEDURES: For sand in eyes, wash immediately with water. If irritation persists, seek medical attention. For gross inhalation, remove person immediately to fresh air, give artificial respiration as needed, seek medical attention as needed.

VII. PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: No special steps

WASTE DISPOSAL METHOD: The packaging and material may be land filled. This product is not classified as a hazardous waster under RCRA or CERCLA

PRECAUTIONS TO BE TAKEN IN STORAGE & HANDLING: N/A

OTHER PRECAUTIONS: Blast area must be kept clear due to respirable silica danger

VIII. CONTROL MEASURES

RESPIRATORY PROTECTION: Respirator requirements are based on exposure level as shown below:

5 x PEL or less: Any dust respirator

10 x PEL or less: Any dust respirator, except single-use or quarter mask respirator. Any fume respirator or high efficiency particulate filter respirator. 50 x PEL or less: A high efficiency particulate filter respirator with a full face-piece. 500 x PEL or less: A powered air-purifying respirator with a high efficiency particulate filter. A Type C supplied-air respirator operated in pressure-demand or other positive pressure or continuous-flow mode. Greater than 500 x PEL or entry and escape from unknown concentrations: Self-contained breathing apparatus with a full face-piece operated pressure-demand or other positive pressure mode. A combination respirator that includes a Type C supplied-air respirator with a full face-piece operated in pressure-demand or other positive pressure continuous-flow mode and an auxiliary self-contained breathing apparatus operated in pressure demand or other positive pressure mode.

VENTILATION: REQUIRED LOCAL EXHAUST: Exhaust into bag house

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Must use OSHA approved respirator & air fed hoods

WORK / HYGIEN PRACTICES: Warn employees and/or customers of the hazards and required OSHA precautions associated with this product.

Printing date 01/22/2016 Reviewed on 01/22/2016

1 Identification

- · Product identifier
- · Trade name: Pro-PoxyTM 300 Fast Part A
- · Article number: 87-140177A
- · Application of the substance / the mixture
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Unitex® 3101 Gardner

Kansas city, MO 64120

Tel: (800) 821-5846 Fax: (816) 483-3149

Emergency Telephone Number: Use only in the event of an emergency involving a spill, leak, fire, exposure, or accident involving chemicals. Within the U.S., Canada, or the U.S. Virgin Islands, call ChemTrec at (800) 424-9300, 24 hours a day. Or, outside these areas, call (703) 527-3887. Collect calls are accepted.

· Information department: Environmental, Health, and Safety department.

2 Hazard(s) identification

· Classification of the substance or mixture

Eye Irrit. 2A H319 Causes serious eye irritation.

Carc. 2 H351 Suspected of causing cancer.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms





GHS07

GHS08

- · Signal word Warning
- · Hazard-determining components of labeling:

Talc (*Mg3H2*(*SiO3*)4)

· Hazard statements

Causes serious eye irritation.

Suspected of causing cancer.

· Precautionary statements

Wear eye protection / face protection.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Store locked up.

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

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 1 Fire = 1Reactivity = 0

(Contd. on page 2)

Printing date 01/22/2016 Reviewed on 01/22/2016

Trade name: Pro-PoxyTM 300 Fast - Part A

· HMIS-ratings (scale 0 - 4)

(Contd. of page 1)



- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · **Description:** Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components:

14807-96-6 Talc (Mg3H2(SiO3)4)

≤ 10%

· Additional information: For the wording of the listed risk phrases refer to section 16.

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

In the event of persistent symptoms recieve medical treatment.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Immediately move exposed person to fresh air. If breathing difficulty persists or develops get prompt medical attention.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing:

Seek immediate medical advice.

Seek medical treatment.

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

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· Special hazards arising from the substance or mixture No further relevant information available.

(Contd. on page 3)

Printing date 01/22/2016 Reviewed on 01/22/2016

Trade name: Pro-PoxyTM 300 Fast - Part A

(Contd. of page 2)

- · Advice for firefighters
- · Protective equipment:

Because fire may produce thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

- · Environmental precautions: Do not allow product to reach sewage system or any water course.
- · Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Wear appropriate personal protective clothing to prevent eye and skin contact. Avoid breathing vapors or mists of this product. Use with adequate ventilation. Do not take internally.

- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage: cool and dry
- Requirements to be met by storerooms and receptacles: Store in a cool dry location.
- · Information about storage in one common storage facility: Store away from incompatible materials.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

(Contd. on page 4)

Printing date 01/22/2016 Reviewed on 01/22/2016

Trade name: Pro-PoxyTM 300 Fast - Part A

(Contd. of page 3)

· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· Eye protection: Wear appropriate eye protection to prevent eye contact.

