



Safety Data Sheet
prepared to UN GHS Revision 3

1. Identification of the Substance/Mixture and the Company/Undertaking

- 1.1 Product Identifier** 200-SEALUV-A **Revision Date:** 05/28/2014
Product Name: Flowseal UV Base A **Supersedes Date:** 01/30/2014
- 1.2 Relevant identified uses of the substance or mixture and uses advised against** Base component of 2 components coatings - Industrial use
- 1.3 Details of the supplier of the safety data sheet**
- Manufacturer:** Flowcrete North America, Inc.
616 Spring Hill Drive, Suite 100
Spring, TX 77386
americas@flowcrete.com
www.flowcreteamericas.com
Tel: (936) 539-6700
Fax: (936) 539-6701
- Datasheet Produced by:** Adamson, Grant - americas@flowcrete.com
- 1.4 Emergency telephone number:** CHEMTREC +1 703 5273887 (Outside US)

2. Hazard Identification

2.1 Classification of the substance or mixture

STOT, single exposure, category 3, NE

2.2 Label elements

Symbol(s) of Product



Signal Word

Warning

Named Chemicals on Label

dipropylene glycol methyl ether acetate

HAZARD STATEMENTS

STOT, single exposure, category 3, NE H336 May cause drowsiness or dizziness.

PRECAUTION PHRASES

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

2.3 Other hazards

Not applicable

Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

3. Composition/Information On Ingredients

3.1 Substances

Hazardous Ingredients

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>%</u>
88917-22-0	dipropylene glycol methyl ether acetate	50-75
2807-30-9	2-(propyloxy)ethanol	2.5-10

<u>CAS-No.</u>	<u>GHS Symbols</u>	<u>GHS Hazard Statements</u>	<u>M-Factors</u>
88917-22-0	GHS07	H227-336	0
2807-30-9	GHS07	H312-319	0

Additional Information: The text for GHS Hazard Statements shown above (if any) is given in Section 16.

4. First-aid Measures

4.1 Description of First Aid Measures

AFTER INHALATION: Move to fresh air. Consult a physician after significant exposure.

AFTER SKIN CONTACT: Use a mild soap if available. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

AFTER EYE CONTACT: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses.

AFTER INGESTION: Gently wipe or rinse the inside of the mouth with water. Give small amounts of water to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Harmful by inhalation. Irritating to eyes. Harmful in contact with skin and if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

5. Fire-fighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam

FOR SAFETY REASONS NOT TO BE USED: Alcohol, Alcohol based solutions, any other media not listed above.

5.2 Special hazards arising from the substance or mixture

No Information

5.3 Advice for firefighters

Flash back possible over considerable distance. In the event of fire, wear self-contained breathing apparatus. High volume water jet. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Remove all sources of ignition.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains.

6.3 Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

Please refer to disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

7. Handling and Storage

7.1 Precautions for safe handling

INSTRUCTIONS FOR SAFE HANDLING: Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Vapours may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Electrical equipment should be protected to the appropriate standard. Preparation may charge electrostatically: always use earthing leads when transferring from one container to another. Use only in area provided with appropriate exhaust ventilation. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Wear personal protective equipment. Do not breathe vapours or spray mist. Use only explosion-proof equipment. Keep away from sources of ignition - No smoking.

PROTECTION AND HYGIENE MEASURES: Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Direct sources of heat.

STORAGE CONDITIONS: Store in original container. Keep locked up or in an area accessible only to qualified or authorised persons. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

7.3 Specific end use(s)

No specific advice for end use available.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (US)

<u>Name</u>	<u>%</u>	<u>OSHA PEL</u>	<u>Company TLV</u>
dipropylene glycol methyl ether acetate	50-75		
2-(propyloxy)ethanol	2.5-10		

FURTHER INFORMATION: Refer to the regulatory exposure limits for the workforce enforced in each country.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: Respirator with a vapor filter. Respirator with filter for organic vapor.

EYE PROTECTION: Ensure that eyewash stations and safety showers are close to the workstation location. Safety goggles. Tightly fitting safety goggles.

