SAFETY DATA SHEET

TEVA® Resin SDS - Bulk and Cartridge

Section 1: Chemical Product and Company Identification

Product Name TEVA® Resin

Product Number(s): TE1ML-R01-S, TE1ML-R50-S, TE-B01-A, TE-B01-F, TE-B01-S, TE-B100-A, TE-B100-S,

TE-B200-A, TE-B200-S, TE-B25-A, TE-B25-F, TE-B25-S, TE-B50-A, TE-B50-S, TE-R01-S,

Revision Date: 27-May-15

TE-R25-S, TE-R50-S

Product Synonym(s): TEVA® Resin

Identified Uses: Laboratory chemicals, manufacture of substances

Manufacturer: Eichrom Technologies LLC General (8-5 CST M-F)

1955 University Lane Information: 800-422-6693 (in USA)

Lisle, Illinois 60532 630-963-0320

24 Hour Emergency Number:

CHEMTREC: 800-424-9300

Section 2: Hazard(s) Identification



GHS Signal Word: Danger

GHS Classification of Acute toxicity, Oral (Category 4)

substance or mixture: Skin corrosion/irritation

Serious eye damage (irreversible effects)

Acute hazards to the aquatic environment (Category 1)
Chronic hazards to the aquatic environment (Category 1)

Hazard Statement(s): H302 Harmful if swallowed

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

H400 Very toxic to aquatic life

mixture contains of component(s) of unknown hazards to the aquatic environment

H410 Very toxic to aquatic life with long lasting effects

Mixture contains of component(s) of unknown hazards to the aquatic environment

| Prevention: | |
|----------------|--|
| P260 | Do not breathe dust or vapors. |
| 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, clothing, and eye protection. |
| Response: | |
| P301/P330/P331 | IF SWALLOWED: Rinse mouth. DO NOT induce vomitting. |
| P303/P361/P353 | IF ON SKIN (or hair): Immediately remove all contaminated clothing. Rinse skin (or hair) with water. |
| P304/P340 | IF INHALED: Remove 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. |
| P310 | IMMEDIATELY call a POISON CONTROL CENTER or doctor. |
| P363 | Wash contaminated clothing before reuse. |
| P391 | Collect Spillage. |
| Storage: | |
| P405 | Store locked up. |
| Disposal: | |
| P501 | Dispose of contents/container in accordance with federal, state, and local regulations. |

| Section 3: Composition / Informa | tion on Ingredients | | |
|--|---|---------------------------|---------------------------------|
| Component | CAS_Num | nber Percer | ntage Range |
| Nonionic Acrylic Ester Polymer | | 61% | |
| Trioctylmethylammonium chloride | 63393-96- | | 0/_ |
| Decan-1-ol | 112-30-1 | 4 29-37 1-3% | 70 |
| | | 1-3% | |
| Octan-1-ol | 111-87-5 68814-95- | ,- | |
| Amines, tri-C8-10-alkyl | 08814-95- | 9 < 1% | |
| Section 4: First-aid Measures | | | |
| General Advice | The hazardous properties of this as if it were toxic when evaluating | | established. Treat materia |
| ngestion | Never give anything by mouth to | an unconscious person | . Consult a physician. |
| | Drink a large quantity of milk or w conscious). | vater and contact local p | poison control center (if |
| Skin Contact | Wash immediately with soap and contaminated clothing promptly. | | |
| Eye Contact | Irrigate immediately with water fo medical attention. | r 15 minutes. Mechanio | cal irritation is possible; see |
| Inhalation | Remove to fresh air. If breathing give artificial respiration. Seek m | | oxygen. If not breathing, |
| Most important symptoms and effects, both acute and delayed | The most important known symp section 2) and/or in section 11. F not known. | | |
| Indication of any immediate medical attention and special treatment needed | Treat according to symptoms (de antidote. | contamination, vital fun | ctions), no known specific |
| Section 5: Firefighting Measures | | | |
| Extinguishing Media | Foam, CO2, Dry Chemical | | |
| Fire and Explosion Hazards | Highly toxic and irritating fumes nobe toxic. | nay be released and ex | tinguishing water runoff ma |
| | Polymer does not support flame. | | |
| Protective Equipment | Wear positive pressure self-contagrate protective equipment. | ained breathing apparat | us and full personal |
| Section 6: Accidental Release Mo | easures | | |
| Personal precautions | Avoid breathing vapors, mist, or | gas. See section 8. | |
| P | Surface may be slippery. | , | |
| Environmental Precautions | Avoid release to the environment | | |
| Methods and materials for containment and clean-up | Collect Spillage | | |
| | Ventilate area and wash spill site | after material pickup is | complete. |
| Containment Cleanup | Sweep up material and transfer to | | • |
| Reference to other sections | For disposal see section 13. | | • |
| Section 7: Handling and Storage | , | | |
| Specific End Use(s) | Apart from the uses mentioned in | section 1 no other spe | cific uses are stinulated |
| Conditions for safe handling | Avoid contact with skin and eyes | • | · |
| Contained for Said Hariding | Use mechanical exhaust if dust is | | por or fillot. |
| Conditions for safe storage | Normal warehouse storage in coo | | rv |
| Conditions for sale storage | Keep away from strong oxidizers | • | ٠,٠ |
| Section 8: Exposure Controls / P | · · · · · · · · · · · · · · · · · · · | • | |
| | | oton 1 olio 50 | |
| Control Parameters | Per AIHA WEEL, 8hr-TWA for Oo | | |
| Exposure Controls | Do not eat, drink or smoke when | | |
| Skin Protection | Wear protective gloves, clothing, | • • | |
| | Wash hands thoroughly after har | ndling | |
| Respiratory protection | Do not breathe dust. | | |
| | Use NIOSH/MSHA approved res mechanical exhaust. An air-purif canister may be permissible. | | |

