



## Safety Data Sheet

prepared to UN GHS Revision 3

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

- 1.1 Product Identifier 200-UNV-A Revision Date: 03/20/2015  
 Product Name: High Performance Resin Base A Supercedes 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: 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
- Hazardous to the aquatic environment, Chronic, category 2  
 Carcinogenicity, category 1A  
 Eye Irritation, category 2  
 Skin Irritation, category 2  
 Skin Sensitizer, category 1

## 2.2 Label elements

## Symbol(s) of Product



## Signal Word

Danger

## Named Chemicals on Label

reaction product: bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700), oxirane, mono [(c12-14-alkyloxy)methyl] derivs.

## HAZARD STATEMENTS

Hazardous to the aquatic environment, Chronic, category 2	H411	Toxic to aquatic life with long lasting effects.
Carcinogenicity, category 1A	H350-1A	May cause cancer.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Skin Irritation, category 2	H315	Causes skin irritation.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.

## PRECAUTION PHRASES

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
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.
P284	Wear respiratory protection.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P308+313	IF exposed or concerned: Get medical advice/attention
P332+313	If skin irritation occurs: Get medical advice/attention.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.

## 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

## 3.2 Mixtures

## Hazardous Ingredients

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>%</u>
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25068-38-6	reaction product bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)	75-100
68609-97-2	oxirane, mono[(c12-14-alkyloxy)methyl] derivs.	2.5-10
64742-46-7	distillates (petroleum), hydrotreated middle	0.1-1.0
64742-95-6	solvent naphtha (petroleum), light arom.	0.1-1.0
108-83-8	2,6-dimethylheptan-4-one	0.1-1.0

<u>CAS-No.</u>	<u>GHS Symbols</u>	<u>GHS Hazard Statements</u>	<u>M-Factors</u>
25068-38-6	GHS07-GHS09	H315-317-319-411	0
68609-97-2	GHS07	H315-317	0
64742-46-7	GHS08	H350	0
64742-95-6	GHS02-GHS08-GHS09	H226-304-411	0
108-83-8	GHS02-GHS07	H226-335	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

GENERAL NOTES: When symptoms persist or in all cases of doubt seek medical advice.

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

Self protection of the first aider:

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

### 4.2 Most important symptoms and effects, both acute and delayed

Irritating to skin. May cause sensitization by skin contact. Prolonged or repeated exposure increases the risk. Harmful to aquatic organisms.

### 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. High volume water jet. Hazardous decomposition products formed under fire conditions. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Contains epoxy constituents. See information supplied by the manufacturer.

## 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. May cause long-term adverse effects in the aquatic environment

### 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. Wear personal protective equipment

**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:** Extremes of temperature and direct sunlight

**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>
reaction product bisphenol-a-(epichlorhydrin)	75-100		
epoxy resin (number average molecularweight <= 700)			
oxirane, mono[(c12-14-alkyloxy)methyl] derivs.	2.5-10		
distillates (petroleum), hydrotreated middle	0.1-1.0		
solvent naphtha (petroleum), light arom.	0.1-1.0	500.0 PPM	
2,6-dimethylheptan-4-one	0.1-1.0	50.0 PPM	

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

### 8.2 Exposure controls

Personal Protection

**RESPIRATORY PROTECTION:** No personal respiratory protective equipment normally required.

**EYE PROTECTION:** Safety glasses.

**HAND PROTECTION:** Rubber or plastic gloves. Long sleeved clothing. Remove and wash contaminated clothing before re-

use. Rubber or plastic apron.

OTHER PROTECTIVE EQUIPMENT: No Information

ENGINEERING CONTROLS: Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

## 9. Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

Appearance:	Transparent Resin
Physical State	Liquid
Odor	Weak Epoxy
Odor threshold	Not determined
pH	Non-aqueous
Melting point /freezing point (°C)	Not determined
Boiling point/range (°C)	136 - 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	Not determined
Vapour density	1.16 g/cm <sup>3</sup>
Relative density	Not determined
Solubility in /Miscibility with water	Insoluble
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Viscosity	Not determined
Explosive properties	N/A
Oxidising properties	N/A

### 9.2 Other information

VOC Content g/l:	20
Specific Gravity (g/cm <sup>3</sup> )	0.120

## 10. Stability and Reactivity

### 10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

### 10.2 Chemical stability

No decomposition if stored and applied as directed. Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

## 10.4 Conditions to avoid

Extremes of temperature and direct sunlight

## 10.5 Incompatible materials

Strong oxidizing agents. Acids and bases.

