Safety Data Sheet

RCC Corrosion Control / SDS #: RCC-20023-HB / Revision Date: 6/1/2022

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: COROFLAKE 23HB NVE RESIN Various Colors

Chemical Family: Novolac Vinyl Ester

Product Use: Coating material

Manufacturer: RCC Corrosion Control
1450 Hoff Industrial Drive
O'Fallon, MO 63366
Phone: 636-697-4659

24-Hour Emergency Phone Number: North America: 800-424-9300 (CHEMTREC)
International: 703-527-3887 (CHEMTREC) Collect Calls Accepted

2. HAZARD IDENTIFICATION

GHS Classifications

Health Hazards
Skin Irritation, Category 2
Eye Irritation, Category 2A
Respiratory Sensitization, Category 1B
Germ Cell Mutagenicity, Category 2
Carcinogenicity, Category 2
Reproductive Toxicity, Category 2
Specific Target Organ Systemic Toxicity, Single Exposure, Category 2, Central Nervous System, Respiratory Tract [Inhalation, Ingestion, Skin absorption]
Specific Target Organ Systemic Toxicity, Repeated Exposure, Category 2, Central Nervous System, Respiratory Tract [Inhalation, Ingestion, Skin absorption]
Aspiration Hazard, Category 2

Physical Hazards
Flammable Liquid, Category 3

Environmental Hazards
Acute Aquatic Toxicity, Category 2

GHS-Labeling
Pictograms:

Signal Word: Danger!

Hazard Statements
H226: Flammable liquid and vapor
H304: May be fatal if swallowed and enters airways
H315: Causes skin irritation
H319: Causes serious eye irritation
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
H341: Suspected of causing genetic defects
H351: Suspected of causing cancer
H361: Suspected of damaging fertility or the unborn child
H371: May cause damage to the central nervous system and respiratory tract
H373: May cause damage to organs prolonged or repeated exposure
H401: Toxic to aquatic life

Precautionary Statements
Prevention:
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P260: Do not breathe vapors.
P264: Wash hands and exposed areas thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P281: Use personal protective equipment as required.
P285: In case of inadequate ventilation, wear respiratory protection.

Response:
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P303 + P361 + P353: IF ON SKIN Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313: IF exposed or concerned: Get medical advice/attention.
P309 + P311: IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
P314: Get medical advice/attention if you feel unwell.
P321: Specific treatment found in supplemental first aid instruction of this SDS (Section 4).
P332 + P313: If skin irritation occurs: Get medical advice/attention.
P337 + P313: If eye irritation persists: Get medical advice/attention.
P342 + P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P362: Take off contaminated clothing and wash before reuse.
P370 + P378: In case of fire: Use alcohol-resistant foam, dry chemical, carbon dioxide or water spray for extinction.

Storage:
P403 + P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.

Disposal:
P501: Dispose of contents/container in accordance with local, regional, and federal regulations

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical characterization
Vinyl Ester

Component*	CAS #	% By Wt.
Styrene, phenylethene	100-42-5	20 - 30
Titanium Dioxide	13463-67-7	1 - 5
Crystalline Silica, Quartz	14808-60-7	1 - 2

4. FIRST AID MEASURES

Inhalation
Symptoms & Effects: Stomach or intestinal irritation, nausea, vomiting, diarrhea, irritation of the nose and airways, central nervous system depression, dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness, lack of coordination, & confusion
Measures: Immediately move outdoors or to fresh air. If breathing is difficult administer oxygen. Seek immediate medical attention and keep individual warm and quiet.

Skin Contact
Symptoms & Effects: Skin irritation, redness, burning sensation, drying, cracking, and other skin damage.
Measures: Immediately remove contaminated clothing. Flush exposed area with large amounts of water. Seek immediate medical attention. Wash contaminated clothing before reuse.

Eye Contact
Symptoms & Effects: Eye irritation, stinging sensation, tearing, redness, and swelling of the eyes.
Measures: Remove contact lenses and immediately flush eyes gently with plenty of water for at least 15 minutes. Hold eyelids open and wash thoroughly. Seek immediate medical attention.

