

# Safety Data Sheet: RESIST-X PLUS, M/M

Supersedes Date 09/14/2012

Issuing Date 06/20/2013

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** RESIST-X PLUS, M/M  
**Recommended use** Corrosion inhibitor  
**Information on Manufacturer**  
CERTIFIED LABS, DIV. OF NCH CORP.  
BOX 152170  
IRVING, TEXAS 75015

**Product Code** 0903  
**Chemical nature** Solvent mixture  
**Emergency Telephone Number**  
CHEMTREC® 800-424-9300  
**Telephone inquiry**  
972-579-2477

## 2. HAZARD IDENTIFICATION

**Color** Amber

**Physical State** Liquid

**Odor** solvent

### GHS

#### Classification

##### Physical Hazards

Flammable liquids

Category 3

##### Health Hazard

Aspiration Toxicity

Category 1

Acute Inhalation Toxicity - Vapors

Category 4

Skin Corrosion/Irritation

Category 2

Serious Eye Damage/Eye Irritation

Category 2B

Respiratory Sensitization

Category 1

Skin Sensitization

Category 1

Specific target organ systemic toxicity (single exposure)

Category 3

Specific target organ systemic toxicity (repeated exposure)

Category 2

##### Other hazards

None

### Labeling

#### Signal Word

**DANGER**



#### Hazard Statements

H226 - Flammable liquid and vapor

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H320 - Causes eye irritation

H332 - Harmful if inhaled

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H304 - May be fatal if swallowed and enters airways

H336 - May cause drowsiness or dizziness

H373 - May cause damage to organs through prolonged or repeated exposure

#### Precautionary Statements

P210 - Keep away from heat, sparks, open flames or hot surfaces.

P280 - Wear protective gloves, protective clothing and eye protection.

P270 - Do not eat, drink or smoke when using this product

P271 - Use in a well-ventilated area.

P260 - Do not breathe vapors.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P272 - Contaminated work clothing should not be allowed out of the workplace

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

P333 + P313 - If skin irritation or rash occurs, get medical attention

P362 - Take off contaminated clothing and wash before reuse

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists, get medical attention.

P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P342 + P311 - If experiencing respiratory symptoms, call a physician

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a physician if unwell.

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P235 - Keep cool

P501 - Dispose of contents and container in accordance with applicable regulations.

12 % of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
1-Tetradecene	1120-36-1	15-40
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	64742-52-5	10-30
Solvent naphtha (petroleum), medium aliphatic	64742-88-7	7-13
Petroleum distillates, hydrotreated light	64742-47-8	7-13
Petroleum distillate	8052-41-3	7-13
Tall oil fatty acid	61790-12-3	1-5
Nonane	111-84-2	1-5
Ethylene diamine	107-15-3	1-5
Fumaric acid	110-17-8	1-5
Magnesium sulfonate	7487-88-9	1-5
Alkenes, C>10 alpha-, polymerized	68527-08-2	1-5

### 4. FIRST AID MEASURES

<b>General advice</b>	Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use.
<b>Inhalation</b>	Move to fresh air. In case of shortness of breath, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
<b>Ingestion</b>	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
<b>Notes to physician</b>	Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways. May cause sensitization of susceptible persons.

### 5. FIRE-FIGHTING MEASURES

<b>Flash Point</b>	134 °F / 57 °C	<b>Method</b>	Seta closed cup
<b>Flammability Limits in Air % Mixture.</b>		<b>Upper 12</b>	<b>Lower 0.8</b>
<b>Suitable Extinguishing Media</b>	Water spray. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.		
<b>Specific hazards arising from the chemical</b>	Combustible Liquid. Solvent vapors are heavier than air and may spread along floors. Vapors may form explosive mixture with air. Material can create slippery conditions.		
<b>Protective Equipment and Precautions for Firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.		
<b>NFPA</b>	<b>Health 1</b>	<b>Flammability 2</b>	<b>Instability 0</b>
<b>HMIS</b>	<b>Health 1</b>	<b>Flammability 2</b>	<b>Instability 0</b>

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
<b>Environmental Precautions</b>	Do not flush into surface water or sanitary sewer system.
<b>Methods for Containment</b>	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).
<b>Methods for Cleaning Up</b>	Use clean non-sparking tools to collect absorbed material. Pick up and transfer to properly labeled containers.
<b>Neutralizing Agent</b>	Not applicable.