HAND PROTECTION: Rubber or plastic gloves. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Long sleeved clothing. Remove and wash contaminated clothing before re-use.

OTHER PROTECTIVE EQUIPMENT: No Information

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Clear
Physical State	Liquid
Odor	Solvent
Odor threshold	Not determined
pH	Non-aqueous
Melting point / freezing point (°C)	Not determined
Boiling point/range (°C)	N.D. - N.D.
Flash Point, (°C)	86
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	999 - 0
Vapour Pressure, mmHg	0.05 mmHg at 77 F
Vapour density	Not determined
Relative density	Not determined
Solubility in / Miscibility with water	Negligible
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Viscosity	< 150 cPs at 77 F

Explosive properties	Not determined
Oxidising properties	Not determined

9.2 Other information

VOC Content g/l:	150
Specific Gravity (g/cm3)	0.120

10. Stability and Reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under recommended storage conditions. Risk of ignition.

10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4 Conditions to avoid

Direct sources of heat.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.

11. Toxicological Information

11.1 Information on toxicological effects**Acute Toxicity:**

Oral LD50:	No data
Inhalation LC50:	No data

Irritation: No information available.

Corrosivity: No information available.

Sensitization: No information available.

Repeated dose toxicity: No information available.

Carcinogenicity: No information available.

Mutagenicity: No information available.

Toxicity for reproduction: No information available.

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested.
Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>
2807-30-9	2-(propyloxy)ethanol	3089 mg/kg, oral, rat		2132 ppm/6 hours

Additional Information:

No Information

12. Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia):	No information
IC50 72hr (Algae):	No information
LC50 96hr (fish):	No information

12.2 Persistence and degradability: No information

12.3 Bioaccumulative potential: No information

12.4 Mobility in soil: No information

12.5 Results of PBT and vPvB assessment: The product does not meet the criteria for PBT/vPvB in accordance with Annex XIII.

12.6 Other adverse effects: No information

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
88917-22-0	dipropylene glycol methyl ether acetate	No information	No information	No information
2807-30-9	2-(propyloxy)ethanol	No information	No information	

13. Disposal Considerations

13.1 WASTE TREATMENT METHODS: Do not burn, or use a cutting torch on, the empty drum. If recycling is not practicable, dispose of in compliance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

14.1 UN number

14.2 UN proper shipping name Not regulated for transport according to ADR/RID, IMDG and IATA regulations

Technical name

14.3 Transport hazard class(es) N/A

Subsidiary shipping hazard N/A

14.4 Packing group

14.5 Environmental hazards

14.6 Special precautions for user Not applicable

EmS-No.:

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code Not applicable

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation for the substance or mixture:

U.S. Federal Regulations: As follows -

CERCLA - Sara Hazard Category

This product has been reviewed according to the EPA ' Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Acute Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<u>Chemical Name</u>	<u>CAS-No.</u>
2-(propyloxy)ethanol	2807-30-9

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA components exist in this product.

U.S. Clean Air Act:

EPA Coating Category:	Industrial Maintenance Coating
EPA VOC Content Limit (g/l):	450
Product VOC Content (g/l)	<150
Thinning Recommendations:	None
Application Recommendations:	For professional use only.

* As per the federal EPA definition for coating categories in 40 CFR 59.401.

** Grams of VOC per liter of coating product as applied (mixture of Part A and Part B) per ASTM D2369 Method E.

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

<u>Chemical Name</u>	<u>CAS-No.</u>
No Chemical Name Found	

Pennsylvania Right-To-Know

The following non-hazardous ingredients are present in the product at greater than 3%.

<u>Chemical Name</u>	<u>CAS-No.</u>
No Chemical Name Found	

California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

No Proposition 65 Carcinogens exist in this product.

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

No Proposition 65 Reproductive Toxins exist in this product.

International Regulations: As follows -

* Canadian DSL:

All chemical ingredients included on inventory

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16. Other Information

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H227	Combustible liquid
H312	Harmful in contact with skin.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Reasons for revision

This is a new Safety Data Sheet (SDS).

