



Safety Data Sheet
prepared to UN GHS Revision 3

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

- 1.1 Product Identifier** C111S1NL
- Product Name:** C-FLEX 1-2-3 AF RED **Revision Date:** 11/14/2016
- 1.2 Relevant identified uses of the substance or mixture and uses advised against** Monocomponent industrial coating - Industrial use. **Supersedes Date:** 10/17/2016
- 1.3 Details of the supplier of the safety data sheet**
- Manufacturer:** Carboline Company
2150 Schuetz Road
St. Louis, MO USA 63146
- Regulatory / Technical Information:
Contact Carboline Technical Services at
1-800-848-4645
- Datasheet Produced by:** Schlereth, Ken - ehs@stoncor.com
- 1.4 Emergency telephone number:** CHEMTREC 1-800-424-9300 (Inside US)
CHEMTREC +1 703 5273887 (Outside US)
HEALTH - Pittsburgh Poison Control 1-412-681-6669

2. Hazard Identification

2.1 Classification of the substance or mixture

Acute Toxicity, Inhalation, category 4
 Acute Toxicity, Oral, category 4
 Hazardous to the aquatic environment, Acute, category 1
 Hazardous to the aquatic environment, Chronic, category 1
 Flammable Liquid, category 2
 Respiratory Sensitizer, category 1
 Skin Irritation, category 2
 Skin Sensitizer, category 1

2.2 Label elements

Symbol(s) of Product



Signal Word

danger

Named Chemicals on Label

ORTHO-XYLENE, ETHYL BENZENE, PARA-XYLENE, META-XYLENE, CUPRIC OXIDE (CuO), CUPROUS OXIDE (Cu₂O), GUM ROSIN

GHS HAZARD STATEMENTS

Flammable Liquid, category 2	H225	Highly flammable liquid and vapour.
Acute Toxicity, Oral, category 4	H302	Harmful if swallowed.
Skin Irritation, category 2	H315	Causes skin irritation.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
Respiratory Sensitizer, category 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Hazardous to the aquatic environment, Acute, category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment, Chronic, category 1	H410	Very toxic to aquatic life with long lasting effects.

GHS PRECAUTION PHRASES

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P235	Keep cool.
P261	Avoid breathing 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.
P285	In case of inadequate ventilation wear respiratory protection.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P332+313	If skin irritation occurs: Get medical advice/attention.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P341	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342+311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P391	Collect spillage.
P403+233	Store in a well-ventilated place. Keep container tightly closed.

2.3 Other hazards

No Information

Results of PBT and vPvB assessment:

Unknown

3. Composition/Information On Ingredients

3.2 Mixtures

Hazardous Ingredients

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>%</u>
1317-39-1	CUPROUS OXIDE (Cu ₂ O)	25-50
540-88-5	TERT-BUTYL ACETATE	2.5-10
108-38-3	META-XYLENE	2.5-10
8050-09-7	GUM ROSIN	2.5-10
106-42-3	PARA-XYLENE	2.5-10
100-41-4	ETHYL BENZENE	2.5-10
1314-13-2	ZINC OXIDE	2.5-10
95-47-6	ORTHO-XYLENE	2.5-10
1317-38-0	CUPRIC OXIDE (CuO)	1.0-2.5

<u>CAS-No.</u>	<u>GHS Symbols</u>	<u>GHS Hazard Statements</u>	<u>M-Factors</u>
1317-39-1	GHS07-GHS09	H302-400-410	0
540-88-5	GHS02	H225	0
108-38-3	GHS02-GHS07	H226-312-315-332	0
8050-09-7	GHS07-GHS08	H315-317-319-334	0
106-42-3	GHS02-GHS07-GHS08	H226-312-315-332-335-371	0
100-41-4	GHS02-GHS07-GHS08	H225-315-319-332-373-412	0
1314-13-2	GHS09	H400-410	0
95-47-6	GHS02-GHS07	H226-312-315-332	0
1317-38-0	GHS07-GHS09	H302-400	0

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

4. First-aid Measures

4.1 Description of First Aid Measures

AFTER INHALATION: Give oxygen or artificial respiration if needed. Remove person to fresh air. If signs/symptoms continue, get medical attention.