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9 Physical	and	\boldsymbol{c}	nomical	nro	nortios
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Information on basic physical and General Information	ononwow proportios
Appearance:	
Form:	Liquid
Color:	Clear
Odor:	Mild
Odor threshold:	Not determined.
pH-value:	Not determined.
	nor actermatea.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	> 93 °C (> 199 °F)
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density at 20 °C (68 °F):	1.2 g/cm³ (10.014 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
Partition coefficient (n-octanol/wat	er): Not determined.
Viscosity:	
<i>Dynamic at 20 °C (68 °F):</i>	1000000 mPas
Kinematic:	Not determined.

(Contd. on page 5)

Printing date 01/22/2016 Reviewed on 01/22/2016

Trade name: Pro-PoxyTM 300 Fast - Part A

		(Contd. of page 4)
· Solvent content: Organic solvents:	0.0 %	
Solids content: · Other information	100.0 % No further relevant information available.	
· Volatile Organic Compounds:	Not determined	

10 Stability and reactivity

- · Reactivity No decomposition if stored and applied as directed.
- · Chemical stability No decomposition if stored and applied as directed
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions Reacts with acids, alkalis and oxidizing agents.
- · Conditions to avoid Keep away from heat and sources of ignition.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: Carbon monoxide and carbon dioxide

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · LD/LC50 values that are relevant for classification:

25085-99-8 Diglycidyl ether of bisphenol A homopolymer

 Oral
 LD50
 5000 mg/kg (rat)

 Dermal
 LD50
 20000 mg/kg (rabbit)

- · Primary irritant effect:
- · on the skin: May cause skin irritation.
- · on the eye:

Strong irritant with the danger of severe eye injury.

Irritating effect.

- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Irritant

· Carcinogenic categories

14807-96-6 Talc (Mg3H2(SiO3)4)

2B

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

(Contd. on page 6)

Printing date 01/22/2016 Reviewed on 01/22/2016

Trade name: Pro-PoxyTM 300 Fast - Part A

(Contd. of page 5)

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water
- · Results of PBT and vPvB assessment
- · **PBT**: Not applicable.
- \cdot **vPvB**: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of as normal garbage. Do not allow product to reach sewage system.

It is the generator's responsibility to determine if the waste meets applicable definitions of hazardous waste. State and local regulations may differ from federal disposal regulations. Dispose of waste material according to local, state, federal, and provincial environmental regulations.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to Federal, State, and Local regulations.

TINI NI 1	
· UN-Number · DOT, ADR, ADN, IATA · IMDG	Not Regulated UN3082
· UN proper shipping name · DOT, ADR, ADN, IATA · IMDG	Not Regulated ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S. (epoxy resin), MARINE POLLUTANT
· Transport hazard class(es)	
· DOT, ADR, ADN, IATA · Class	Not Regulated
· IMDG	
· Class · Label	9 Miscellaneous dangerous substances and articles 9
· Packing group · DOT, ADR, IMDG, IATA	III

(Contd. on page 7)

Printing date 01/22/2016 Reviewed on 01/22/2016

Trade name: Pro-PoxyTM 300 Fast - Part A

(Contd. of page 6) · Environmental hazards: · Marine pollutant: Symbol (fish and tree) · Special precautions for user · EMS Number: F-A,S-F· Stowage Category · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. · Transport/Additional information: $\cdot DOT$ · Remarks: Not Regulated for Transport. $\cdot ADR$ · Remarks: Not Regulated for Transport. · U.S. Domestic Ground Shipments: Same as listed for Standard Shipments above. · U.S. Domestic Ground Non-Bulk (119 gal or less per container) Shipments: Same as listed for Standard Shipments above. · Emergency Response Guide (ERG) Number: Not determine · UN "Model Regulation": Not Regulated

15 Regulatory information

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

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

This product may contain 1 or more toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR part 372. If so, the chemicals are listed below.

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

- · Proposition 65
- · Chemicals known to the State of California (Prop. 65) to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

- · Cancerogenity categories
- · EPA (Environmental Protection Agency)

None of the ingredients is listed.

(Contd. on page 8)

Printing date 01/22/2016 Reviewed on 01/22/2016

Trade name: Pro-PoxyTM 300 Fast - Part A

(Contd. of page 7)

· TLV (Threshold Limit Value established by ACGIH)

14807-96-6 Talc (Mg3H2(SiO3)4)

A4

· MAK (German Maximum Workplace Concentration)

14807-96-6 Talc (Mg3H2(SiO3)4)

3B

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

None of the ingredients is listed.

