

MATERIAL SAFETY DATA SHEET

Issue Date: May 4, 2002

Identity: (As used on label and list)

RUSTECO R-200-3

SECTION I: Material & Manufacturer Identification

| | |
|----------------------|---|
| Product Name | RUSTECO R-200-3 |
| Material Type | LIQUID |
| Product Use | ALL METALS RUST REMOVAL/PROTECTION DEGREASER/METAL POLISH/PRIMER |
| Manufacturer Address | RUSTECO LLC 1465 E Del Amo Blvd Carson, CA 90746 |
| Emergency Phone | 800-787-8326 |
| Fax | 310-294-9635 |
| E-mail | rusteco@aol.com |

SECTION II: Hazardous Ingredients & Identity Information

Hazard Data OSHA PEL

Based on constituent data:

Ingredients

Made from ingredients generally regarded as safe or permissible under CFR 21/178.1010 and CFR 21/182 respectively

DOT Hazard Class:

Biodegradability:

Corrosiveness:

ACGIH TLV

Oral LD50= (RAT) 1.26 g/Kg
Skin PIS (RBT) = Moderate
Eye Irritation (RBT) = Severe

Liquid Extract from organically grown plants

Not Regulated

Biodegradable

Non-Corrosive

SECTION III: Physical/Chemical Characteristics

| | |
|---------------|-------|
| Boiling Point | 220 F |
|---------------|-------|

| | |
|---------------------|--------------|
| Solubility in Water | Infinite |
| Appearance | Amber Liquid |
| pH of 1% solution | 5-6 |
| Density | 1.04 |

SECTION IV: Fire and Explosion Data

| | | | |
|----------------------------|------------------|-----|-----|
| Flash Point (Methods Used) | Flammable Limits | LEL | UEL |
| N/A Aqueous | N/A | N/A | N/A |

Special Fire Fighting Procedures

None

Hazardous Combustion Products

Carbon Dioxide, Carbon Monoxide

SECTION V: Reactivity Data

| | |
|--|---------------------|
| Stability | Conditions to avoid |
| Stable under normal conditions | Excessive heat |
| Incompatibility (Materials to avoid) | |
| None known | |
| Hazardous Decomposition or By-products | |
| None known | |
| Hazardous Polymerization | Conditions to avoid |
| Stable under normal conditions | Excessive heat |
| Will not occur | Excessive heat |

Exposure from routine use

This product is not hazardous under normal conditions of use

Effects of overexposure

Prolonged exposure to vapor or mist may cause irritation in eyes, nose, mouth and/or throat.

Emergency and First Aid procedures

Eye Contact: Rinse immediately with water. Remove contact lenses, then flush eyes immediately

with water for at least 15 minutes, including under the eyelids. Consult a physician if necessary.

Skin Contact: Wash skin with soap and water. Seek medical attention if irritation persists. Launder contaminated clothing before reuse.

Inhalation: Remove to fresh air. Rest in half upright position. Seek medical attention if necessary.

Ingestion:

Rinse mouth. Immediately dilute by drinking large amounts of water. After dilution induce vomiting. Seek immediate medical attention. Never give anything by mouth to an unconscious person.

SECTION VII: Toxicity Data

Oral: This material may be slightly toxic if ingested Dermal: This material may be mildly irritating to the skin Inhalation: This material is not known to be toxic by inhalation Carcinogenicity: Not listed as a Carcinogen by IARC, NTP, ACGIH, OSHA Other pertinent data: This material is a moderate eye irritant, and could cause possible corneal damage

SECTION VIII: Special Protection Information

Personal protective equipment

Protective gloves: Rubber

Eye protection: Safety glasses

Respiratory protection (specify type): None required under normal conditions of use

Other protective equipment: Not applicable

Ventilation: Local exhaust

General Mechanical: Not applicable

SECTION IX: Spill, Leak and Disposal Procedures

Steps to be taken in case material is released or spilled:

Confine spillage and absorb on sand, sawdust or other available solids. Spills or release of this material does not currently trigger the emergency release reporting requirements under SARA Title III or CERCLA. State or local reporting requirements may differ from Federal requirements. Consult counsel for further guidance on your duties and responsibilities under these laws.

Waste Disposal Method

Dispose of absorbed material in accordance with all Federal, State and Local regulations. Dispose of water in contained water treatment system. Resource Conservation and Recovery Act (RCRA) Requirements: N/A

SECTION X: Regulatory Information

FDA/USDA/CPSC: N/A

DOT: Non-Regulated

TSCA: Mixture: All components of this solution are listed on the TSCA inventory

Proper Shipping Name: Non-Regulated

Hazardous Class: None

Label Requirements: None

ID No.: None

Other Info: N/A

EPA: Superfund Amendments & Reauthorization Act (SARA) Title III; Section 313, Supplier Notification:

This product is known to contain the following chemicals, which are listed in 40 CFR 372.65 as toxic chemicals requiring notification:

| Chemical Name | CAS # | Weight Percent |
|----------------|-------|----------------|
| Not applicable | N/A | N/A |

SECTION XI: Special Precautions and Comments

Avoid eye contact

Avoid contamination with Alkaline Material

Other Precautions: Not applicable

Registration or Certifications: Not applicable

IMPORTANT NOTICE**Please read carefully prior to use**

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RUSTECO LLC, 1465 E Del Amo Blvd, Carson, CA 90746

Effective Date: 05-04-02 Issue four

RUSTECO Liquid

RUSTECO Product Fact Sheet
Corrosion Treatment & Prevention

RUSTECO R-200-3 Corrosion Treatment is a fluid designed to remove oxidation corrosion from any type of metal, including iron, carbon and alloy steels, aluminum, bronze and tin. This product has many attributes that make it superior to conventional corrosion removal methods in most applications. The R-200-3 Corrosion Treatment:

- i) Is highly effective in neutralizing and removing oxidized metal. Analysis of treated parts using a Scanning Electron Microscope reveals negligible corrosion remaining, even in the oxidation sites of pitted metal.
- ii) Is extremely environmentally friendly. According to EPA Tests RUSTECO has negligible or undetectable amounts of the EPA's 121 priority pollutants. Further the R-200-3 consists of 80% recycled and reclaimed waste material and is completely biodegradable. Finally, after removal of any sediment, the used liquid is safe enough for the environment that it can be used as a liquid plant fertilizer or can be disposed into any water treatment system.
- iii) Is completely benign to any material other than oxidized metal. The R-200-3 can come into long term contact with non-oxidized finished metal surfaces, plastics, rubber, paint or human skin without any undesirable effects.
- iv) Has a simple and inexpensive application method and can be applied in many situations where conventional methods are not possible. Because it is a fluid it can reach inaccessible areas in complex shaped parts such as water jackets, passage ways, screw threads and hidden surfaces not accessible to grit blasting or machining. The liquid nature of the R-200-3 allows it to completely surround the material irregularities where oxidation originates. Also because it selectively attacks only oxidized metal, use of the R-200-3 does not result in any metal loss. This is critical in situations where close tolerances are being maintained. Its benign nature allows it to be applied in cases where other materials (such as rubber, gaskets, chrome, etc) are attached to the oxidized part.
- v) Has no OSHA or DOT shipping, storage, handling restrictions and is easily disposed of. This translates directly into cost and time savings in term of paperwork, specialized labor and auxiliary services.
- vi) Acts as a corrosion inhibitor. Unlike machining, grit blasting and highly acidic or alkaline solutions, where corrosion begins immediately after treatment, parts treated with the R-200-3 can be stored without ill effects.
- vii) The formulation of the RUSTECO R-200-3 is proprietary and cannot be described beyond saying that it contains a food grade acid, as found in cola drinks.
- viii) It has a specific gravity and viscosity similar to water and can be used in any sprayer or conduit at ambient or high temperatures.

- ix) The application requires only that the area to be treated be brought into contact with the fluid. For light surface oxidation, spray and wiping is often adequate. More serious conditions (thick scaling and exfoliation) require submersion for up to 48 hours. While not necessary, heat and agitation can be applied to shorten the treatment times considerably.
- x) Treated parts shall be rinsed in water subsequent to application, since this provides the protection against future corrosion. If a treated part is pressure washed (to speed up the cleaning process), then the protection against new oxidation will be in place.
- xi) RUSTECO is not known to have any undesirable effects on the strength, ductility, or surface hardness of high strength steels or alloys. Epoxy coatings applied to parts treated with the R-200-3 have shown excellent adhesion after having been exposed to a fresh water bath for one year in temperature of 110-120F (more corrosive than salt water).
- xii) RUSTECO migrates through the rust, it eliminates the oxygen at the substrate interface and causes the rust to lose adhesion. It provides a surface over which a hard coating can be applied.
- xiii) In the soaking application it is designed for a long-term repeat use, thus making it highly cost effective. It does not require any other activity, apart from blow-drying or wiping the cleaned part dry.
- xiv) If pressure washer equipment is available, the corroded parts will be cleaned much faster, since the R-200-3 soaking process will loosen up the existing rust and facilitate a quicker cleaning process.
- xv) The pH of the virgin product ranges from 5-6.