## 10.6 Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapours. Alcohols. Exothermic reaction. Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke.

## 11. Toxicological Information

## 11.1 Information on toxicological effects

## Acute Toxicity:

Oral LD50:

Inhalation LC50:

Irritation: Irritating to eyes, skin, mouth and pharynx.

Corrosivity: No information available.

Sensitization: Prolonged or repeated skin contact may result in allergic eczema.

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>
25068-38-6	reaction product bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)	>2000 mg/kg, rat, oral	>2000 mg/kg, rat	
68609-97-2	oxirane, mono[(c12-14-alkyloxy)methyl] derivs.	17100 mg/kg, oral, rat		
64742-46-7	distillates (petroleum), hydrotreated middle	3160 mg/kg rabbit oral		
64742-95-6	solvent naphtha (petroleum), light arom.	4700 mg/kg, oral, rat	>2000 mg/kg	3670 ppm/8 hours, rat, inhalation
108-83-8	2,6-dimethylheptan-4-one	3200 mg/kg, oral, rat		1979 ppm /6 hrs, rat, inhalation

## 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>
25068-38-6	reaction product bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)	No information	No information	
68609-97-2	oxirane, mono[(c12-14-alkyloxy)methyl] derivs.	No information	No information	
64742-46-7	distillates (petroleum), hydrotreated middle	No information	No information	
64742-95-6	solvent naphtha (petroleum), light arom.	>1 - 10 mg/l	>1 - 10 mg/l	>10-100 mg/l
108-83-8	2,6-dimethylheptan-4-one	No information	No information	

## 13. Disposal Considerations

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

## 14. Transport Information

14.1 UN number	UN3082
14.2 UN proper shipping name	Environmentally Hazardous Substance, Liquid, N.O.S.
Technical name	Epoxy Resin
14.3 Transport hazard class(es)	9
Subsidiary shipping hazard	N/A
14.4 Packing group	III
14.5 Environmental hazards	Yes
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:

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 U.S. Superfund Amendment and Reauthorization Act (SARA) of 1986 and 40 CFR part 372:

<u>Chemical Name</u>	<u>CAS-No.</u>
1,2,4-trimethylbenzene	95-63-6
xylene	1330-20-7
ethylbenzene	100-41-4

#### 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 12(b) 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)	<20
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%.

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 or exempt.

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

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H350	May cause cancer.
H411	Toxic to aquatic life with long lasting effects.

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 <sup>3</sup>	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 203-PRIME -B Revision Date: 03/20/2015  
Product Name: Flowprime Hardener B Supercedes Date: 07/31/2014
- 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
- Acute Toxicity, Oral, category 4
  - Acute Toxicity, Inhalation, category 4
  - Hazardous to the aquatic environment, Chronic, category 3
  - Skin Corrosion, category 1
  - Skin Sensitizer, category 1

## 2.2 Label elements

## Symbol(s) of Product



## Signal Word

Danger

## Named Chemicals on Label

benzyl alcohol, benzene-1, 3-dimethanamine, 3-aminomethyl-3,5,5-trimethylcyclohexylamine

## HAZARD STATEMENTS

Acute Toxicity, Oral, category 4	H302	Harmful if swallowed.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
Hazardous to the aquatic environment, Chronic, category 3	H412	Harmful to aquatic life with long lasting effects.
Skin Corrosion, category 1	H314-1	Causes severe skin burns and eye damage.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.

## PRECAUTION PHRASES

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.