### 7. HANDLING AND STORAGE

<b>Handling</b>	Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.			
<b>Storage</b>	Keep away from heat and sources of ignition. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.			
<b>Storage Temperature</b>	<b>Minimum</b>	35 °F / 2 °C	<b>Maximum</b>	120 °F / 49 °C
<b>Storage Conditions</b>	<b>Indoor</b>	X	<b>Outdoor</b>	<b>Heated</b> <b>Refrigerated</b>

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

## Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
1-Tetradecene	No data available	No data available	No data available
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	TWA: 5 mg/m <sup>3</sup> ; STEL: 10 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	IDLH: 2,500 mg/m <sup>3</sup> ; STEL 10 mg/m <sup>3</sup> ; TWA: 5 mg/m <sup>3</sup>
Solvent naphtha (petroleum), medium aliphatic	No data available	No data available	No data available
Petroleum distillates, hydrotreated light	5 mg/m <sup>3</sup> as oil mist	10 mg/m <sup>3</sup> as oil mist	No data available
Petroleum distillate	TWA: 100 ppm	TWA: 500 ppm TWA: 2900 mg/m <sup>3</sup>	IDLH: 20000 mg/m <sup>3</sup> Ceiling: 1800 mg/m <sup>3</sup> TWA: 350 mg/m <sup>3</sup>
Tall oil fatty acid	No data available	No data available	No data available
Nonane	TWA: 200 ppm	No data available	TWA: 200 ppm TWA: 1050 mg/m <sup>3</sup>
Ethylene diamine	TWA: 10 ppm Skin	TWA: 10 ppm TWA: 25 mg/m <sup>3</sup>	IDLH: 1000 ppm TWA: 10 ppm TWA: 25 mg/m <sup>3</sup>
Fumaric acid	No data available	No data available	No data available
Magnesium sulfonate	No data available	No data available	No data available
Alkenes, C>10 alpha-, polymerized	3 mg/m <sup>3</sup> PNOS	No data available	No data available

## Engineering Measures

Ensure adequate ventilation, especially in confined areas.

## Personal Protective Equipment

## Eye/Face Protection

Safety glasses with side-shields.

## Skin Protection

Wear suitable protective clothing, Impervious gloves.

## Respiratory Protection

In case of insufficient ventilation wear suitable respiratory equipment. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

## General Hygiene Considerations

Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	Viscosity	Non viscous
Color	Amber	Odor	solvent
Odor Threshold	Not applicable	Appearance	Transparent - Slightly hazy
pH	Not applicable	Specific Gravity	0.81
Evaporation Rate	0.11 (BuAc = 1)	Percent Volatile (Volume)	71
VOC Content (%)	67.1	VOC Content (g/L)	544
Vapor Pressure	1.26 mmHg @ 70°F	Vapor Density	6.6 (air = 1)
Solubility	Negligible	n-Octanol/Water Partition	No data available
Melting Point/Range	No data available	Decomposition Temperature	No data available
Boiling Point/Range	380 °F / 193 °C	Flammability (solid, gas)	No data available
Flash Point	134 °F / 57 °C	Method	Seta closed cup
Autoignition Temperature	No information available.		
Flammability Limits in Air %	Mixture.	Upper 12 Lower 0.8	

## 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions. Hazardous polymerization does not occur.
Conditions to Avoid	Keep away from open flames, hot surfaces, and sources of ignition
Incompatible Products	Strong oxidizing agents, Strong acids, Reducing agents.
Hazardous Decomposition Products	Carbon oxides, Sulfur oxides.
Possibility of Hazardous Reactions	None under normal processing

## 11. TOXICOLOGICAL INFORMATION

## Product Information

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 3, 2009):

Oral LD50	No information available
Dermal LD50	No information available
Inhalation LC50	
Gas	No information available
Mist	No information available
Vapor	No information available

<b>Principle Route of Exposure</b>	Skin contact, Eye contact, Inhalation.
<b>Primary Routes of Entry</b>	Inhalation, Skin Absorption.
<b>Acute Effects</b>	
<b>Eyes</b>	Causes eye irritation.
<b>Skin</b>	Causes skin irritation. May be absorbed through the skin in harmful amounts. May cause allergic skin reaction.
<b>Inhalation</b>	May cause irritation of respiratory tract. Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. May cause allergic respiratory reaction.
<b>Ingestion</b>	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Causes headache, drowsiness or other effects to the central nervous system. Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways.
<b>Chronic Toxicity</b>	May cause sensitization by skin contact. May cause sensitization by inhalation. Liver and kidney injuries may occur. Prolonged skin contact may defat the skin and produce dermatitis. Prolonged or repeated inhalation may cause damage to the lungs.
<b>Target Organ Effects</b>	Liver, Kidney, Respiratory system, Central nervous system, Skin, Eyes, Immune system.
<b>Aggravated Medical Conditions</b>	Liver disorders, Kidney disorders, Neurological disorders, Respiratory disorders, Skin disorders.