canister may be permissible.

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| Section 9: Physical | | O I COM ODO L | bulk and Carthuge | Nevision Date. 21-iviay-1 |
|-------------------------------------|-----------------|--|---|------------------------------------|
| Information on basic ph | | cal properties | | |
| Appearance: | Powder | p. opo. 1100 | Explosion Limits | Not Established |
| rippediarioe. | | e spherical beads | (Upper/Lower): | |
| Odor: | Low to none | | Flash Point: | 132 °C, for |
| Odor Threshold: | Not Establish | ed | | trioctylmethylammonium chloride |
| pH: | Not relevant | | Flammability: | Not Established |
| Melting Point: | Not Establish | ed | AutoIgnition Temperature: | Not Established |
| Boiling Point: | Not Establish | ed | Decomposition Temperatur | re Not Established |
| Relative Density: | 0.35 g/mL at | | ., _ | |
| Solubility: | Practically ins | soluble in water | VaporPressure: | <1 hPa (<1 mmHg) |
| Partition Coefficient: | Not Establish | | VaporDensity: | Not established |
| Viscosity: | Not Applicable | | Evaporation Rate: | Not Established |
| Section 10: Stability | y and Reactivi | ty | | |
| Reactivity | | | ons if stored and handled as i | |
| Chemical Stability | | Stable under normal | handling and storage condition | ons. |
| Hazardous Reactions | | No hazardous reacti polymerization will n | ons are expected in normal la ot occur. | boratory use. Hazardous |
| Conditions to Avoid | | Avoid all sources of | ignition; heat, sparks, open fla | ame. Avoid electro-static discharg |
| Materials to Avoid | | Contact with strong | oxidizers will degrade materia | l. |
| Hazardous decomposition | | No hazardous decor section 5. | mposition products if stored ar | nd handled as indicated. See also |
| Section 11: Toxicol | | | | |
| Acute Toxicity | | | been tested. The statements of the individual components. | s on toxicology have been derived |
| Oral Effects | | The estimated oral I | D50 for TEVA® Resin is 477 | mg/kg (rat) |
| Oral Eliotto | | | D50 for quaternary ammonium | |
| Inhalation Effects | | | r acute inhalation effects of th | |
| Dermal Effects | | | the mouth, throat, and stomac | • |
| Skin corrosion/irritation | | | | |
| Serious eye damage/irri | | Non-corrosive to ski | n via Corrositex® (skin) test. | |
| | | May cause irritation | or corneal injury. | |
| Respiratory or skin sens | | Based on the ingred | ients, there is no suspicion of | a skin-sensitizing potential |
| Germ Cell Mutagenicity | | • | • | • |
| Carcinogenicity | | Based on the ingred | ients, there is no suspicion of | a mutagenic effect. |
| , | | The whole of the info | ormation assessable provides | no indication of a carcinogenic |
| | | | ilable. Minimize direct exposi | ure to material. |
| Reproductive Toxicity | | | | |
| · | | A component of the laboratory animals. | substance caused malformati | ons/developmental toxicity in |
| | | • | al studies suggest a fertility im | pairing effect. |
| Specific Target Organ T | oxicity | | | |
| Single Exposure | | Based on the availal expected after a sing | | ecific target organ toxicity to be |
| Repeated Exposure Aspiration Hazard | е | Repeated exposure | may affect certain organs. | |
| | | No data available re | garding aspiration hazards as | sociated with this product. |