## 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

## 3.2 Mixtures

## Hazardous Ingredients

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>%</u>
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	10-25
100-51-6	benzyl alcohol	10-25
1477-55-0	benzene-1, 3-dimethanamine	10-25

<u>CAS-No.</u>	<u>GHS Symbols</u>	<u>GHS Hazard Statements</u>	<u>M-Factors</u>
100-51-6	GHS07	H302-319-332	0

2855-13-2	GHS05-GHS07	H302-312-314-317-412	0
1477-55-0	GHS05-GHS06	H302-314-317-331-412	0

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

## 4. First-aid Measures

### 4.1 Description of First Aid Measures

GENERAL NOTES: When symptoms persist or in all cases of doubt seek medical advice.

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

Self protection of the first aider:

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

### 4.2 Most important symptoms and effects, both acute and delayed

Causes severe burns. Harmful in contact with skin and if swallowed. Irritating to eyes and respiratory system.

### 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. High volume water jet. Hazardous decomposition products formed under fire conditions. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. 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.

### 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:** Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. Do not breathe vapours or spray mist.

**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>
3-aminomethyl-3,5,5-trimethylcyclohexylamine	10-25		
benzyl alcohol	10-25		
benzene-1, 3-dimethanamine	10-25		

**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 filter for organic vapor.

**EYE PROTECTION:** Safety glasses.

**HAND PROTECTION:** Rubber or plastic gloves. Long sleeved clothing. Remove and wash contaminated clothing before re-use. Rubber or plastic apron.

**OTHER PROTECTIVE EQUIPMENT:** No Information

**ENGINEERING CONTROLS:** Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

## 9. Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

Appearance:	Light Yellow - Clear
Physical State	Liquid
Odor	Amine Like
Odor threshold	Not determined
pH	11-12
Melting point /freezing point (°C)	Not determined

Boiling point/range (°C)	302 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	Not determined
Vapour density	ca. 1.05 g/cm <sup>3</sup>
Relative density	Not determined
Solubility in /Miscibility with water	Limited
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Viscosity	Not determined
Explosive properties	N/A
Oxidising properties	Not determined

## 9.2 Other information

VOC Content g/l:	12
Specific Gravity (g/cm <sup>3</sup> )	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 normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation may occur.

### 10.4 Conditions to avoid

Direct sources of heat

### 10.5 Incompatible materials

Strong oxidizing agents.

### 10.6 Hazardous decomposition products

Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke.

## 11. Toxicological Information

### 11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50:

Inhalation LC50:

Irritation: No information available.

Corrosivity: Causes burns. Dehydrating on skin. Eye contact may cause irreversible damage.

Sensitization: Prolonged or repeated skin contact may result in allergic eczema.

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>
100-51-6	benzyl alcohol	1230 mg/kg rat, oral		1000 ppm /8 hrs rat inhalation
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	500 mg/kg oral		
1477-55-0	benzene-1, 3-dimethanamine	1514 mg/kg, oral		

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



**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:

<u>Chemical Name</u>	<u>CAS-No.</u>
ethylenediamine	107-15-3

**U.S. Clean Air Act**

EPA Coating Category:	Floor Coatings
EPA VOC Content Limit (g/l):	400
Product VOC Content (g/l)	12
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 or exempt.

**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.
H312	Harmful in contact with skin.

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H412	Harmful to aquatic life with long lasting effects.

## 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 &amp; 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 <sup>3</sup>	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 215-CR-A-FORMULA Revision Date: 03/20/2015  
Product Name: Flowcoat CR Base A Supercedes Date: 07/28/2014
- 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: 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
- Hazardous to the aquatic environment, Chronic, category 2  
Carcinogenicity, category 1A  
Eye Irritation, category 2  
Skin Irritation, category 2  
Skin Sensitizer, category 1

## 2.2 Label elements

## Symbol(s) of Product



## Signal Word

Danger

## Named Chemicals on Label

trimethylolpropane triacrylate, reaction product bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700), phenol, polymer with formaldehyde, glycidyl ether, oxirane, mono[(c12-14-alkyloxy)methyl] derivs.

## HAZARD STATEMENTS

Hazardous to the aquatic environment, Chronic, category 2	H411	Toxic to aquatic life with long lasting effects.
Carcinogenicity, category 1A	H350-1A	May cause cancer.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Skin Irritation, category 2	H315	Causes skin irritation.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.