Ingestion
Symptoms & Effects: Stomach or intestinal irritation, nausea, vomiting, diarrhea, metallic taste in the mouth and throat, irritation of the throat, central nervous system depression, dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness, lack of coordination, & confusion. Swallowing large amounts may cause for material to enter the lungs during swallowing or vomiting, leading to lung inflammation and other lung damages.
Measures: Seek immediate medical attention. If individual is drowsy or unconscious, have the individual lie down on their left side with their head down. Do not give individual anything by mouth. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. Do not leave individual unattended.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical, Carbon dioxide, Water spray, Alcohol-resistant foam

Unsuitable Extinguishing Media: Water may be ineffective unless used under favorable conditions.

Hazardous Combustion Products: Carbon monoxide, Carbon dioxide, Hydrocarbons, Phenols

Protective Equipment for Fire-Fighters: Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).

Precautions for Fire-Fighters: Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by any ignition source near the material. Never use a welding or cutting torch on or near the drum, even if empty, because product can ignite explosively. Water may be ineffective for extinguishment unless used under favorable conditions by experienced fire-fighters. If

performed under minimal risk, use water spray to cool fire-exposed containers and materials until fire is out. Avoid spreading burning material with water used for cooling purposes. Polymerization will take place under fire conditions. If polymerization occurs in a closed container, there is a possibility it will rupture violently.

6. ACCIDENTAL RELEASE MEASURES:

Protective Equipment: Recommended to wear chemical splash goggles & resistant gloves, such as polyvinyl alcohol-based gloves, and discard of gloves that show tears, pinholes, or signs of wear. Wear proper garments to prevent skin exposure, such as long-sleeves and pants.

Personal Precautions: Persons not wearing proper PPE should be excluded from the area of contamination until clean-up has been completed. Ensure adequate ventilation. Eliminate all ignition sources and pay attention to the spreading of gases, especially at ground level.

Environmental Precautions: Do not allow discharge into drains, surface waters, or sanitary sewer system. Prevent spreading over a wide area by containment or oil barriers. Local authorities should be advised if significant spillages cannot be contained or if material discharges into drains or ground water.

Methods & Materials for Clean-Up: Contained spilled material with inert, non-combustible absorbent materials (e.g. sand, earth, diatomaceous earth, vermiculite). Transfer to a suitable container for disposal according to proper federal, state, and local regulations.

7. HANDLING AND STORAGE

Handling: Containers of this material may be hazardous when emptied since emptied containers retain product residues (vapor, liquid, or solid). Keep away from heat and ignition sources. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in the National Fire Protection Association (NFPA) document 77.
Storage: Store in a cool, dry, ventilated area, away from heat and ignition sources as well as from incompatible materials (see below). Keep container tightly closed. Keep away from food, drink, and animal foodstuffs.

Incompatible Materials: Acids, Aluminum, Aluminum Chloride, Bases, Copper, Copper alloys, Halogens, Iron chloride, Metal salts, Strong oxidizing agents, Peroxides

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

Exposure Limits :
Exposure limits have not been established for this product.

Styrene	**CAS # 100-42-5**	
OSHA	Permissible Exposure Limit (PEL)	100 ppm
ACGIH	Threshold Limiting Value (TLV)/(STEL)	20 ppm/85 ppm
NIOSH	Recommended Exposure Limit (REL)	50 ppm
Crystalline Silica	**CAS # 14808-60-7**	
OSHA	Permissible Exposure Limit (PEL)	0.05 mg/m^3 / % Si_2
ACGIH	Threshold Limiting Value (TLV)	0.025 mg/m^3 (respirable)
NIOSH	Recommended Exposure Limit (REL)	0.05 mg/m^3
Titanium Dioxide	**CAS # 13463-67-7**	
OSHA	Permissible Exposure Limit (PEL)	15 mg/m^3
ACGIH	Time weighted average (TWA)	10 mg/m^3

Engineering Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposures below permissible exposure limits. OSHA has formally endorsed a styrene industry proposal for a voluntary 50 ppm workplace limit on styrene. Members of the Styrene Information and Research Council (SIRC), Composites Institute (CI), Composite Fabricators Association (CFA), International Cast Polymers Association (ICPA) and National Marine Manufacturers Association (NMMA) have agreed to use either engineering controls, work practices or respiratory protection to achieve this voluntary limit for styrene.

