

Safety Data Sheet

In accordance with Hazardous Products Regulations (HPR) (SOR/2015-17)

Forbo C930 Conductive Adhesive
Revision Number 1

Revision Date 03-May-2019
Supersedes Date: 03-May-2019

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

Product identifier

Product Name Forbo C930 Conductive Adhesive

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Adhesives

Uses advised against No information available

Details of the supplier of the safety data sheet

Responsible Party

Forbo Flooring Systems
3983 Nashua Dr., Unit 1
Mississauga, ON L4V 1P3
Canada
Phone: +1 (800) 268-8108

Emergency telephone number

Telephone: +1 (800) 268-8108

2. Hazards Identification

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

Label elements

Warning

Hazard statements

Causes skin irritation
Causes serious eye irritation

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Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Specific treatment (see supplemental first aid instructions on this label)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Skin

IF ON SKIN: Wash with plenty of water and soap
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse

Precautionary Statements - Storage

Not applicable

Precautionary Statements - Disposal

Not applicable

Other information

Unknown acute toxicity 3 % of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/information on Ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Limestone	1317-65-3	15 - 40	-	-
1,2-Propylene glycol	57-55-6	1 - 5	-	-
Carbonic acid, magnesium salt (1:1)	546-93-0	1 - 5	-	-
Quaternary ammonium compounds, ethyldimethylsoya alkyl, Et sulfates	68308-67-8	0.5 - 1.5	-	-
Quartz	14808-60-7	0.1 - 1	-	-
Silver	7440-22-4	0.1 - 1	-	-

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4. First Aid Measures

FIRST AID

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician or poison control center immediately.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation. Irritating to skin.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-Fighting Measures

Suitable extinguishing media	Dry chemical, CO ₂ , alcohol-resistant foam or water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	Full water jet.
Specific hazards arising from the chemical	No information available.
Hazardous Combustion Products	Carbon monoxide. Carbon dioxide (CO ₂). Hydrocarbons.
Explosion Data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

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Personal precautions Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Other information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use personal protective equipment as required. Dam up. Cover liquid spill with sand, earth or other noncombustible absorbent material. Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and Storage

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep out of the reach of children. Keep in properly labeled containers. Keep from freezing. Keep containers tightly closed in a dry, cool and well-ventilated place.

Reference to other sections Section 10: STABILITY AND REACTIVITY

8. Exposure Controls/Personal Protection

Control parameters

Exposure Limits . This product contains substances which in their raw state are powder form, however in this product they are in a non-respirable form. Inhalation of powder/dust particles is unlikely to occur from exposure to this product.

Chemical name	Alberta	British Columbia	Ontario TWA	Quebec
Limestone 1317-65-3	TWA: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 3 mg/m ³ STEL: 20 mg/m ³		TWA: 10 mg/m ³
1,2-Propylene glycol 57-55-6			TWA: 10 mg/m ³ TWA: 50 ppm	

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Carbonic acid, magnesium salt (1:1) 546-93-0		TWA: 10 mg/m ³ TWA: 3 mg/m ³	TWA: 155 mg/m ³	TWA: 10 mg/m ³
Quartz 14808-60-7	TWA: 0.025 mg/m ³	TWA: 0.025 mg/m ³	TWA: 0.10 mg/m ³	TWA: 0.1 mg/m ³
Silver 7440-22-4	TWA: 0.1 mg/m ³	TWA: 0.01 mg/m ³ STEL: 0.03 mg/m ³	TWA: 0.1 mg/m ³	TWA: 0.1 mg/m ³

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Wear suitable gloves and eye/face protection. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Take off contaminated clothing and wash it before reuse. Regular cleaning of equipment, work area and clothing is recommended.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State Liquid
Appearance viscous Liquid
Color No information available
Odor Slight
Odor Threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	
Melting point / freezing point	No data available	
Boiling point / boiling range	100 °C / 212 °F	
Flash Point	> 100 °C / 212 °F	
Evaporation Rate	1.0	
Flammability (solid, gas)	No data available	
Flammability Limit in Air		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor Pressure	No data available	
Vapor Density	No data available	

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Relative Density	No data available
Water Solubility	Dispersible
Solubility in Other Solvents	No data available
Partition coefficient	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Kinematic Viscosity	No data available
Dynamic Viscosity	No data available
Explosive properties	No information available.
Oxidizing properties	No information available.

Other information

Softening Point	No information available
Molecular Weight	No information available
Density	No information available
Bulk Density	No information available
Solid content (%)	No information available
VOC (volatile organic compound)	No information available

No information available

10. Stability and Reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	Carbon monoxide. Carbon dioxide (CO ₂). Hydrocarbons.