## Component Information

**Acute Toxicity**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
1-Tetradecene	> 10000 mg/kg ( Rat )	> 10000 mg/kg ( Rabbit )	no data available	no data available	no data available
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	> 5000 mg/kg ( Rat )	> 5000 mg/kg ( Rabbit )	> 5 mg/L ( Rat ) 4 h	no data available	no data available
Solvent naphtha (petroleum), medium aliphatic	> 5000 mg/kg ( Rat )	= 3000 mg/kg ( Rabbit )	> 5.28 mg/L ( Rat ) 4 h	no data available	no data available
Petroleum distillates, hydrotreated light	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 5.2 mg/L ( Rat ) 4 h	no data available	no data available
Petroleum distillate	no data available	no data available	no data available	no data available	no data available
Tall oil fatty acid	= 7600 mg/kg ( Rat )	no data available	no data available	no data available	no data available
Nonane	no data available	no data available	= 3200 ppm ( Rat ) 4 h	no data available	no data available
Ethylene diamine	= 637 mg/kg ( Rat )	= 1000 mg/kg ( Rat ) = 550 mg/kg ( Rabbit )	no data available	no data available	no data available
Fumaric acid	= 9300 mg/kg ( Rat )	> 20000 mg/kg ( Rabbit )	no data available	no data available	no data available
Magnesium sulfonate	no data available	no data available	no data available	no data available	no data available
Alkenes, C>10 alpha-, polymerized	no data available	no data available	no data available	no data available	no data available

**Chronic Toxicity**

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
1-Tetradecene	no data available	no data available	no data available	no data available	no data available
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	no data available	no data available	no data available	no data available	respiratory system
Solvent naphtha (petroleum), medium aliphatic	no data available	no data available	no data available	no data available	CNS, liver, kidneys
Petroleum distillates, hydrotreated light	no data available	no data available	no data available	no data available	respiratory system, liver, kidney, CNS
Petroleum distillate	no data available	no data available	no data available	no data available	eyes,CNS,respiratory system,skin,kidneys
Tall oil fatty acid	no data available	no data available	no data available	no data available	no data available
Nonane	no data available	no data available	no data available	no data available	eyes,CNS,respiratory system,skin
Ethylene diamine	no data available	Skin sensitization, respiratory sensitization	no data available	no data available	respiratory system,liver,kidneys,skin
Fumaric acid	no data available	no data available	no data available	no data available	no data available
Magnesium sulfonate	no data available	no data available	no data available	no data available	no data available
Alkenes, C>10 alpha-, polymerized	no data available	no data available	no data available	no data available	no data available

**Carcinogenicity**

Component	ACGIH	IARC	NTP	OSHA	Other
1-Tetradecene	not applicable				
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	not applicable				
Solvent naphtha (petroleum), medium aliphatic	not applicable				
Petroleum distillates, hydrotreated light	not applicable				

Petroleum distillate	not applicable				
Tall oil fatty acid	not applicable				
Nonane	not applicable				
Ethylene diamine	not applicable				
Fumaric acid	not applicable				
Magnesium sulfonate	not applicable				
Alkenes, C>10 alpha-, polymerized	not applicable				