AFTER SKIN CONTACT: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If skin irritation persists, call a physician.

AFTER EYE CONTACT: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

AFTER INGESTION: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If swallowed, call a poison control centre or doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed. Irritating to eyes and skin. Risk of serious damage to the lungs (by aspiration). Vapours may cause drowsiness and dizziness.

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.

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

5. Fire-fighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable liquid. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. Provide adequate ventilation. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Electrical installations / working materials must comply with the technological safety standards. Wear shoes with conductive soles.

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. Cool containers / tanks with water spray. Flammable.

6. Accidental Release Measures**6.1 Personal precautions, protective equipment and emergency procedures**

For personal protection see section 8. Ensure adequate ventilation. Evacuate personnel to safe areas. Evacuate personnel to safe areas. Remove all sources of ignition. Remove all sources of ignition. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Wear 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). 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 : Keep containers dry and tightly closed to avoid moisture absorption and contamination. Prepare the working solution as given on the label(s) and/or the user instructions. Do not breathe vapours or spray mist. Ensure all equipment is electrically grounded before beginning transfer operations. Do not use sparking tools. Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation/personal protection.

PROTECTION AND HYGIENE MEASURES : Handle in accordance with good industrial hygiene and safety practice. 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: Heat, flames and sparks.

STORAGE CONDITIONS: Keep container closed when not in use. 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>ACGIH TLV-TWA</u>	<u>ACGIH TLV-STEL</u>	<u>OSHA PEL-TWA</u>	<u>OSHA PEL-CEILING</u>	<u>OEL Note</u>
CUPROUS OXIDE (Cu ₂ O)	25-50	1 MG/M ³	NE	1 MG/M ³	NE	
TERT-BUTYL ACETATE	2.5-10	200 PPM	N/E	950 MG/M ³	N/E	
META-XYLENE	2.5-10	100 PPM	150 PPM	435 MG/M ³	N/E	
GUM ROSIN	2.5-10	N/E	N/E	N/E	N/E	

PARA-XYLENE	2.5-10	100 PPM	150 PPM	435 MGM3	N/E
ETHYL BENZENE	2.5-10	20 PPM	N/E	435 MGM3	N/E
ZINC OXIDE	2.5-10	2 MGM3	10 MGM3	5 MGM3	N/E
ORTHO-XYLENE	2.5-10	100 PPM	150 PPM	435 MG/M3	N/E
CUPRIC OXIDE (CuO)	1.0-2.5	1 MG/M3	NE	1 MG/M3	NE

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

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: In order to avoid inhalation of spray-mist and sanding dust, all spraying and sanding must be done wearing adequate respirator. Use only with ventilation to keep levels below exposure guidelines reported in this document. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure, or not able to monitor, use State or federally approved supplied air respirator. For silica containing coatings in a liquid state, and/or if no exposure limits are established above, air-supplied respirators are generally not required.

EYE PROTECTION: Safety glasses with side-shields.

HAND PROTECTION: Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Impervious gloves. Request information on glove permeation properties from the glove supplier.

OTHER PROTECTIVE EQUIPMENT: Ensure that eyewash stations and safety showers are close to the workstation location. Lightweight protective clothing

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:	Red Liquid
Physical State	Liquid
Odor	Solvent
Odor threshold	N/D
pH	N/D
Melting point / freezing point (°C)	N/D
Boiling point/range (°C)	281 F (138 C) - 343 F (173 C)
Flash Point, (°C)	18
Evaporation rate	Slower Than Ether
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	1.0 - 7.3
Vapour Pressure, mmHg	N/D
Vapour density	Heavier than Air
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	Unknown

Explosive properties Not determined

Oxidising properties Not determined

9.2 Other information

VOC Content g/l: 390

Specific Gravity (g/cm³) 1.87

10. Stability and Reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

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

11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50: N/D

Inhalation LC50: N/D

Irritation: Unknown

Corrosivity: Unknown

Sensitization: Unknown

Repeated dose toxicity: Unknown

Carcinogenicity: Unknown

Mutagenicity: Unknown

Toxicity for reproduction: Unknown

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>
1317-39-1	CUPROUS OXIDE (Cu ₂ O)	470 mg/kg, oral, rat	Not Available	Not Available

