



Product: DERBIGUM FS Surface - Component A

MSDS Date: 6-30-10
Product Name: DERBIGUM FS Surface- Component A
Manufacturer: DERBIGUM Americas, Inc.

I. Product and Company Description

DERBIGUM Americas, Inc.
4821 Chelsea Ave.
Kansas City, MO 64130

Emergency Phone Number:
(800) 424-9300 CHEMTREC

For Product Information:
(800) 541-5455

Product Description:
Colored PU coating

II. Chemical Composition

Component	CAS#	%Composition
Aliphatic Hydrocarbons	64742-82-1	<0.5
Naptha (petroleum), hydrotreated light	64742-49-0	<0.5

III. Hazards Identification

A. Emergency Overview:

Physical Appearance and Odor:
Viscous liquid with characteristic odor.

B. Potential Health Effects:

Acute Eye:
Contact may cause irritation, redness and pain.

Acute Skin:
May cause irritation.

Acute Inhalation:
Inhalation may cause irritation

Acute ingestion:
Harmful or fatal if swallowed.

Chronic effects:
None



Product: DERBIGUM FS Surface - Component A

IV. First Aid Measures

First Aid Measures for Accidental Exposure:

Eye Exposure:

Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

Skin Exposure:

Wash affected area with soap and water; remove contaminated clothing and wash before reuse. Get medical attention if irritation develops or persists.

Inhalation:

Remove to fresh air. Seek medical attention if respiratory irritation develops or if breathing becomes difficult.

Ingestion:

Seek medical attention immediately. Never give anything by mouth to an unconscious person.

V. Fire Fighting Measures

Fire Hazard Data:

Flash Point: ND

Ignition Temperature: ND

Flammability Limits (vol/vol%): Lower: 0.8 Upper: ND

Extinguishing Media:

CO₂, extinguishing powder, waterspray
Fight larger fires with alcohol-resistant foam.

Special Fire Fighting Procedures:

If excessive fumes or smoke is encountered, wear self-contained breathing apparatus and full protective equipment.

Unusual Fire and Explosion Hazards:

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapor in air and avoid vapor concentration higher than the occupational exposure limits.

Hazardous Decomposition Materials (Under Fire Conditions):

Oxides of carbon and nitrogen, smoke



Product: DERBIGUM FS Surface - Component A

VI. Accidental Release Measures

Cleanup and Disposal of Spill:

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal. Use protective measures as outlined in Section VIII below. Avoid contact with eyes, skin or clothing.

Dispose of materials according to the applicable Federal, State, or local regulations.

VII. Handling and Storage

Handling:

Preparation may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear anti-static footwear and clothing and floors should be of the conducting type. Keep container tightly closed. Isolate from sources of heat, sparks and open flame. No sparking tools should be used. Avoid skin and eye contact. Avoid inhalation of dust, particulates and spray mist arising from the application of this preparation. Avoid inhalation of dust from sanding. Smoking, eating and drinking should be prohibited in application area. For personal protection see Section 8.

Storage:

Observe label precautions. Store between 5 and 30°C in a dry, well ventilated place away from sources of heat and direct sunlight. Keep away from sources of ignition. Keep away from oxidizing agents, from strongly alkaline and strongly acid materials. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

VIII. Exposure Controls / Personal Protection

Exposure Guidelines:

Component	Exposure limits		
	ACGIH	NIOSH	OSHA-PELs
Aliphatic Hydrocarbons	ND	ND	ND
Naptha (petroleum), hydrotreated light	ND	ND	ND

Engineering Controls:

Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the MSDS.

Respiratory Protection:

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or EN approved respirator when necessary.

Eye / Face Protection:

Wear appropriate safety glasses with side shields or chemical goggles as described by OSHA's eye and face protection regulations in 29CFR 1910.133 or European Standard EN166.

Skin Protection:

Chemical resistant gloves recommended, such as neoprene or nitrile rubber. Body covering clothing should be utilized.