## 12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
1-Tetradecene	no data available	no data available	EC50 > 10000 mg/L 6 h	no data available	N/A
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	no data available	LC50 > 5000 mg/L Oncorhynchus mykiss 96 h	no data available	EC50> 1000 mg/L 48 h	N/A
Solvent naphtha (petroleum), medium aliphatic	EC50 = 450 mg/L Pseudokirchneriella subcapitata 96 h	LC50 = 800 mg/L Pimephales promelas 96 h	no data available	EC50> 100 mg/L 48 h	N/A
Petroleum distillates, hydrotreated light	no data available	LC50 = 45 mg/L Pimephales promelas 96 h LC50 = 2.2 mg/L Lepomis macrochirus 96 h LC50 = 2.4 mg/L Oncorhynchus mykiss 96 h	no data available	LC50= 4720 mg/L 96 h	N/A
Petroleum distillate	no data available	no data available	no data available	no data available	N/A
Tall oil fatty acid	EC50 >= 1000 mg/L Pseudokirchneriella subcapitata 72 h	no data available	no data available	no data available	4.89 - 5.98
Nonane	no data available	no data available	no data available	no data available	N/A
Ethylene diamine	EC50 = 645 mg/L Pseudokirchneriella subcapitata 72 h EC50 = 151 mg/L Pseudokirchneriella subcapitata 96 h	LC50 98.6 - 131.6 mg/L Pimephales promelas 96 h LC50 191 - 254 mg/L Pimephales promelas 96 h LC50 = 115.7 mg/L Pimephales promelas 96 h LC50 180 - 560 mg/L Poecilia reticulata 96 h	EC50 = 20 mg/L 15 min EC50 = 29 mg/L 17 h	EC50= 17 mg/L 48 h	-1.221
Fumaric acid	EC50 = 41 mg/L Desmodesmus subspicatus 72 h	LC50 = 245 mg/L Brachydanio rerio 48 h	no data available	EC50= 73.6 mg/L 24 h EC50 204 - 220 mg/L 48 h	0.33
Magnesium sulfonate	EC50 = 2700 mg/L Desmodesmus subspicatus 72 h	LC50 = 19000 mg/L Lepomis macrochirus 24 h LC50 2610 - 3080 mg/L Pimephales promelas 96 h	EC50 = 84000 mg/L 30 min	EC50= 1700 mg/L 24 h EC50 266.4 - 417.3 mg/L 48 h	N/A
Alkenes, C>10 alpha-, polymerized	no data available	no data available	no data available	no data available	N/A

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

## 13. DISPOSAL CONSIDERATIONS

Product Disposal

Dispose of in accordance with local regulations.

Container Disposal

Empty containers should be taken for local recycling, recovery, or waste disposal.

## 14. TRANSPORT INFORMATION

DOT

Proper Shipping Name

Petroleum distillates, n.o.s.

Hazard Class

3

UN-No

UN1268

Packing Group

III

Description

Petroleum distillates, n.o.s.,(Naphtha),3,UN1268,PG III; Combustible <119 gallons

TDG

Proper shipping name

Petroleum distillates, n.o.s

**Hazard Class** 3  
**UN-No** UN1268  
**Packing Group** III

**ICAO**

**UN-No** UN1268  
**Proper Shipping Name** Petroleum distillates, n.o.s.  
**Hazard Class** 3  
**Packing Group** III  
**Shipping Description** UN1268,Petroleum distillates, n.o.s.,(Naphtha),3,PG III

**IATA**

**UN-No** UN1268  
**Proper Shipping Name** Petroleum distillates, n.o.s.  
**Hazard Class** 3  
**Packing Group** III  
**ERG Code** 3L  
**Shipping Description** UN1268,Petroleum distillates, n.o.s.,(Naphtha),3,PG III

**IMDG/IMO**

**Proper Shipping Name** Petroleum distillates, n.o.s.  
**Hazard Class** 3  
**UN-No** UN1268  
**Packing Group** III  
**EmS No.** F-E, S-E  
**Shipping Description** UN1268, Petroleum distillates, n.o.s.,(Naphtha),3,PG III

## 15. REGULATORY INFORMATION

**Inventories**

**TSCA** Complies  
**DSL** Complies

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	No	No

**CERCLA**

Component	Hazardous Substances RQs	CERCLA EHS RQs
1-Tetradecene	Not applicable	Not applicable
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	Not applicable	Not applicable
Solvent naphtha (petroleum), medium aliphatic	Not applicable	Not applicable
Petroleum distillates, hydrotreated light	Not applicable	Not applicable
Petroleum distillate	Not applicable	Not applicable
Tall oil fatty acid	Not applicable	Not applicable
Nonane	Not applicable	Not applicable
Ethylene diamine	5000 lb	10000 lb TPQ 5000 lb
Fumaric acid	5000 lb	Not applicable
Magnesium sulfonate	Not applicable	Not applicable
Alkenes, C>10 alpha-, polymerized	Not applicable	Not applicable

## 16. OTHER INFORMATION

**Prepared By** Rachael Mohochi  
**Supersedes Date** 09/14/2012  
**Issuing Date** 06/20/2013  
**Reason for Revision** No information available.  
**Glossary** No information available.  
**List of References.** No information available.

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