List of References:

This Safety Data Sheet was compiled with data and information from the following sources:

The Ariel Regulatory Database provided by the 3E Corporation in Copenhagen, Denmark
 ESIS (The European Chemical Substances Information System), provided by the European Commission
 Joint Research Centre in Ispra, Italy
 Annex VI of the EU Council Directive 67/548/EEC
 Council Directive 67/548/EEC - Annex I or EU Council Directive 1999/45/EC
 European Union (EC) Regulation No. 1272/2008 on the classification, labelling and packaging of
 substances and mixtures (CLP Regulation)
 EU Council Decision 2000/532/EC and its Annex entitled "List of Wastes"

Acronym & Abbreviation Key:

CLP	Classification, Labeling & Packaging Regulation
EC	European Commission
EU	European Union
US	United States
CAS	Chemical Abstract Service
EINECS	European Inventory of Existing Chemical Substances
REACH	Registration, Evaluation, Authorization of Chemicals Regulation
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
LTEL	Long term exposure limit
STEL	Short term exposure limit
OEL	Occupational exposure limit
ppm	Parts per million
mg/m ³	Milligrams per cubic meter
TLV	Threshold Limit Value
ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety & Health Administration
PEL	Permissible Exposure Limits
VOC	Volatile organic compounds
g/l	Grams per liter
mg/kg	Milligrams per kilogram

N/A	Not applicable
LD50	Lethal dose at 50%
LC50	Lethal concentration at 50%
EC50	Half maximal effective concentration
IC50	Half maximal inhibitory concentration
PBT	Persistent bioaccumulative toxic chemical
vPvB	Very persistent and very bioaccumulative
EEC	European Economic Community
ADR	International Transport of Dangerous Goods by Road
RID	International Transport of Dangerous Goods by Rail
UN	United Nations
IMDG	International Maritime Dangerous Goods Code
IATA	International Air Transport Association
MARPOL	International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978
IBC	International Bulk Container

For further information, please contact: Technical Services Department

The information on this sheet corresponds to our present knowledge. It is not a specification and it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product or where instructions and recommendations are not followed.



Safety Data Sheet
prepared to UN GHS Revision 3

1. Identification of the Substance/Mixture and the Company/Undertaking

- 1.1 Product Identifier** 200-SEALUV-B **Revision Date:** 07/28/2014
Product Name: Flowseal UV - Hardener B **Supersedes Date:** New SDS
- 1.2 Relevant identified uses of the substance or mixture and uses advised against** Hardener for 2 components coatings - Industrial use
- 1.3 Details of the supplier of the safety data sheet**
- Manufacturer:** Flowcrete North America, Inc.
616 Spring Hill Drive, Suite 100
Spring, TX 77386
americas@flowcrete.com
www.flowcreteamericas.com
Tel: (936) 539-6700
Fax: (936) 539-6701
- Datasheet Produced by:** Anderson, Paul - americas@flowcrete.com
- 1.4 Emergency telephone number:** CHEMTREC +1 703 5273887 (Outside US)

2. Hazard Identification

2.1 Classification of the substance or mixture

Acute Toxicity, Inhalation, category 3
STOT, single exposure, category 3, RT1
Skin Sensitizer, category 1

2.2 Label elements

Symbol(s) of Product



Signal Word

Danger

Named Chemicals on Label

hexamethylene diisocyanate, homopolymer of hdi

HAZARD STATEMENTS

Acute Toxicity, Inhalation, category 3	H331	Toxic if inhaled.
STOT, single exposure, category 3, RT1	H335	May cause respiratory irritation.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.

PRECAUTION PHRASES

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

2.3 Other hazards

Not applicable

Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

3. Composition/Information On Ingredients

3.1 Substances

Hazardous Ingredients

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>%</u>
28182-81-2	homopolymer of hdi	50-75
822-06-0	hexamethylene diisocyanate	0.1-1.0

<u>CAS-No.</u>	<u>GHS Symbols</u>	<u>GHS Hazard Statements</u>	<u>M-Factors</u>
28182-81-2	GHS07	H317-332-335	0
822-06-0	GHS06-GHS08	H302-315-317-319-330-334-335	0

Additional Information: The text for GHS Hazard Statements shown above (if any) is given in Section 16.