## PRECAUTION PHRASES

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
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.
P284	Wear respiratory protection.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P308+313	IF exposed or concerned: Get medical advice/attention
P332+313	If skin irritation occurs: Get medical advice/attention.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.

## 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

## 3.2 Mixtures

## Hazardous Ingredients

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>%</u>
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25068-38-6	reaction product bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)	75-100
28064-14-4	phenol, polymer with formaldehyde, glycidyl ether	2.5-10
68609-97-2	oxirane, mono[(c12-14-alkyloxy)methyl] derivs.	2.5-10
15625-89-5	trimethylolpropane triacrylate	1.0-2.5
64742-46-7	distillates (petroleum), hydrotreated middle	0.1-1.0

<u>CAS-No.</u>	<u>GHS Symbols</u>	<u>GHS Hazard Statements</u>	<u>M-Factors</u>
25068-38-6	GHS07-GHS09	H315-317-319-411	0
28064-14-4	GHS07-GHS09	H315-317-319-411	0
68609-97-2	GHS07	H315-317	0
15625-89-5	GHS07	H315-317-319	0
64742-46-7	GHS08	H350	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

GENERAL NOTES: When symptoms persist or in all cases of doubt seek medical advice.

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

Self protection of the first aider:

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

### 4.2 Most important symptoms and effects, both acute and delayed

Irritating to skin. May cause sensitization by skin contact. Prolonged or repeated exposure increases the risk. Harmful to aquatic organisms.

### 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. High volume water jet. Hazardous decomposition products formed under fire conditions. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Contains epoxy constituents. See information supplied by the manufacturer.

## 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. May cause long-term adverse effects in the aquatic environment

### 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. Wear personal protective equipment

**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:** Extremes of temperature and direct sunlight

**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>
reaction product bisphenol-a-(epichlorhydrin)	75-100		
epoxy resin (number average molecularweight <= 700)			
phenol, polymer with formaldehyde, glycidyl ether	2.5-10		
oxirane, mono[(c12-14-alkyloxy)methyl] derivs.	2.5-10		
trimethylolpropane triacrylate	1.0-2.5		
distillates (petroleum), hydrotreated middle	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:** No personal respiratory protective equipment normally required.

**EYE PROTECTION:** Safety glasses.

HAND PROTECTION: Rubber or plastic gloves. Long sleeved clothing. Remove and wash contaminated clothing before re-use. Rubber or plastic apron.

OTHER PROTECTIVE EQUIPMENT: No Information

ENGINEERING CONTROLS: Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

## 9. Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

Appearance:	Transparent Resin
Physical State	Liquid
Odor	Weak Epoxy
Odor threshold	Not determined
pH	Non-aqueous
Melting point /freezing point (°C)	Not determined
Boiling point/range (°C)	136 - 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	Not determined
Vapour density	1.16 g/cm <sup>3</sup>
Relative density	Not determined
Solubility in /Miscibility with water	Insoluble
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Viscosity	Not determined
Explosive properties	N/A
Oxidising properties	N/A

### 9.2 Other information

VOC Content g/l:	20
Specific Gravity (g/cm <sup>3</sup> )	0.120

## 10. Stability and Reactivity

### 10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

### 10.2 Chemical stability

No decomposition if stored and applied as directed. Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

## 10.4 Conditions to avoid

Extremes of temperature and direct sunlight

## 10.5 Incompatible materials

Strong oxidizing agents. Acids and bases.

## 10.6 Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapours. Alcohols. Exothermic reaction. Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke.

## 11. Toxicological Information

## 11.1 Information on toxicological effects

## Acute Toxicity:

Oral LD50:

Inhalation LC50:

Irritation: Irritating to eyes, skin, mouth and pharynx.

Corrosivity: No information available.

Sensitization: Prolonged or repeated skin contact may result in allergic eczema.