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| Section 12: Ecological Information | on |
|--|--|
| Aquatic Toxicity | *The product has not been tested. The statement has been derived from the properties of individual components using an additivity method. |
| Acute Toxicity to fish | LC50 > 0.3-2.6 mg/l* |
| | LC50 - Oncorhynchus mykiss (rainbow trout) - 0.18 -0.32 mg/l - 96.0 h for trioctylammonium chloride |
| Acute Toxicity to aquatic invertebrates | EC50 - Daphnia magna (Water flea) - 0.01 -0.04 mg/l - 48 h for trioctylammonium chloride |
| | estimated EC50 (48 h), 0.41 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)* |
| Acute toxicity to aquatic plants | estimated EC10, 0.28 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)* estimated EC50 (72h) 0.29 mg/l (growth rate), Desmodesmus subspicatus (OECD Guideline 201, static). The details of the toxic effect relate to the nominal concentration.* |
| | estimated EC10 (72h) 0.35 mg/l (growth rate), Desmodesmus subspicatus (OECD Guideline 201, static). The details of the toxic effect relate to the nominal concentration.* |
| Chronic Toxicity to fish | No data available regarding chronic toxicity to fish. |
| Chronic Toxicity to aquatic invertebrates | No data available regarding chronic toxicity to daphnids. |
| Chronic toxicity to aquatic plants Microorganisms/Effect on Activated Sludge | No data available regarding chronic toxicity to aquatic plants. |
| Toxicity to Microorganisms | OECD Guideline 209 static, activated sludge, domestic/EC10 (3h): 11 mg/l* |
| · | OECD Guideline 209 static, activated sludge, domestic/EC50 (3h): 46 mg/l* |
| Persistance and degradability | |
| Biodegradability | Not readily biodegradable. |
| Biodegradation and elimination (H2O) | The organic component of the mixture is biodegradable. |
| Elimination information | 10% CO2 formation relative to the theoretical value (28d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) (aerobic, activated, sludge). Derived from products with similar chemical character. |
| Stability in water | No data available. |
| Bioaccumulative Potential | Discharge into the environment should be avoided. |
| | Bioconcentration Factor for Organic components is calculated to be between 70-2,349, with an estimate of 1,778. |
| Mobility in Soil | No data are available for mobility in soil. |
| Transport between environmental compartments | No data available. |
| PBT/vPvB assessment | PBT/vPvB assessment not available as chemical safety assessment not required/not conducted. |
| Other | An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects. |
| Section 13: Disposal Considerat | ions |
| General | Dispose of contents/container in accordance with federal, state, and local regulations |

| General | Dispose of contents/container in accordance with federal, state, and local regulations. |
|---------|---|
| Unused: | Bury resin in licensed landfill or burn in approved incinerator equipped with an afterburner and scrubber according to local, state, and federal regulations. |
| Used: | For resin contaminated with hazardous materials, dispose of mixture as hazardous material according to local, state, and federal regulations. |

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Section 14: Transport Information

| JN Number | UN3077 |
|----------------------------|---|
| Land Transport (US DOT) | |
| Hazard Class | 9 |
| Packing Group | III |
| Hazard Label | 9 |
| Proper Shipping Name | Environmentally hazardous substance, solid, n.o.s. (Phosphine sulfide compound), 9, III |

From 49 CFR 171.4 (c) (2) -- Single or combination packagings having a net mass of 5 kg or less for solids, are not subject to any other requirements of 49 CFR Subchapter C [Parts 171 – 177] provided the packagings meet the general requirements in §§173.24 and 173.24a [provided transportation is not by any form of watercraft capable of being used as a means of transportation on the water]

Air Transport

| (IAIA) | |
|----------------------|--|
| Hazard Class | 9 |
| Packing Group | III |
| Hazard Label | 9 |
| Proper Shipping Name | Environmentally hazardous substance, solid, n.o.s. (Phosphine oxide compound) . 9. III |

From IATA DGR 56th edition Special Provision A197 -- UN3077 substances may be shipped as "not restricted" provided that the net quantity in any receptacle does not exceed 5 kg and the packaging used meets defined standards. Hazardous substance mark is not required on single packagings and combination packagings.

Water Transport (IMDG)

| (IIVIDG) | |
|----------------------|---|
| Hazard Class | 9 |
| Packing Group | III |
| Hazard Label | 9 |
| Proper Shipping Name | Environmentally hazardous substance, solid, n.o.s. (Phosphine |
| | oxide compound) . 9. III |

From IMDG Code 2.10.2.7 -- Marine pollutants packaged in single or combination packagings having a net mass per single or inner packaging of 5 kg or less for solids are not subject to any other provisions of the 2014 IMDG 4Code relevant to marine pollutants provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Section 15: Regulatory Information

| Section 15. Regulatory in | omation |
|---------------------------|---|
| US Federal Regulations | |
| | Toxic Substances Control Act (TSCA): This material is provided to you under the research and development (R&D) exemption. |
| US State Regulations | |
| | A component, Deca-1-ol [CAS 112-30-1], is listed on the following state right to know lists: PA |
| | A component, Octan-1-ol [CAS 111-87-5], is listed on the following state right to know lists: MN, PA |

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Section 16: Other Information

Revision Updated to GHS SDS format, including classification

Trademark: TEVA® Resin is a registered trademark of Eichrom Technologies LLC

SDS Prepared By: Eichrom Technologies LLC

The information set forth herein has been gathered from standard reference materials and is to the best knowledge and belief of Eichrom Technologies LLC, accurate and reliable. Such information is offered solely for your consideration, investigation and verification, and does not suggest or guarantee that the hazard precautions or procedures mentioned are the only ones that exist. Eichrom Technologies LLC makes no warrantees, express or implied, with respect to the use of such information or the use of the specific material identified herein in combination with any other material or process, and assumes no responsibility therefore.