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms





GHS08

GHS07

· Signal word Warning

· Hazard-determining components of labeling:

Talc (*Mg3H2*(*SiO3*)4)

· Hazard statements

Causes serious eye irritation.

Suspected of causing cancer.

· Precautionary statements

Wear eye protection / face protection.

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

IF exposed or concerned: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Store locked up.

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

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

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: Environmental, Health & Safety Department
- · Contact: Environmental, Health & Safety Manager
- · Date of preparation / last revision 01/22/2016 / 173
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

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Printing date 01/22/2016 Reviewed on 01/22/2016

Trade name: Pro-PoxyTM 300 Fast - Part A

(Contd. of page 8)

PEL: Permissible Exposure Limit REL: Recommended Exposure Limit

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A Carc. 2: Carcinogenicity, Hazard Category 2

Printing date 03/14/2016 Reviewed on 03/14/2016

1 Identification

- · Product identifier
- · Trade name: Pro-PoxyTM 300 Fast Part B
- · Article number: 87-140177B
- · Application of the substance / the mixture
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Unitex® 3101 Gardner

Kansas city, MO 64120

Tel: (800) 821-5846 Fax: (816) 483-3149

Emergency Telephone Number: Use only in the event of an emergency involving a spill, leak, fire, exposure, or accident involving chemicals. Within the U.S., Canada, or the U.S. Virgin Islands, call ChemTrec at (800) 424-9300, 24 hours a day. Or, outside these areas, call (703) 527-3887. Collect calls are accepted.

· Information department: Environmental, Health, and Safety department.

2 Hazard(s) identification

· Classification of the substance or mixture

Acute Tox. 4 H332 Harmful if inhaled.

Skin Corr. 1C H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS05

GHS07

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

m-phenylenebis(*methylamine*)

nonylphenol

cyclohex-1,2-ylenediamine

hexamethylenediamine

· Hazard statements

Harmful if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of damaging fertility or the unborn child.

· Precautionary statements

Do not breathe dusts or mists.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Store locked up.

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

(Contd. on page 2)

Printing date 03/14/2016 Reviewed on 03/14/2016

Trade name: Pro-PoxyTM 300 Fast - Part B

(Contd. of page 1)

- · Classification system:
- · NFPA ratings (scale 0 4)



· HMIS-ratings (scale 0 - 4)



- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:			
1477-55-0	m-phenylenebis(methylamine)	10-25%	
25154-52-3	nonylphenol	10-25%	
694-83-7	cyclohex-1,2-ylenediamine	≤10%	
	hexamethylenediamine	≤5%	
	tetramethylenediamine	≤1%	
156-87-6	3-aminopropan-1-ol	≤1%	

[·] Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

In the event of persistent symptoms recieve medical treatment.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

Immediately move exposed person to fresh air. If breathing difficulty persists or develops get prompt medical attention.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Immediately rinse with water.

If skin irritation continues, consult a doctor.

- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing:

Immediately call a doctor.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

(Contd. on page 3)

Printing date 03/14/2016 Reviewed on 03/14/2016

Trade name: Pro-PoxyTM 300 Fast - Part B

(Contd. of page 2)

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

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment:

Because fire may produce thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

· Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Wear appropriate personal protective clothing to prevent eye and skin contact. Avoid breathing vapors or mists of this product. Use with adequate ventilation. Do not take internally.

- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: Store in a cool dry location.
- · Information about storage in one common storage facility: Store away from incompatible materials.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

(Contd. on page 4)

Printing date 03/14/2016 Reviewed on 03/14/2016

Trade name: Pro-PoxyTM 300 Fast - Part B

(Contd. of page 3)

· Control parameters

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

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

1477-55-0 m-phenylenebis(methylamine)

REL Ceiling limit value: 0.1 mg/m³

Skin

TLV Ceiling limit value: 0.1 mg/m³

Skin

124-09-4 hexamethylenediamine

TLV Long-term value: 2.3 mg/m³, 0.5 ppm

WEEL Long-term value: 1 ppm

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· Eye protection: Wear appropriate eye protection to prevent eye contact.

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Liquid
Color: Grey

Odor: Distinctive

Odor threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Undetermined.