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>
25068-38-6	reaction product bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)	>2000 mg/kg, rat, oral	>2000 mg/kg, rat	
28064-14-4	phenol, polymer with formaldehyde, glycidyl ether	5000 mg/kg, oral, rat	>2000 mg/kg, rabbit	
68609-97-2	oxirane, mono[(c12-14-alkyloxy)methyl] derivs.	17100 mg/kg, oral, rat		
15625-89-5	trimethylolpropane triacrylate	5000 mg/kg, oral, rat		
64742-46-7	distillates (petroleum), hydrotreated middle	3160 mg/kg rabbit oral		

## 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>
25068-38-6	reaction product bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)	No information	No information	
28064-14-4	phenol, polymer with formaldehyde, glycidyl ether	No information	No information	
68609-97-2	oxirane, mono[(c12-14-alkyloxy)methyl] derivs.	No information	No information	
15625-89-5	trimethylolpropane triacrylate	No information	No information	
64742-46-7	distillates (petroleum), hydrotreated middle	No information	No information	

## 13. Disposal Considerations

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

## 14. Transport Information

14.1 UN number	UN3082
14.2 UN proper shipping name	Environmentally Hazardous Substance, Liquid, N.O.S.
Technical name	Epoxy Resin
14.3 Transport hazard class(es)	9
Subsidiary shipping hazard	N/A
14.4 Packing group	III
14.5 Environmental hazards	Yes
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:

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 U.S. Superfund Amendment and Reauthorization Act (SARA) of 1986 and 40 CFR part 372:

<u>Chemical Name</u>	<u>CAS-No.</u>
xylene	1330-20-7
ethylbenzene	100-41-4

#### 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 12(b) 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)	<20
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%.

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 or exempt.

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

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H350	May cause cancer.
H411	Toxic to aquatic life with long lasting effects.

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 <sup>3</sup>	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 215-CR-B-1GAL Revision Date: 03/20/2015  
Product Name: Flowcoat CR Hardener B Supercedes Date: 07/28/2014
- 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
- Acute Toxicity, Oral, category 4
  - Acute Toxicity, Inhalation, category 4
  - Hazardous to the aquatic environment, Chronic, category 3
  - Reproductive Toxicity, category 2
  - Skin Corrosion, category 1
  - Skin Sensitizer, category 1

## 2.2 Label elements

## Symbol(s) of Product



## Signal Word

Danger

## Named Chemicals on Label

para-tertiarybutylphenol, benzyl alcohol, benzene-1, 3-dimethanamine, 3-aminomethyl-3,5,5-trimethylcyclohexylamine, nonylphenol, trimethyl 1-1,6-hexanediamine

## HAZARD STATEMENTS

Acute Toxicity, Oral, category 4	H302	Harmful if swallowed.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
Hazardous to the aquatic environment, Chronic, category 3	H412	Harmful to aquatic life with long lasting effects.
Reproductive Toxicity, category 2	H361	Suspected of damaging fertility or the unborn child.
Skin Corrosion, category 1	H314-1	Causes severe skin burns and eye damage.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.

## PRECAUTION PHRASES

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice/attention
P333+313	If skin irritation or rash occurs: Get medical advice/attention.

## 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

## 3.2 Mixtures

## Hazardous Ingredients

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>%</u>
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	10-25
100-51-6	benzyl alcohol	10-25

1477-55-0	benzene-1, 3-dimethanamine	10-25
98-54-4	parateritarybutylphenol	2.5-10
25620-58-0	trimethyl 1-1,6-hexanediamine	2.5-10
25154-52-3	nonylphenol	1.0-2.5

<u>CAS-No.</u>	<u>GHS Symbols</u>	<u>GHS Hazard Statements</u>	<u>M-Factors</u>
100-51-6	GHS07	H302-319-332	0
2855-13-2	GHS05-GHS07	H302-312-314-317-412	0
1477-55-0	GHS05-GHS06	H302-314-317-331-412	0
98-54-4	GHS07-GHS08-GHS09	H315-319-335-361-411	0
25620-58-0	GHS05-GHS07	H302-314-317-412	0
25154-52-3	GHS05-GHS07-GHS08-GHS09	H302-314-361-400-410	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

GENERAL NOTES: When symptoms persist or in all cases of doubt seek medical advice.