11. Toxicological Information

Information on likely routes of exposure

Product Information

Inhalation	Based on available data, the classification criteria are not met.
Eye contact	Specific test data for the substance or mixture is not available. Irritating to eyes. (based on components).
Skin contact	Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).
Ingestion	Based on available data, the classification criteria are not met.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Redness. May cause redness and tearing of the eyes.
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Numerical measures of toxicity

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Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	34,798.00 mg/kg
ATEmix (inhalation-dust/mist)	59.66 mg/l
ATEmix (inhalation-vapor)	357.00 mg/l

Unknown acute toxicity

- 3 % of the mixture consists of ingredient(s) of unknown toxicity
- 1 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 3 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 3 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
- 3 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 3 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Limestone 1317-65-3	>5000 mg/kg (rat)	-	-
1,2-Propylene glycol 57-55-6	= 20 g/kg (Rat)	LD50 > 2000 mg/kg (Rabbit)	LC50 (4h) >44.9 mg/L (Rat)
Carbonic acid, magnesium salt (1:1) 546-93-0	>2000 mg/Kg Rat	-	-
Quartz 14808-60-7	>2000 mg/kg (Rat)	-	-
Silver 7440-22-4	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. As Quartz (14808-60-7) is inextricably bound in the polymer matrix, it is not expected to be available as an airborne hazard (dust, mist, or spray) under normal condition of uses.

Chemical name	ACGIH	IARC	NTP	OSHA
Quartz 14808-60-7	A2	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

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STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target Organ Effects	Eyes, retina, Skin.
Subchronic Toxicity	No information available.
Neurological Effects	No information available.
Other Adverse Effects	No information available.
Aspiration hazard	No information available.

12. Ecological Information

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Limestone 1317-65-3	CE50 (72h) >200mg/L Algae (<i>Desmodesmus subspicatus</i>)	CL50 (96h) >10000mg/L Fish (<i>Oncorhynchus mykiss</i>)	-	CE50 (48h) >1000 mg/L <i>Daphnia Magna</i>
1,2-Propylene glycol 57-55-6	EC50: =19000mg/L (96h, <i>Pseudokirchneriella subcapitata</i>)	LC50: =710mg/L (96h, <i>Pimephales promelas</i>) LC50: =51600mg/L (96h, <i>Oncorhynchus mykiss</i>) LC50: 41 - 47mL/L (96h, <i>Oncorhynchus mykiss</i>) LC50: =51400mg/L (96h, <i>Pimephales promelas</i>)	-	EC50: >10000mg/L (24h, <i>Daphnia magna</i>) EC50: >1000mg/L (48h, <i>Daphnia magna</i>)
Silver 7440-22-4	-	LC50: 0.00155 - 0.00293mg/L (96h, <i>Pimephales promelas</i>) LC50: =0.064mg/L (96h, <i>Lepomis macrochirus</i>) LC50: =0.0062mg/L (96h, <i>Oncorhynchus mykiss</i>)	-	EC50: =0.00024mg/L (48h, <i>Daphnia magna</i>)

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Chemical name	Partition coefficient
Limestone 1317-65-3	0.9
1,2-Propylene glycol 57-55-6	-1.07

Mobility in soil No information available

Other Adverse Effects No information available.

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13. Disposal Considerations

Waste treatment methods

Waste from residues/unused products It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Contaminated packaging Do not reuse empty containers.

14. Transport Information

Note: The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments made in non-bulk packages (see regulatory definition) The information shown here, may not always agree with the bill of lading shipping description for the material

TDG

UN/ID No	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Silver,Quaternary ammonium compounds, ethyldimethylsoya alkyl, Et sulfates)
Hazard Class	9
Packing Group	III
Special Provisions	16, 99
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Silver,Quaternary ammonium compounds, ethyldimethylsoya alkyl, Et sulfates), 9, III

IATA

UN Number	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Silver,Quaternary ammonium compounds, ethyldimethylsoya alkyl, Et sulfates)
Transport hazard class(es)	9
Packing Group	III
ERG Code	9L
Special Provisions	A97, A158, A197
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Silver,Quaternary ammonium compounds, ethyldimethylsoya alkyl, Et sulfates), 9, III

IMDG

UN Number	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Silver, Quaternary ammonium compounds, ethyldimethylsoya alkyl, Et sulfates), Marine Pollutant
Transport hazard class(es)	9
Packing Group	III
EmS-No.	F-A, S-F
Special Provisions	274, 335, 969
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Silver,Quaternary ammonium compounds, ethyldimethylsoya alkyl, Et sulfates), 9, III, Marine Pollutant

15. Regulatory Information

NPRI - National Pollutant Release Inventory

No component is listed on the NPRI above the threshold

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International Inventories

TSCA	Listed
DSL	Not Listed

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL - Canadian Domestic Substances List

Listed - The components of this product are either listed or exempt from listing on inventory.

Not Listed - One or more components of this product are not listed on inventory.

16. Other information, including date of preparation of the last revision

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Revision Date 03-May-2019

Revision note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet