MATERIAL SAFETY DATA SHEET **RED LIQ**

Version Number 1.1 Revision Date 10/26/2006

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

| Telephone Emergency telephone number | : | Product Stewardship (770) 271-5902 CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident). |
|--|---|---|
| Product name | : | RED LIQ |
| Product code | : | CC10078549 |
| Chemical Name | : | Mixture |
| CAS-No. | : | Mixture |
| Product Use | : | Industrial Applications |

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight % |
|------------------|------------|----------|
| Titanium dioxide | 13463-67-7 | 10 - 30 |

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This mixture has not been evaluated as a whole for health effects. Information provided on health effects of this product is based on the individual components. However, some vapors or contaminants may be released upon heating and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure. See sections 8 and 11 for special precautions.

POTENTIAL HEALTH EFFECTS

| Routes of Exposure: | : Inhalation, Skin contact, Ingestion |
|---|--|
| Acute exposure | |
| Inhalation | : Inhalation of airborne droplets may cause irritation of the respiratory tract. |
| Ingestion | : May be harmful if swallowed. |
| Eyes | : Irritating to eyes and respiratory system. |
| Skin | : Experience shows no unusual dermatitis hazard from routine handling. |
| Chronic exposure | : Refer to Section 11 for Toxicological Information. |
| Medical Conditions Aggravated by Exposure: | : None known. |

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| | 4. FIRST AID MEASURES |
|--|--|
| Inhalation | : Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. Seek medical attention after significant exposure. |
| Ingestion | : Do not induce vomiting without medical advice. Seek medical attention if necessary. |
| Eyes | : Rinse immediately with plenty of water for at least 15 minutes. If eye irritation persists, seek medical attention. |
| Skin | : Wash off with soap and plenty of water. If skin irritation persists see medical attention. |
| | 5. FIRE-FIGHTING MEASURES |
| Flash point | : Greater than 200 °F (93 °C) |
| Flammable Limits Upper explosion limit Lower explosion limit Autoignition temperature Suitable extinguishing media | Not applicable Not applicable Not applicable Carbon dioxide blanket, dry powder, foam. |
| Special Fire Fighting Procedures Unusual Fire/Explosion Hazards | Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants. Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible. |
| | 6. ACCIDENTAL RELEASE MEASURES |
| Personal precautions | : Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls. |
| Environmental precautions | : The product should not be allowed to enter drains, water courses or the soil. Should not be released into the environment. |
| Methods for cleaning up | : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder universal binder, sawdust). Package all material in appropriate container for disposal. Refer to Section 13 of this MSDS for proper disposal methods. |
| | 7. HANDLING AND STORAGE |
| Handling | : Heat only in areas with appropriate exhaust ventilation. |
| Storage | : Keep containers dry and tightly closed to avoid moisture absorption |



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| 8. H | XPOSURE | CONTROLS / P | PERSONAL 3 | PROTECTION | | |
|---|---|---|-------------------------|---|---------|-----------------|
| Respiratory protection | : U | Inder normal hand | lling conditio | ns a respirator may | y not l | be required. |
| Eye/Face Protection | : S | afety glasses with | side-shields. | | | |
| Hand protection | : P | rotective gloves. | | | | |
| Skin and body protection | : L | ong sleeved cloth | ing. | | | |
| Additional Protective Measures | : S | afety shoes. | | | | |
| General Hygiene Considerations | | | | industrial hygiene t the end of workd | | afety practice. |
| Engineering measures | | leat only in areas ppropriate exhaus | | ate exhaust ventila at machinery. | ation. | Provide |
| Exposure limit(s) | | | | | | |
| Components | Value | Exposure | time | Exposure typ | P | List: |
| Titanium dioxide | 10 mg/m3 | Time Weighte | | Exposure typ | C | ACGIH |
| Thuman dioxide | 10 1115/1115 | (TWA | - | | | neom |
| | 15 mg/m3 | PEL | | Total dust. | | OSHA Z1 |
| | | | | | MX OEL | |
| | 9. PHYSIC | CAL AND CHEN | MICAL PRO | PERTIES | | |
| - | | | | | | |
| Form | : liqui | | | ation rate : | | established |
| 1 | : Viscous, liquid | | | Specific Gravity:: Not determinedBulk density: Not applicable | | |
| Appearance Color | $\cdot \text{ BEL}$ | : Very faint Vapor pressure | | | | determined |
| Color | : RED · Very | v faint | | pressure . | 1,00 | determined |
| Color Odor | : Very | | Vapor | | Not | determined |
| Color | : Very : Not | ⁷ faint applicable applicable | Vapor | density : | | applicable |
| Color Odor Melting point/range | : Very : Not : Not | applicable | Vapor j Vapou | | | |
| Color Odor Melting point/range Boiling Point: | : Very : Not : : Not : : Imm | applicable applicable | Vapor j Vapour pH | density : | | |
| Color Odor Melting point/range Boiling Point: | : Very : Not : Not : Imm 10. \$ | applicable applicable iscible | Vapor j Vapour pH | density : | | |
| Color Odor Melting point/range Boiling Point: Water solubility | : Very : Not : : Not : : Imm 10. \$: S | applicable applicable iscible STABILITY ANI | Vapor j Vapour pH | density : | | |
| Color Odor Melting point/range Boiling Point: Water solubility Stability | : Very : Not : : Not : : Imm <u>10. §</u> : S n : V | applicable applicable iscible STABILITY ANI table. Vill not occur. | Vapor j Vapour pH | density : | Not | |