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

Self protection of the first aider:

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

### 4.2 Most important symptoms and effects, both acute and delayed

Causes severe burns. Harmful in contact with skin and if swallowed. Irritating to eyes and respiratory system.

### 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. High volume water jet. Hazardous decomposition products formed under fire conditions. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. 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

## 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:** Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. Do not breathe vapours or spray mist.

**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>
3-aminomethyl-3,5,5-trimethylcyclohexylamine	10-25		
benzyl alcohol	10-25		
benzene-1, 3-dimethanamine	10-25		
paratertiarybutylphenol	2.5-10		
trimethyl 1-1,6-hexanediamine	2.5-10		
nonylphenol	1.0-2.5		

**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 filter for organic vapor.

**EYE PROTECTION:** Safety glasses.

**HAND PROTECTION:** Rubber or plastic gloves. Long sleeved clothing. Remove and wash contaminated clothing before re-use. Rubber or plastic apron.

**OTHER PROTECTIVE EQUIPMENT:** No Information

**ENGINEERING CONTROLS:** Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

## 9. Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

Appearance:	Light Yellow - Clear
Physical State	Liquid
Odor	Amine Like
Odor threshold	Not determined
pH	11-12
Melting point /freezing point (°C)	Not determined
Boiling point/range (°C)	302 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	Not determined
Vapour density	ca. 1.05 g/cm <sup>3</sup>
Relative density	Not determined
Solubility in /Miscibility with water	Limited
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Viscosity	Not determined
Explosive properties	N/A
Oxidising properties	Not determined

### 9.2 Other information

VOC Content g/l:	12
Specific Gravity (g/cm <sup>3</sup> )	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 normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation may occur.

### 10.4 Conditions to avoid

Direct sources of heat

### 10.5 Incompatible materials

Strong oxidizing agents.

## 10.6 Hazardous decomposition products

Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke.

## 11. Toxicological Information

## 11.1 Information on toxicological effects

## Acute Toxicity:

Oral LD50:

Inhalation LC50:

Irritation: No information available.

Corrosivity: Causes burns. Dehydrating on skin. Eye contact may cause irreversible damage.

Sensitization: Prolonged or repeated skin contact may result in allergic eczema.

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>
100-51-6	benzyl alcohol	1230 mg/kg rat, oral		1000 ppm /8 hrs rat, inhalation
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	500 mg/kg oral		
1477-55-0	benzene-1, 3-dimethanamine	1514 mg/kg, oral		
98-54-4	paratertiarybutylphenol	5600 mg/kg skin 1500 mg/kg oral		
25620-58-0	trimethyl 1-1,6-hexanediamine	910 mg/kg, oral, rat		
25154-52-3	nonylphenol	1620 mg/kg oral		

## Additional Information:

No Information

## 12. Ecological Information

## 12.1 Toxicity:

EC 50 48hr (Daphnia):	No information
IC 50 72hr (Algae):	No information
LC 50 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>
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	No information	No information	
100-51-6	benzyl alcohol	No information	No information	
1477-55-0	benzene-1, 3-dimethanamine	No information	No information	
98-54-4	paratertiarybutylphenol	No information	No information	
25620-58-0	trimethyl 1-1,6-hexanediamine	No information	No information	
25154-52-3	nonylphenol	0.0848 mg/l	No information	0.128 mg/l

### 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	UN2735
14.2 UN proper shipping name	Amines, Liquid, Corrosive, N.O.S.
Technical name	Benzene-1,3-Dimethanamine, 3-aminomethyl-3,5,5-trimethylcyclohexylamine
14.3 Transport hazard class(es)	8
Subsidiary shipping hazard	N/A
14.4 Packing group	PG III
14.5 Environmental hazards	RQ 1001 lbs.
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:

## 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 U.S. Superfund Amendment and Reauthorization Act (SARA) of 1986 and 40 CFR part 372:

No Sara 313 components exist in this product

## 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 12(b) 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)	12
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 or exempt.

## 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.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

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 <sup>3</sup>	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.