4. First-aid Measures

4.1 Description of First Aid Measures

AFTER INHALATION: Move to fresh air. Consult a physician after significant exposure.

AFTER SKIN CONTACT: Use a mild soap if available. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

AFTER EYE CONTACT: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses.

AFTER INGESTION: Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes and respiratory system. Heating or fire can release toxic gas.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

5. Fire-fighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam

FOR SAFETY REASONS NOT TO BE USED: Alcohol, Alcohol based solutions, any other media not listed above.

5.2 Special hazards arising from the substance or mixture

No Information

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. ABC powder. Danger! - water reactive substance. Reacts with water to release toxic gas. May be harmful or fatal if inhaled.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains. Keep the container open.

6.3 Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

Please refer to disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

7. Handling and Storage

7.1 Precautions for safe handling

INSTRUCTIONS FOR SAFE HANDLING: Use only in area provided with appropriate exhaust ventilation. Provide sufficient air exchange and/or exhaust in work rooms. Wear personal protective equipment. Do not breathe vapours or spray mist. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is being used.

PROTECTION AND HYGIENE MEASURES: Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Keep from any possible contact with water.

STORAGE CONDITIONS: Store in original container. Keep container tightly closed in a dry and well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons.

7.3 Specific end use(s)

No specific advice for end use available.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (US)

<u>Name</u>	<u>%</u>	<u>OSHAPEL</u>	<u>Company TLV</u>
homopolymer of hdi	50-75		
hexamethylene diisocyanate	0.1-1.0		

FURTHER INFORMATION: Refer to the regulatory exposure limits for the workforce enforced in each country.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Respirator with a vapor filter.

EYE PROTECTION: Ensure that eyewash stations and safety showers are close to the workstation location. Tightly fitting safety goggles.

HAND PROTECTION: Nitrile rubber. Long sleeved clothing. Remove and wash contaminated clothing before re-use.

OTHER PROTECTIVE EQUIPMENT: No Information

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Clear / Pale Yellow
Physical State	Liquid
Odor	Slightly Musty
Odor threshold	Not determined
pH	Non-aqueous
Melting point / freezing point (°C)	Not determined
Boiling point/range (°C)	382 F - N.D.
Flash Point, (°C)	93
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	999 - 0
Vapour Pressure, mmHg	Approx. 5.2×10^{-9}
Vapour density	Not determined
Relative density	Not determined
Solubility in / Miscibility with water	Insoluble, Reacts With Water
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Viscosity	650-750 cPs
Explosive properties	Not determined

Oxidising properties Not determined

9.2 Other information

VOC Content g/l: 5

Specific Gravity (g/cm³) 1.130

10. Stability and Reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Container can be pressurized by carbon dioxide due to reaction with humid air and/or water. Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4 Conditions to avoid

Keep from any possible contact with water.

10.5 Incompatible materials

Reacts violently in contact with acids, amines, driers, polymerisation accelerators and easily oxidized materials. Contact with water or moist air liberates irritating gas.

10.6 Hazardous decomposition products

Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.

11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50: >10000 mg/kg, oral (rat)

Inhalation LC50: 137-1150 mg/m³, rats (aerosol), 4 hr.

Irritation: Severe eye irritant capable of inducing corneal injury (rabbit). Moderate skin irritant.

Corrosivity: No information available.

Sensitization: Pulmonary and dermal sensitizer in animals and humans.

Repeated dose toxicity: No information available.

Carcinogenicity: No information available.

Mutagenicity: No information available.

Toxicity for reproduction: No information available.

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested.
Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>
28182-81-2	homopolymer of hdi	5000 mg/kg, oral, rat		18500 mg/m ³ /1H inhalation, rat
822-06-0	hexamethylene diisocyanate	710 mg/kg, oral rat		230 ppm / 4 hrs

Additional Information:

Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates.

12. Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia):	No information
IC50 72hr (Algae):	No information
LC50 96hr (fish):	No information

12.2 Persistence and degradability: No information

12.3 Bioaccumulative potential: No information

12.4 Mobility in soil: No information

12.5 Results of PBT and vPvB assessment: The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

12.6 Other adverse effects: No information

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
28182-81-2	homopolymer of hdi	No information	No information	
822-06-0	hexamethylene diisocyanate	No information	No information	

13. Disposal Considerations

13.1 WASTE TREATMENT METHODS: If recycling is not practicable, dispose of in compliance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

14.1	UN number	
14.2	UN proper shipping name	Not regulated for transport according to ADR/RID, IMDG and IATA regulations
	Technical name	
14.3	Transport hazard class(es)	N/A
	Subsidiary shipping hazard	N/A
14.4	Packing group	
14.5	Environmental hazards	
14.6	Special precautions for user	Not applicable
	EmS-No.:	
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	Not applicable

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation for the substance or mixture:

U.S. Federal Regulations: As follows -

CERCLA - Sara Hazard Category

This product has been reviewed according to the EPA ' Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Reactive Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<u>Chemical Name</u>	<u>CAS-No.</u>
hexamethylene diisocyanate	822-06-0

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA components exist in this product.

U.S. Clean Air Act:

EPA Coating Category:	Floor coatings
EPA VOC Content Limit (g/l):	400
Product VOC Content (g/l)	5
Thinning Recommendations:	None
Application Recommendations:	For professional use only.

* As per the federal EPA definition for coating categories in 40 CFR 59.401.

** Grams of VOC per liter of coating product as applied (mixture of Part A and Part B) per ASTM D2369 Method E.

U.S. State Regulations: As follows -**New Jersey Right-to-Know:**

The following materials are non-hazardous, but are among the top five components in this product.

<u>Chemical Name</u>	<u>CAS-No.</u>
No Chemical Name Found	

Pennsylvania Right-To-Know

The following non-hazardous ingredients are present in the product at greater than 3%.

<u>Chemical Name</u>	<u>CAS-No.</u>
No Chemical Name Found	

California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

No Proposition 65 Carcinogens exist in this product.

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

No Proposition 65 Reproductive Toxins exist in this product.

International Regulations: As follows -*** Canadian DSL:**

All chemical ingredients included on inventory

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16. Other Information**Text for GHS Hazard Statements shown in Section 3 describing each ingredient:**

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.

Reasons for revision

This is a new Safety Data Sheet (SDS).

List of References:

This Safety Data Sheet was compiled with data and information from the following sources:

The Ariel Regulatory Database provided by the 3E Corporation in Copenhagen, Denmark
 ESIS (The European Chemical Substances Information System), provided by the European Commission
 Joint Research Centre in Ispra, Italy

Annex VI of the EU Council Directive 67/548/EEC
Council Directive 67/548/EEC - Annex I or EU Council Directive 1999/45/EC
European Union (EU) Regulation No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation)
EU Council Decision 2000/532/EC and its Annex entitled "List of Wastes"

Acronym & Abbreviation Key:

CLP	Classification, Labeling & Packaging Regulation
EC	European Commission
EU	European Union
US	United States
CAS	Chemical Abstract Service
EINECS	European Inventory of Existing Chemical Substances
REACH	Registration, Evaluation, Authorization of Chemicals Regulation
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
LTEL	Long term exposure limit
STEL	Short term exposure limit
OEL	Occupational exposure limit
ppm	Parts per million
mg/m ³	Milligrams per cubic meter
TLV	Threshold Limit Value
ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety & Health Administration
PEL	Permissible Exposure Limits
VOC	Volatile organic compounds
g/l	Grams per liter
mg/kg	Milligrams per kilogram
N/A	Not applicable
LD50	Lethal dose at 50%
LC50	Lethal concentration at 50%
EC50	Half maximal effective concentration
IC50	Half maximal inhibitory concentration
PBT	Persistent bioaccumulative toxic chemical
vPvB	Very persistent and very bioaccumulative
EEC	European Economic Community
ADR	International Transport of Dangerous Goods by Road
RID	International Transport of Dangerous Goods by Rail
UN	United Nations
IMDG	International Maritime Dangerous Goods Code
IATA	International Air Transport Association
MARPOL	International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978
IBC	International Bulk Container

For further information, please contact: Technical Services Department

The information on this sheet corresponds to our present knowledge. It is not a specification and it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product or where instructions and recommendations are not followed.



