

Franklin International

Material Safety Data Sheet

Marlite C551 Solvent Free FRP Adhesive

1. Product and company identification

CAS #	: Mixture
Address	: Franklin International 2020 Bruck Street Columbus OH 43207
Contact person	: Franklin Technical Services
Telephone	: (800) 877-4583
<u>In case of emergency</u>	: Franklin Security (614) 445-1300
Reference number	: 3432
Product code	: 3989
Date of revision	: 8/23/2012.
Print date	: 2/8/2013.
Chemtrec (24 Hour)	: (800) 424 - 9300
Chemtrec International	: (703) 527 - 3887
Product use	: Adhesive Solvent Free Adhesive

2. Hazards identification

Emergency overview

Physical state	: Liquid. [Paste.]
Color	: Brown. [Light]
Odor	: Characteristic. [Slight]
Signal word	: WARNING!
Hazard statements	: CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION.
Precautionary measures	: Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Keep container tightly closed. Wash thoroughly after handling.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Routes of entry	: Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation	: Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation. Slightly irritating to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	: Harmful if swallowed.
Skin	: Slightly irritating to the skin.
Eyes	: Irritating to eyes.

Potential chronic health effects

Chronic effects	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.

2. Hazards identification

- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.
- Target organs** : May cause damage to the following organs: upper respiratory tract, skin, eyes.
Contains material which may cause damage to the following organs: eye, lens or cornea.

Over-exposure signs/symptoms

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Ingestion** : No specific data.
- Skin** : Adverse symptoms may include the following:
irritation
redness
- Eyes** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Medical conditions aggravated by over-exposure** : None known.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
oxydipropyl dibenzoate	27138-31-4	1 - 5
urea	57-13-6	1 - 5

Canada

Name	CAS number	%
oxydipropyl dibenzoate	27138-31-4	1 - 5
urea	57-13-6	1 - 5
ethanediol	107-21-1	0.5 - 1

Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special
urea	57-13-6	Not available.	1 - 5	-	2	0	0	-
oxydipropyl dibenzoate	27138-31-4	Not available.	1 - 5	-	2	0	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : 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.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Small spill** : Stop leak if without risk. Move containers from spill area. Dispose of via a licensed waste disposal contractor. Absorb with an inert material.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Do not store below the following temperature: 0°C (32°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
urea	AIHA WEEL (United States, 10/2011). TWA: 10 mg/m ³ 8 hour(s).

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	Notations
ethanediol	US ACGIH 3/2012	-	-	-	-	-	-	-	100	-	[a]
	AB 4/2009	-	-	-	-	-	-	-	100	-	[3] [b]
	BC 9/2011	-	-	-	-	-	-	-	100	-	[a]
		-	10	-	-	20	-	-	-	-	[c]
		-	-	-	-	-	-	50	-	-	[d]
urea	ON 7/2010	-	-	-	-	-	-	-	100	-	[b]
	QC 9/2011	-	-	-	50	127	-	-	-	-	[e]
	US AIHA 10/2011	-	10	-	-	-	-	-	-	-	

[3]Skin sensitization

Form: [a]Aerosol [b]aerosol [c]Particulate [d]Vapour [e]vapour and mist

Mexico

Occupational exposure limits

No exposure limit value known.

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

8. Exposure controls/personal protection

- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

9. Physical and chemical properties

- Physical state** : Liquid. [Paste.]
- Flash point** : Closed cup: >93.3°C (>199.9°F) [Setaflash.]
- Color** : Brown. [Light]
- Odor** : Characteristic. [Slight]
- pH** : 5
- Boiling/condensation point** : 100°C (212°F)
- Relative density** : 1.39
- Volatility** : 33% (w/w)
- Evaporation rate** : <1 (butyl acetate = 1)
- VOC (less water, less exempt solvents)** : 2.6 g/l
- Solubility** : Soluble in the following materials: cold water and hot water.