Product: DERBIGUM FS Surface - Component A

IX. Physical and Chemical Properties

Physical Appearance:	Viscous liquid
Odor:	None
pH:	ND
Specific Gravity:	1.45
Water Solubility:	partially soluble
Melting Point Range:	ND
Boiling Point:	ND
Vapor Pressure:	ND
Vapor Density:	ND
%Volatile by volume:	ND
Evaporation Rate:	ND

X. Stability and Reactivity

Chemical Stability:

Stable under standard use and storage conditions.

Conditions to Avoid:

High temperatures

Materials / Chemicals to be Avoided:

Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Hazardous Decomposition Products:

Oxides of carbon and nitrogen, smoke.

Hazardous Polymerization:

Should not occur.

XI. Toxicological Information

Acute Oral Toxicity:

ND

Acute Dermal Toxicity:

ND

Acute Inhalation Toxicity:

ND

Chronic Toxicity:

ND



Product: DERBIGUM FS Surface - Component A

XII. Ecological Information

Ecotoxicological Information:

Degradation: Not Determined
 Accumulation: Not Determined
 Fish-Toxicity Not Determined

Chemical Fate Information:

Not Determined

XIII. Disposal Considerations

Waste Disposal Method:

Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations.

Container Handling and Disposal:

Dispose of container and unused contents in accordance with federal, state, and local regulations.

XIV. Transportation Information

US Department of Transportation Shipping Name:

US Department of Transportation	Proper Shipping Name	Not Regulated
	Hazard Class	Not Regulated
	ID Number	Not Regulated
	Packaging Group	Not Regulated

XV. Regulatory Information

Federal Regulations:

SARA Title III Hazard Classes:

Fire Hazard: YES
 Reactive Hazard: NO
 Release of Pressure: NO
 Acute Health Hazard: YES
 Chronic Health Hazard: YES

SARA Section References:

Section 302 (RQ)
None
 Section 302 (TPQ)
None
 Section 313
None

Toxic Substances Control Act (TSCA): All components are included in the inventory or are not required to be listed.



Product: DERBIGUM FS Surface - Component A

Other Regulations:

State:

The components identified with an X are present on the respective state's Right To Know lists:

Component	MA	PA	MI	MN	CA	NJ
Aliphatic Hydrocarbons						
Naptha (petroleum), hydrotreated light						

California Prop. 65: None of the chemicals in this product are listed.

XVI. Other Information

National Fire Protection Association Hazard Ratings – NFPA(R):

Health Hazard: 2
 Flammability: 2
 Reactivity: 0

Key Legend Information:

N/A – Not Applicable
 ND – Not Determined
 ACGIH – American Conference of
 Governmental Industrial Hygienists
 OSHA – Occupational Safety and Health
 Administration

TLV – Threshold Limit Value
 PEL – Permissible Exposure Limit
 TWA – Time Weighted Average
 STEL – Short Term Exposure Limit
 NTP – National Toxicology Program
 IARC – International Agency for Research on
 Cancer

The information contained herein is based on the data available to us and is believed to be correct. However DERBIGUM Americas, Inc. makes no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.



DERBIGUM®

MAKING BUILDINGS SMART

Material Safety Data Sheet

Product: DERBIGUM FS Surface - Component B

MSDS Date: 6-30-10
Product Name: DERBIGUM FS Surface - Component B
Manufacturer: DERBIGUM Americas, Inc.

I. Product and Company Description

DERBIGUM Americas, Inc.
4821 Chelsea Ave.
Kansas City, MO 64130

Emergency Phone Number:
(800) 424-9300 CHEMTREC

For Product Information:
(800) 541-5455

Product Description:
Sealing/Coating

II. Chemical Composition

Component	CAS#	%Composition
Diphenylmethane Diisocyanate	9016-87-9	50-100

III. Hazards Identification

A. Emergency Overview:

Physical Appearance and Odor:
Liquid with characteristic odor.

B. Potential Health Effects:

Acute Eye:
Contact may cause irritation.

Acute Skin:
Contact with skin may cause irritation and sensitization.

Acute Inhalation:
Inhalation may cause irritation and sensitization.

Acute ingestion:
Harmful or fatal if swallowed.