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Hazardous decomposition
products:Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen
(NOx), other hazardous materials, and smoke are all possible.

11. TOXICOLOGICAL INFORMATION

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Toxicity Overview

This product contains the following components which in their pure form have the following characteristics:

| CAS-No. | Chemical Name | Effect | Target Organ |
|------------|------------------|------------------|---------------------|
| 13463-67-7 | Titanium dioxide | Systemic effects | Respiratory system. |

Carcinogenicity

This product contains the following components which, in their pure form, have the following carcinogenicity data:

| CAS-No. | Chemical Name | OSHA | IARC | NTP |
|------------|------------------|------|------|-----|
| 13463-67-7 | Titanium dioxide | no | 2B | no |

IARC Carcinogen Classifications:

1 - The component is carcinogenic to humans.

2A - The component is probably carcinogenic to humans.

2B - The component is possibly carcinogenic to humans.

NTP Carcinogen Classifications:

1 - The component is known to be a human carcinogen.

2 - The component is reasonably anticipated to be a human carcinogen.

| | 12. ECOLOGICAL INFORMATION |
|----------------------------------|---|
| Persistence and degradability | : Not readily biodegradable. |
| Environmental Toxicity | : Adverse ecological impact is not known or expected under normal use. |
| Bioaccumulation Potential | : Does not bioaccumulate. |
| Additional advice | : No data available |
| | 13. DISPOSAL CONSIDERATIONS |
| Product | : Where possible recycling is preferred to disposal or incineration. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations. |
| Contaminated packaging | : Recycling is preferred when possible. The generator of waste material has the responsibility for proper waste classification, transportation |



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| ICAO/IATA (air) : Not regulated for transportation. IMO / IMDG (maritime) : Not regulated for transportation. IS. REGULATORY INFORMATION US Regulations: OSHA Status : Classified as hazardous based on components. TSCA Status : All components of this product are listed on or exempt from the TSC Inventory. US. EPA CERCLA Hazardous Substances (40 CFR 302) Not applicable California Proposition : Not applicable 65 SARA Title III Section 302 Extremely Hazardous Substance Unless specific chemicals are identified under this section, this product is Not Applicable under this regu | sion Number 1.1 ision Date 10/26/2006 | | | Pr | Page 5 int Date 11/25/2 |
|---|--|------------------------|-----------------------|-----------------------|----------------------------|
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| Phenol, nonyl-, phosphite (3:1) 26523-78-4 1.00 - 5.00 178 | | | | | |
| | Phenol, nonyl-, phosphite (3 | 5:1) | 26523-78-4 | 1.00 - 5.00 | 178 |

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|--|---|---|
| | | |
| WHMIS Classification | : | Not controlled. |
| DSL | : | All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt. |
| National Inventories: | | |
| Australia AICS | : | Listed |
| China IECS | : | Listed |
| Europe EINECS | : | Listed |
| Japan ENCS | : | Not determined |
| Korea KECI | : | Listed |
| Philippines PICCS | : | Listed |
| | | 16. OTHER INFORMATION |

The information provided in this 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.