Safety Data Sheet

prepared to UN GHS Revision 3

1. Identification of the Substance/Mixture and the Company/Undertaking

1.1	Product Identifier	900-AGG-C-ALOX220	Revision Date:	09/03/2014
	Product Name:	High Wear Filler	Supersedes Date:	New SDS
1.2	Relevant identified uses of the substance or mixture and uses advised against	Component of multicomponent industrial coatings - Industrial use		
1.3	Details of the supplier of the safety data sheet			
	Manufacturer:	Flowcrete North America, Inc. 616 Spring Hill Drive, Suite 100 Spring, TX 77386 americas@flowcrete.com www.flowcreteamericas.com Tel: (936) 539-6700 Fax: (936) 539-6701		
	Datasheet Produced by:	Anderson, Paul - americas@flowcrete.com		
1.4	Emergency telephone number:	CHEMTREC +1 703 5273887 (Outside US)		

2. Hazard Identification

2.1 Classification of the substance or mixture

2.3 Other hazards

Not applicable

Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

3. Composition/Information On Ingredients

3.1 Substances

Hazardous Ingredients

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>%</u>
1344-28-1	alumina oxide	75-100

<u>CAS-No.</u>	<u>GHS Symbols</u>	<u>GHS Hazard Statements</u>	<u>M-Factors</u>
1344-28-1			0

Additional Information: The text for GHS Hazard Statements shown above (if any) is given in Section 16.

4. First-aid Measures

4.1 Description of First Aid Measures

AFTER INHALATION: Move to fresh air. Consult a physician after significant exposure.

AFTER SKIN CONTACT: Use a mild soap if available. Wash off with soap and plenty of water.

AFTER EYE CONTACT: Rinse thoroughly with plenty of water, also under the eyelids. Remove contact lenses. If eye irritation persists, consult a specialist.

AFTER INGESTION: Gently wipe or rinse the inside of the mouth with water. Give small amounts of water to drink. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Harmful by inhalation.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

5. Fire-fighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam, Water Fog

FOR SAFETY REASONS NOT TO BE USED: Alcohol, Alcohol based solutions, any other media not listed above.

5.2 Special hazards arising from the substance or mixture

No Information

5.3 Advice for firefighters

None known. The product itself does not burn. In the event of fire, wear self-contained breathing apparatus. Water spray/Dry powder/Alcohol-resistant foam/Carbon dioxide (CO₂)/High volume water jet. None.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Avoid dust formation. Use personal protective equipment.

6.2 Environmental precautions

No Information

6.3 Methods and material for containment and cleaning up

Pick up and transfer to properly labelled containers. No special environmental precautions required. After cleaning, flush away traces with water.

6.4 Reference to other sections

Please refer to disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

7. Handling and Storage

7.1 Precautions for safe handling

INSTRUCTIONS FOR SAFE HANDLING: Use only in area provided with appropriate exhaust ventilation. Provide sufficient air exchange and/or exhaust in work rooms. Wear personal protective equipment. Avoid dust formation. Protect from

moisture.

PROTECTION AND HYGIENE MEASURES: Wash hands before breaks and at the end of workday. Do not breathe dust. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: No Information

STORAGE CONDITIONS: Keep tightly closed in a dry and cool place.

7.3 Specific end use(s)

No specific advice for end use available.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (US)

<u>Name</u>	<u>%</u>	<u>OSHA PEL</u>	<u>Company TLV</u>
alumina oxide	75-100	10 MG/M3 (DUST)	

FURTHER INFORMATION: Refer to the regulatory exposure limits for the workforce enforced in each country.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: Effective dust mask.