Chronic effects:
ND



Product: DERBIGUM FS urface - Component B

IV. First Aid Measures

First Aid Measures for Accidental Exposure:

Eye Exposure:

Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

Skin Exposure:

Wash affected area with soap and water; remove contaminated clothing and wash before reuse. Get medical attention if irritation develops or persists.

Inhalation:

Remove to fresh air. Seek medical attention if respiratory irritation develops or if breathing becomes difficult.

Ingestion:

Seek medical attention immediately. Never give anything by mouth to an unconscious person.

V. Fire Fighting Measures

Fire Hazard Data:

Flash Point: >356°F (>180°C)

Ignition Temperature: 752°F (400°C)

Flammability Limits (vol/vol%): Lower: NA Upper: NA

Extinguishing Media:

Use extinguishing media suitable for surrounding fire.

Special Fire Fighting Procedures:

If excessive fumes or smoke is encountered, wear self-contained breathing apparatus and full protective equipment.

Unusual Fire and Explosion Hazards:

None

Hazardous Decomposition Materials (Under Fire Conditions):

None

VI. Accidental Release Measures

Cleanup and Disposal of Spill:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Use protective measures as outlined in Section VIII below. Avoid contact with eyes, skin or clothing.

Dispose of materials according to the applicable Federal, State, or local regulations.



Product: DERBIGUM FS Surface - Component B

VII. Handling and Storage

Handling:
Use with adequate ventilation. Avoid prolonged or repeated contact with skin.

Storage:
Keep containers tightly closed.

VIII. Exposure Controls / Personal Protection

Exposure Guidelines:

Component	Exposure limits		
	ACGIH	NIOSH	OSHA-PELs
Diphenylmethane Diisocyanate	ND	ND	ND

Engineering Controls:
Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the MSDS.

Respiratory Protection:
Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or EN approved respirator when necessary.

Eye / Face Protection:
Wear appropriate safety glasses with side shields or chemical goggles as described by OSHA's eye and face protection regulations in 29CFR 1910.133 or European Standard EN166.

Skin Protection:
Chemical resistant gloves recommended, such as neoprene or nitrile rubber. Body covering clothing should be utilized.

IX. Physical and Chemical Properties

Physical Appearance: Liquid
Odor: Characteristic
pH: ND
Specific Gravity: ND
Water Solubility: Insoluble
Melting Point Range: 106°F (41°C)
Boiling Point: 374°F (190°C)
Vapor Pressure: 0.0002 hPa (0 mm Hg)
Vapor Density: 1.24 g/cm³
%Volatile by volume: ND
Evaporation Rate: ND

X. Stability and Reactivity

Chemical Stability:



Product: DERBIGUM FS Surface - Component B

Stable under standard use and storage conditions.

Conditions to Avoid:

None

Materials / Chemicals to be Avoided:

None

Hazardous Decomposition Products:

None

Hazardous Polymerization:

Should not occur.

XI. Toxicological Information

Acute Oral Toxicity:

LD50: 15000 mg/kg (rat)

Acute Dermal Toxicity:

ND

Acute Inhalation Toxicity:

LC50/4h: 490 mg/l (rat)

Chronic Toxicity:

ND

XII. Ecological Information

Ecotoxicological Information:

Degradation:	Not Determined
Accumulation:	Not Determined
Fish-Toxicity	EC50:>100 mg/l (Belebschlamm-bakterien);>1000 mg/l (DAPHNIA MAGNA) LC0 >1000 mg/l (DANIO RERIO)

Chemical Fate Information:

Not Determined

XIII. Disposal Considerations

Waste Disposal Method:

Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations.

Container Handling and Disposal:

Dispose of container and unused contents in accordance with federal, state, and local regulations.



Product: DERBIGUM FS Surface - Component B

XIV. Transportation Information

US Department of Transportation Shipping Name:

US Department of Transportation	Proper Shipping Name	Not Regulated
	Hazard Class	Not Regulated
	ID Number	Not Regulated
	Packaging Group	Not Regulated

XV. Regulatory Information

Federal Regulations:

SARA Title III Hazard Classes:

- Fire Hazard: NO
- Reactive Hazard: NO
- Release of Pressure: NO
- Acute Health Hazard: NO
- Chronic Health Hazard: NO

SARA Section References:

- Section 302 (RQ)
None
- Section 302 (TPQ)
None
- Section 313

This category is on the list of toxic chemicals subject to reporting under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), also called the Toxic Release Inventory (TRI). Listed Category: Diisocyanates. Listed Name: Polymeric diphenylmethane diisocyanate.

Toxic Substances Control Act (TSCA): All components are included in the inventory or are not required to be listed.

Other Regulations:

State:

The components identified with an X are present on the respective state's Right To Know lists:

Component	MA	PA	MI	NJ
Diphenylmethane Diisocyanate				

California Prop. 65: None of the chemicals in this product are listed.



DERBIGUM®
MAKING BUILDINGS SMART

Material Safety Data Sheet

Product: DERBIGUM FS Surface - Component B

XVI. Other Information

National Fire Protection Association Hazard Ratings – NFPA(R):

Health Hazard:	2
Flammability:	1
Reactivity:	0

Key Legend Information:

N/A – Not Applicable

ND – Not Determined

ACGIH – American Conference of
Governmental Industrial Hygienists

OSHA – Occupational Safety and Health
Administration

TLV – Threshold Limit Value

PEL – Permissible Exposure Limit

TWA – Time Weighted Average

STEL – Short Term Exposure Limit

NTP – National Toxicology Program

IARC – International Agency for Research on
Cancer

The information contained herein is based on the data available to us and is believed to be correct. However DERBIGUM Americas, Inc. makes no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.



DERBIGUM®
MAKING BUILDINGS SMART

Material Safety Data Sheet

Product: DERBIGUM FS Surface - Component C

MSDS Date: 6-30-10
Product Name: DERBIGUM FS Surface - Component C
Manufacturer: DERBIGUM Americas, Inc.

I. Product and Company Description

DERBIGUM Americas, Inc.
4821 Chelsea Ave.
Kansas City, MO 64130

Emergency Phone Number:
(800) 424-9300 CHEMTREC

For Product Information:
(800) 541-5455

Product Description:
Sealing/Coating

II. Chemical Composition

Component	CAS#	%Composition
Quartz	14808-60-7	50-100

III. Hazards Identification

A. Emergency Overview:

Physical Appearance and Odor:
Solid with characteristic odor.

B. Potential Health Effects:

Acute Eye:
Contact may cause irritation.

Acute Skin:
Contact with skin may cause irritation and sensitization.

Acute Inhalation:
Inhalation may cause irritation and sensitization.

Acute ingestion:
Harmful or fatal if swallowed.

Chronic effects:
ND



Product: DERBIGUM FS Surface - Component C

IV. First Aid Measures

First Aid Measures for Accidental Exposure:

Eye Exposure:

Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

Skin Exposure:

Wash affected area with soap and water; remove contaminated clothing and wash before reuse. Get medical attention if irritation develops or persists.

Inhalation:

Remove to fresh air. Seek medical attention if respiratory irritation develops or if breathing becomes difficult.

Ingestion:

Seek medical attention immediately. Never give anything by mouth to an unconscious person.

V. Fire Fighting Measures

Fire Hazard Data:

Flash Point: NA

Ignition Temperature: Product is not self-igniting

Flammability Limits (vol/vol%): Lower: NA Upper: NA

Extinguishing Media:

Carbon dioxide, powder, foam. Fight larger fires with alcohol-resistant foam.

Special Fire Fighting Procedures:

None

Unusual Fire and Explosion Hazards:

None

Hazardous Decomposition Materials (Under Fire Conditions):

None

VI. Accidental Release Measures

Cleanup and Disposal of Spill:

Pick up mechanically. Dispose of materials according to the applicable Federal, State, or local regulations.

VII. Handling and Storage

Handling:

No special handling needed.



Product: DERBIGUM FS Surface - Component C

Storage:

Store away from foodstuffs. Recommended storage temperature is 5°-30°C.

VIII. Exposure Controls / Personal Protection

Exposure Guidelines:

Component	Exposure limits		
	ACGIH	NIOSH	OSHA-PELs
Quartz	0.025 mg/m ³ TWA (respirable fraction)	0.05 mg/m ³ TWA (respirable dust)	0.1 mg/m ³ TWA (respirable dust)

Engineering Controls:

Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the MSDS.