10. Stability and reactivity

- Chemical stability** : The product is stable.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.
- Incompatibility** : Reactive or incompatible with the following materials: acids and alkalis.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
urea	LD50 Oral	Rat	8471 mg/kg	-
oxydipropyl dibenzoate	LD50 Oral	Rat	3295 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

11. Toxicological information

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
urea	Skin - Mild irritant	Human	-	72 hours 22 milligrams Intermittent	-
	Skin - Moderate irritant	Human	-	24 hours 20 Percent	-

Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : This product may irritate eyes upon contact.
- Respiratory** : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ethanediol	LD50 Oral	Rat	4700 mg/kg	-
oxydipropyl dibenzoate	LD50 Oral	Rat	3295 mg/kg	-
urea	LD50 Oral	Rat	8471 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanediol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	1 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	6 hours 1440 milligrams	-
	Skin - Mild irritant	Rabbit	-	555 milligrams	-
urea	Skin - Mild irritant	Human	-	72 hours 22 milligrams Intermittent	-
	Skin - Moderate irritant	Human	-	24 hours 20 Percent	-

Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : This product may irritate eyes upon contact.

11. Toxicological information

Respiratory : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Mexico

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
urea	LD50 Oral	Rat	8471 mg/kg	-
oxydipropyl dibenzoate	LD50 Oral	Rat	3295 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
-	Skin - Mild irritant	Human	-	72 hours 22 milligrams Intermittent	-
-	Skin - Moderate irritant	Human	-	24 hours 20 Percent	-

Conclusion/Summary

Skin : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Eyes : This product may irritate eyes upon contact.

Respiratory : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

12. Ecological information

Product/ingredient name	Result	Species	Exposure
urea	Acute EC50 6573.1 mg/L Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate - <24 hours	48 hours
	Acute EC50 3910000 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 5000 ug/L Fresh water	Fish - Colisa fasciata - Fingerling	96 hours

Persistence/degradability

No known significant effects or critical hazards.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
ethanediol	Acute LC50 6900000 to 8800000 ug/L Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 41000000 ug/L Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 8050000 ug/L Fresh water	Fish - Pimephales promelas - <=7 days	96 hours
urea	Acute EC50 6573.1 mg/L Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate - <24 hours	48 hours
	Acute EC50 3910000 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 5000 ug/L Fresh water	Fish - Colisa fasciata - Fingerling	96 hours

Persistence/degradability

No known significant effects or critical hazards.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
urea	Acute EC50 6573.1 mg/L Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate - <24 hours	48 hours
	Acute EC50 3910000 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 5000 ug/L Fresh water	Fish - Colisa fasciata - Fingerling	96 hours

No known significant effects or critical hazards.

Persistence/degradability

No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal

: The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information**United States**

- HCS Classification** : Irritating material
U.S. Federal regulations : **TSCA 4(a) final test rules**: sodium hydroxymethanesulphinate; acetaldehyde
TSCA 8(a) PAIR: acetaldehyde
TSCA 8(a) IUR Exempt/Partial exemption: Not determined

Commerce control list precursor: 2-diethylaminoethanol**United States inventory (TSCA 8b)**: All components are listed or exempted.**SARA 302/304/311/312 extremely hazardous substances**: No products were found.**SARA 302/304 emergency planning and notification**: No products were found.**SARA 302/304/311/312 hazardous chemicals**: No products were found.**SARA 311/312 MSDS distribution - chemical inventory - hazard identification**: No products were found.**Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)** : Not listed**Clean Air Act Section 602 Class I Substances** : Not listed**Clean Air Act Section 602 Class II Substances** : Not listed**DEA List I Chemicals (Precursor Chemicals)** : Not listed**DEA List II Chemicals (Essential Chemicals)** : Not listed**State regulations**

- Massachusetts** : None of the components are listed.
New York : None of the components are listed.
New Jersey : None of the components are listed.

15. Regulatory information

Pennsylvania : None of the components are listed.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).

Canadian lists

Canadian NPRI : None of the components are listed.

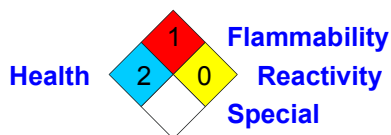
CEPA Toxic substances : None of the components are listed.

Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :



International regulations

International lists :

- Australia inventory (AICS)**: Not determined.
- China inventory (IECSC)**: Not determined.
- Japan inventory**: Not determined.
- Korea inventory**: Not determined.
- New Zealand Inventory of Chemicals (NZIoC)**: Not determined.
- Philippines inventory (PICCS)**: Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION.

Hazardous Material Information System (U.S.A.) :

Health	1
Flammability	1
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :

16. Other information



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

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Date of previous issue : 4/26/2012.

Version : 2

☑ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.