540-88-5	TERT-BUTYL ACETATE	3160 mg/kg, oral, rat	Not Available	4000 ppm/6 hours, rat inhalation
108-38-3	META-XYLENE	Not Available	Not Available	Not Available
8050-09-7	GUM ROSIN	2800 mg/kg, oral, rat	> 2000 mg/kg, oral, rat	Not Available
106-42-3	PARA-XYLENE	Not Available	Not Available	Not Available
100-41-4	ETHYL BENZENE	3500 mg/kg rat, oral	>5000 mg/l, dermal rabbit	17.2 mg/L Inh, Rat, 4Hr
1314-13-2	ZINC OXIDE	15000 mg/kg, oral, rat	Not Available	Not Available
95-47-6	ORTHO-XYLENE	Not Available	Not Available	Not Available
1317-38-0	CUPRIC OXIDE (CuO)	470 mg/kg, oral, rat	Not Available	Not Available

Additional Information:

Harmful if swallowed. Irritating to eyes and skin. Risk of serious damage to the lungs (by aspiration). Vapours may cause drowsiness and dizziness.

12. Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia): Unknown

IC50 72hr (Algae): Unknown

LC50 96hr (fish): Unknown

12.2 Persistence and degradability: Unknown

12.3 Bioaccumulative potential: Unknown

12.4 Mobility in soil: Unknown

12.5 Results of PBT and vPvB assessment: Unknown

12.6 Other adverse effects: Unknown

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
1317-39-1	CUPROUS OXIDE (Cu ₂ O)	No information	No information	No information
540-88-5	TERT-BUTYL ACETATE	No information	No information	No information
108-38-3	META-XYLENE	No information	No information	No information
8050-09-7	GUM ROSIN	No information	No information	No information
106-42-3	PARA-XYLENE	No information	No information	No information
100-41-4	ETHYL BENZENE	1.8 mg/l (Daphnia Magna)	4.6 mg/l (Green Algae)	4.2 mg/l (Rainbow Trout)
1314-13-2	ZINC OXIDE	No information	No information	No information
95-47-6	ORTHO-XYLENE	No information	No information	No information
1317-38-0	CUPRIC OXIDE (CuO)	No information	No information	No information

13. Disposal Considerations

13.1 WASTE TREATMENT METHODS: Do not burn, or use a cutting torch on, the empty drum. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of in accordance 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	UN 1263
14.2 UN proper shipping name	Paint
Technical name	N/A
14.3 Transport hazard class(es)	3
Subsidiary shipping hazard	N/A
14.4 Packing group	II
14.5 Environmental hazards	Unknown
14.6 Special precautions for user	Unknown
EmS-No.:	F-E, S-E
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	Unknown

15. Regulatory Information

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

U.S. Federal Regulations: As follows -

CERCLA - Sara Hazard Category

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

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

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

<u>Chemical Name</u>	<u>CAS-No.</u>
CUPROUS OXIDE (Cu ₂ O)	1317-39-1
META-XYLENE	108-38-3
PARA-XYLENE	106-42-3
ETHYL BENZENE	100-41-4
ZINC OXIDE	1314-13-2
ORTHO-XYLENE	95-47-6
CUPRIC OXIDE (CuO)	1317-38-0

Toxic Substances Control Act:

All components of this product are either listed on the TSCA Inventory or are exempt.

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>
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No TSCA 12(b) components exist in this product.

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>
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VINYL RESIN

TRADE SECRET

Pennsylvania Right-To-Know

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

Chemical Name**CAS-No.**

VINYL RESIN

TRADE SECRET

California Proposition 65:

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

Chemical Name**CAS-No.**

ETHYL BENZENE

100-41-4

BENZENE

71-43-2

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

Chemical Name**CAS-No.**

TOLUENE

108-88-3

BENZENE

71-43-2

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

No Information

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:**

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H371	May cause damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Reasons for revision

No Information

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.