Respiratory Protection:

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or EN approved respirator when necessary.

Eye / Face Protection:

Wear appropriate safety glasses with side shields or chemical goggles as described by OSHA's eye and face protection regulations in 29CFR 1910.133 or European Standard EN166.

Skin Protection:

Chemical resistant gloves recommended, such as neoprene or nitrile rubber. Body covering clothing should be utilized.

IX. Physical and Chemical Properties

Physical Appearance:	Solid
Odor:	Characteristic
pH:	NA
Specific Gravity:	2.2-2.6 g/cm ³
Water Solubility:	Insoluble
Melting Point Range:	1713°C (3115°F)
Boiling Point:	2230°C (4046°F)
Vapor Pressure:	13.5 hPa (10 mm Hg)
Vapor Density:	ND
%Volatile by volume:	ND
Evaporation Rate:	ND

X. Stability and Reactivity

Chemical Stability:

Stable under standard use and storage conditions.

Conditions to Avoid:

None



DERBIGUM®

MAKING BUILDINGS SMART

Material Safety Data Sheet

Product: DERBIGUM FS Surface - Component C

Materials / Chemicals to be Avoided:

None

Hazardous Decomposition Products:

None

Hazardous Polymerization:

Should not occur.

XI. Toxicological Information

Acute Oral Toxicity:

LD50 Rat: 500 mg/kg

Acute Dermal Toxicity:

ND

Acute Inhalation Toxicity:

ND

Chronic Toxicity:

ND

Component Carcinogenicity

Quartz (14808-60-7)

ACGIH: A2 - Suspected Human Carcinogen

NIOSH: potential occupational carcinogen

NTP: Known Human Carcinogen (Select Carcinogen)

IARC: Monograph 68 [1997] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources) (Group 1 (carcinogenic to humans))

XII. Ecological Information

Ecotoxicological Information:

Degradation: Not Determined

Accumulation: Not Determined

Fish-Toxicity: Not Determined

Chemical Fate Information:

Not Determined

XIII. Disposal Considerations

Waste Disposal Method:

Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations.

Container Handling and Disposal:

Dispose of container and unused contents in accordance with federal, state, and local regulations.



Product: DERBIGUM FS Surface - Component C

XIV. Transportation Information

US Department of Transportation Shipping Name:

US Department of Transportation	Proper Shipping Name	Not Regulated
	Hazard Class	Not Regulated
	ID Number	Not Regulated
	Packaging Group	Not Regulated

XV. Regulatory Information

Federal Regulations:

SARA Title III Hazard Classes:

Fire Hazard: NO
 Reactive Hazard: NO
 Release of Pressure: NO
 Acute Health Hazard: NO
 Chronic Health Hazard: NO

SARA Section References:

Section 302 (RQ)
 None
 Section 302 (TPQ)
 None
 Section 313
 None

Toxic Substances Control Act (TSCA): All components are included in the inventory or are not required to be listed.

Other Regulations:

State:

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Quartz	14808-60-7	No	Yes	Yes	Yes	Yes	Yes

California Prop. 65: WARNING! This product contains a chemical known to the state of California to cause cancer.

XVI. Other Information

National Fire Protection Association Hazard Ratings – NFPA(R):

Health Hazard: 0
 Flammability: 0
 Reactivity: 0



DERBIGUM®
MAKING BUILDINGS SMART

Material Safety Data Sheet

Product: DERBIGUM FS Surface - Component C

Key Legend Information:

N/A – Not Applicable
ND – Not Determined
ACGIH – American Conference of
Governmental Industrial Hygienists
OSHA – Occupational Safety and Health
Administration

TLV – Threshold Limit Value
PEL – Permissible Exposure Limit
TWA – Time Weighted Average
STEL – Short Term Exposure Limit
NTP – National Toxicology Program
IARC – International Agency for Research on
Cancer

The information contained herein is based on the data available to us and is believed to be correct. However DERBIGUM Americas, Inc. makes no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.