Occupational Exposure Controls: Ensure adequate ventilation, especially in confined areas. Consider all potential hazards of this material, applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting PPE. Ensure that eyewash stations and safety showers are proximal to the work location. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Protective and Hygiene measures: Do not inhale vapors. Wash hands before breaks and immediately after handling product. When using, do not eat, drink, or smoke. In case of clothes contamination, remove and wash contaminated clothing before re-use.

Eye Protection: Recommended to wear tight fitting, chemical splash goggles are recommended when there is potential for the exposure of the eyes to the liquid, vapor or mist. Have a suitable eye wash station or bottle nearby in case of splashing into the eyes.

Hand Protection: Recommended to wear resistant gloves, such as polyvinyl alcohol-based gloves and discard of gloves that show tears, pinholes, or signs of wear.

Skin Protection: Recommended to wear long-sleeved clothing, pants and proper foot covering in order to prevent direct skin contact with the product. If skin irritation develops, contact your facility health and safety

professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.

Respiratory Protection: A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Varied Colored Liquid
Odor: Mild
Odor Threshold: No data available
pH: No data available
Melting/freezing point: No data available
Boiling point: No data available
Boiling range: No data available
Flash point (Tag closed cup): 95°F (35°C)
Evaporation rate: No data available
Flammability: Lower Limit: 1.1% (V) **Upper Limit:** No data available
Vapor pressure: 6.0 hPa
Vapor density: > 1 (Air = 1)
Relative density: 1.2 g/cm^3 (9.9 lb/gal) @ 68°F (20°C)
Solubility in water: Insoluble
Partition coefficient (n-octanol/water): No data available
Auto-ignition temperature: 910°F (490°C)
Decomposition temperature: No data available
Viscosity (dynamic): No data available

10. STABILITY AND REACTIVITY

Reactivity: No decomposition if stored and applied as directed.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Avoid exposure to excessive heat, peroxides and polymerization catalysts. Product will not undergo hazardous polymerization.

Conditions to Avoid: Heat, Flames, Sparks, Exposure to sunlight, Exposure to air

Incompatible Materials: Acids, Aluminum, Aluminum Chloride, Bases, Copper, Copper alloys, Halogens, Iron chloride, Metal salts, Strong oxidizing agents, Peroxides, UV light

Hazardous decomposition products: Carbon monoxide, Carbon dioxide, Phenols, Hydrocarbons

11. TOXICOLOGICAL INFORMATION

Primary Routes of Exposure: Inhalation, Skin absorption, Skin contact, Eye contact, Ingestion

Symptoms Related to Physical, Chemical and Toxicological Characteristics: Metallic taste, stomach or intestinal irritation, nausea, vomiting, diarrhea, irritation of the nose, throat and airways, central nervous system depression, dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness, lack of coordination, confusion and liver damage

Delayed and Immediate Effects & Chronic Effects from Exposure: The liquid defats the skin after long-term or repeated exposure. The substance may have effects on the central nervous system. Exposure to the substance may enhance hearing damage caused by exposure to noise. This substance is a potential carcinogen to humans (see below).

Measures of Toxicity:
Acute toxicities are calculated based on component toxicities
Mixture: Acute Oral Toxicity: LD_{50} Rat: > 3,000 mg/kg
Acute Dermal Toxicity: LD_{50} Rat: > 3,000 mg/kg
Acute Inhalation Toxicity: LC_{50} Rat: 4,000 ppmV; 4 h

Carcinogen Claims: (quartz, styrene, titanium dioxide)
OSHA: **Yes; 2,** International Agency for Research on Cancer (IARC): **Yes; 2B**
ACGIH: Yes **A1,** National Toxicology Program (NTP) Report on Carcinogens: **Yes; II**

There was no increase in cancer in rats exposed to styrene by inhalation. However, there was an increase in lung cancer in styrene-exposed mice. The relevance of mouse lung cancer to humans is uncertain. Styrene did not cause cancer in mice in studies in which the chemical was placed in the stomachs through a feeding tube, or in a study in which styrene was given by injection. Epidemiological studies do not provide a basis for concluding that styrene causes cancer.