EYE PROTECTION: Safety glasses with side-shields

HAND PROTECTION: Protective gloves Long sleeved clothing. Remove and wash contaminated clothing before re-use.

OTHER PROTECTIVE EQUIPMENT: No Information

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Granules / Powder Mix
Physical State	Solid
Odor	None
Odor threshold	Not determined
pH	6-8
Melting point / freezing point (°C)	Not determined
Boiling point/range (°C)	N.D. - N.D.
Flash Point, (°C)	999
Evaporation rate	N/A
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	999 - 0
Vapour Pressure, mmHg	N/A
Vapour density	N/A
Relative density	Not determined

Solubility in / Miscibility with water	Slight
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Viscosity	N/A
Explosive properties	N/A
Oxidising properties	N/A

9.2 Other information

VOC Content g/l:	0
Specific Gravity (g/cm³)	2.650

10. Stability and Reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4 Conditions to avoid

No Information

10.5 Incompatible materials

Do not store near acids. Strong oxidizing agents.

10.6 Hazardous decomposition products

No hazardous decomposition products are known. Hydrogen fluoride

11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50:

Inhalation LC50:

Irritation: No information available.

Corrosivity: No information available.

Sensitization: No information available.

Repeated dose toxicity: No information available.

Carcinogenicity: No information available.

Mutagenicity: No information available.

Toxicity for reproduction: No information available.

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested. Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>
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Data at the substance level is not available.

Additional Information:

No Information

12. Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia): No information

IC50 72hr (Algae): No information

LC50 96hr (fish): No information

12.2 Persistence and degradability: No information

12.3 Bioaccumulative potential: No information

12.4 Mobility in soil: No information

12.5 Results of PBT and vPvB assessment: The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

12.6 Other adverse effects: No information

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
1344-28-1	alumina oxide	No information	No information	

13. Disposal Considerations

13.1 **WASTE TREATMENT METHODS:** If recycling is not practicable, dispose of in compliance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

14.1 UN number	
14.2 UN proper shipping name	Not regulated for transport according to ADR/RID, IMDG and IATA regulations
Technical name	
14.3 Transport hazard class(es)	N/A
Subsidiary shipping hazard	
14.4 Packing group	
14.5 Environmental hazards	
14.6 Special precautions for user	Not applicable
EmS-No.:	
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	Not applicable

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation for the substance or mixture:

U.S. Federal Regulations: As follows -

CERCLA - Sara Hazard Category

This product has been reviewed according to the EPA ' Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<u>Chemical Name</u>	<u>CAS-No.</u>
alumina oxide	1344-28-1

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA components exist in this product.

U.S. Clean Air Act:

EPA Coating Category: Not applicable
EPA VOC Content Limit (g/l): N/A
Product VOC Content (g/l) N/A
Thinning Recommendations: N/A
Application Recommendations: N/A

* As per the federal EPA definition for coating categories in 40 CFR 59.401.

** Grams of VOC per liter of coating product as applied (mixture of Part A and Part B) per ASTM D2369 Method E.

U.S. State Regulations: As follows -**New Jersey Right-to-Know:**

The following materials are non-hazardous, but are among the top five components in this product.

No NJ Right-To-Know components exist in this product.

Pennsylvania Right-To-Know

The following non-hazardous ingredients are present in the product at greater than 3%.

No PA Right-To-Know components exist in this product.

California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

No Proposition 65 Carcinogens exist in this product.

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

No Proposition 65 Reproductive Toxins exist in this product.

International Regulations: As follows -*** Canadian DSL:**

All chemical ingredients included on inventory

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16. Other Information**Reasons for revision**

This is a new Safety Data Sheet (SDS).

List of References:

This Safety Data Sheet was compiled with data and information from the following sources:

The Ariel Regulatory Database provided by the 3E Corporation in Copenhagen, Denmark
 ESIS (The European Chemical Substances Information System), provided by the European Commission
 Joint Research Centre in Ispra, Italy
 Annex VI of the EU Council Directive 67/548/EEC
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