• Flash point: $>94 \,^{\circ}C \,(>201 \,^{\circ}F)$

(Contd. on page 5)

Printing date 03/14/2016 Reviewed on 03/14/2016

Trade name: Pro-PoxyTM 300 Fast - Part B

		(Contd. of page 4
Flammability (solid, gaseous):	Not applicable.	
Ignition temperature:	370 °C (698 °F)	
Decomposition temperature:	Not determined.	
Auto igniting:	Product is not selfigniting.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits:		
Lower:	1.0 Vol %	
Upper:	0.0~Vol~%	
Vapor pressure:	Not determined.	
Density at 20 °C (68 °F):	1.776 g/cm³ (14.821 lbs/gal)	
Relative density	Not determined.	
Vapor density	Not determined.	
Evaporation rate	Not determined.	
Solubility in / Miscibility with		
Water:	Not miscible or difficult to mix.	
Partition coefficient (n-octanol/wa	ter): Not determined.	
Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Solvent content:		
Organic solvents:	0.0 %	
Solids content:	100.0 %	
Other information	No further relevant information available.	
Volatile Organic Compounds:	Not determined	

10 Stability and reactivity

- · Reactivity No decomposition if stored and applied as directed.
- · Chemical stability No decomposition if stored and applied as directed
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions Reacts with acids, alkalis and oxidizing agents.
- · Conditions to avoid Keep away from heat and sources of ignition.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Nitrogen oxides

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11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC50 values that are relevant for classification:				
1477-55-0 m-phenylenebis(methylamine)				
Oral	LD50	1040 mg/kg (rat)		
Inhalative	LC50/4 h	2.4 mg/l (rat)		
25154-52-3 nonylphenol				
Oral	LD50	D50 1620 mg/kg (rat)		
124-09-4 hexamethylenediamine				
Oral	LD50	750 mg/kg (rat)		
Dermal	LD50	1110 mg/kg (rabbit)		

- · Primary irritant effect:
- · on the skin: May cause skin irritation.
- · on the eye: Strong caustic effect.
- · Sensitization: Sensitization possible through skin contact.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Ecotoxical effects:
- · Remark: Toxic for fish
- · Additional ecological information:
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

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

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of as normal garbage. Do not allow product to reach sewage system.

It is the generator's responsibility to determine if the waste meets applicable definitions of hazardous waste. State and local regulations may differ from federal disposal regulations. Dispose of waste material according to local, state, federal, and provincial environmental regulations.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to Federal, State, and Local regulations.

14 Transport information

· UN-Number

· DOT, ADR, IMDG, IATA

UN1760

· UN proper shipping name

 \cdot DOT, IATA

 $\cdot ADR$

· IMDG

Corrosive liquids, n.o.s. (nonylphenol) 1760 Corrosive liquids, n.o.s. (nonylphenol)

CORROSIVE LIQUID, N.O.S. (nonylphenol), MARINE

POLLUTANT

- · Transport hazard class(es)
- $\cdot DOT$



· Class · Label 8 Corrosive substances

· ADR, IMDG





· Class

8 Corrosive substances

· Label

 \cdot IATA



· Class

8 Corrosive substances

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	(Contd. of page
Label	8
Packing group DOT, ADR, IMDG, IATA	III
Environmental hazards:	Product contains environmentally hazardous substances
Marine pollutant: Special marking (ADR):	nonylphenol Yes Symbol (fish and tree) Symbol (fish and tree)
Special precautions for user Danger code (Kemler): EMS Number: Stowage Category	Warning: Corrosive substances 80 F-A,S-B A
Stowage Category Stowage Code	SW2 Clear of living quarters.
Transport in bulk according to Annex II of MARPOL73/ and the IBC Code	78 Not applicable.
Transport/Additional information:	
DOT Remarks:	Add "Marine Pollutant" to end of proper shipping name shipping in a bulk container (>119 gallons).
ADR Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
U.S. Domestic Ground Shipments: U.S. Domestic Ground Non-Bulk (119 gal or less per container) Shipments:	Same as listed for Standard Shipments above. Same as listed for Standard Shipments above.
Emergency Response Guide (ERG) Number:	Not determine
IMDG Limited quantities (LQ) Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN 1760 CORROSIVE LIQUIDS, N.O.S., 8, III

15 Regulatory information

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

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

This product may contain 1 or more toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR part 372. If so, the chemicals are listed below.

25154-52-3 nonylphenol 10-25%

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

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· Proposition 65

· Chemicals known to the State of California (Prop. 65) to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Cancerogenity categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

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

None of the ingredients is listed.

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS05

GHS07

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

m-phenylenebis(*methylamine*)

nonylphenol

cyclohex-1,2-ylenediamine

hexamethylenediamine

· Hazard statements

Harmful if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of damaging fertility or the unborn child.

· Precautionary statements

Do not breathe dusts or mists.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Store locked up.

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

- · National regulations:
- · Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

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

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: Environmental, Health & Safety Department
- · Contact: Environmental, Health & Safety Manager
- · Date of preparation / last revision 03/14/2016 / 239
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Repr. 2: Reproductive toxicity, Hazard Category 2