12. ECOLOGICAL INFORMATION

Eco-toxicity: This substance is toxic to aquatic organisms. It is strongly advised that this substance does not enter the environment.
Persistence & Degradability: No data available
Bio-accumulative Potential: No data available
Mobility in Soil: No data available
Other Adverse Effects: No data available

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Federal, State or Local regulations.
Contaminated packaging should be emptied as far as possible before disposal.

14. TRANSPORT INFORMATION

DOT SHIPPING CLASSIFICATION:
UN NUMBER: UN1866
PROPER SHIPPING NAME: Resin solution, flammable
TRANSPORTATION HAZARD CLASS: 3
PACKING GROUP: III
HAZARD LABEL: 3

IMDG (Marine) SHIPPING CLASSIFICATION:
IMDG CODE: 3
UN NUMBER: UN1866
MARINE POLLUTANT: No
EmS: F-E; S-E
IMDG PACKING GROUP: III
HAZARD LABEL: 3
Description of the goods
RESIN SOLUTION flammable

IATA (Air) SHIPPING CLASSIFICATION:
ICAO/IATA-DGR: 3
UN NUMBER: UN1866
HAZARD LABEL: 3
IATA-packing instructions – Passenger: 355
IATA -max. quantity – Passenger: 60L
IATA – packing instructions – Cargo: 366
IATA –max. quantity – Cargo: 220L
IAO packing group: III
Limited quantity Passenger: Y344 / 10 L
Description of the goods
Resin solution, flammable

15. REGULATORY INFORMATION

All components of this product conform to the following national inventory requirements. US TSCA, EU EINECS and Canada DSL

SARA Title III

The following ingredients are subject to the supplier notification requirements of Section 313 of the Superfund Amendments and Reauthorization Act (SARA/EPCRA) and the requirements of 40 CFR Part 37

Component	CAS #	Weight %
Styrene	100-42-5	32 – 42

OTHER FEDERAL REGULATIONS

Components of this product are subject to RCRA Hazardous Waste requirements.
Clean Air Act (CAA) Hazardous Air Pollutants requirements and OSHA Process Safety Management (PSM) high hazard requirements.

CANADIAN REGULATIONS

Same as OSHA GHS Classification

STATE REGULATIONS

California Proposition 65
WARNING: This product contains chemicals known to the state of California to cause cancer, birth defects, and other reproductive harm.

Component	CAS #	Weight %
Styrene	100-42-5	<30
Crystalline Silica, Quartz	14808-60-7	< 1

The components of this product may be included on the various state hazardous materials lists noted below.

California Hazardous Substances List/Permissible Exposure List
California Toxic air contaminants
Connecticut Permissible Exposure Limits
Delaware List of Chemicals and RQs
Hawaii Permissible Exposure Limits
Idaho Toxic Air Pollutants
Illinois Toxic Air Contaminants List
Louisiana Toxic Air Pollutants
Maine Hazardous Air Pollutants
Maryland Toxic Air Pollutants for Existing Sources
Massachusetts Hazardous Substances List
Michigan Permissible Exposure Limits
Minnesota Hazardous Substances
Minnesota Permissible Exposure Limits
Nebraska Hazardous Air Pollutants
New Jersey RTK Hazardous Substances List/TCPA Extremely Hazardous Substances List
New York List of Hazardous Substances
Ohio Toxic Air Contaminants
Oklahoma Toxic Air Contaminants
North Carolina TAP Emissions Rates Requiring a Permit
Pennsylvania Hazardous Substances List
Rhode Island Toxic Air Contaminants
Tennessee Permissible Exposure Limits
Vermont Hazardous Air Contaminants/Permissible Exposure Limits
Washington Permissible Exposure Limits for Airborne Contaminants.
West Virginia Toxic Air Pollutant List
Wisconsin hazardous Air Contaminants

Note: Entries under Section 15 are not intended to be all inclusive of Federal and State laws and regulations. Please consult the appropriate agencies for further clarification of any requirements.

16. OTHER INFORMATION

Disclaimer: The information provided in this Material 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.