



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: S1251 Mastic (red)
S1243 Mastic (black)

MANUFACTURER: Tyco Electronics Corporation
DIVISION: Tyco Electronics Energy Division
ADDRESS: 2901 Fulling Mill Road
Middleton, PA 17105-3608 USA

SUPPLIERS

EMERGENCY TELEPHONE NUMBERS: US: CHEMTREC 1-800-424-9300
CN: CHEMTREC 1-800-424-9300
Outside North America: 1-703-527-3887
(Collect calls accepted)

NON-EMERGENCY HEALTH/SAFETY INFORMATION: North America: 1- 800-327-6996

CHEMICAL FAMILY: Hydrocarbon based polymer mastic materials
PRODUCT USE: S1251 is red mastic and S1243 is black mastic. Both are used as void fillers in splices.

This product is considered an article and thus it is not regulated under US-OSHA; CAN-WHMIS; IOSH; ISO; UK-CHIP; or EU Directives (67/548/EEC-Dangerous Substance Labelling, 98/24/EC-Chemical Agents at Work, 99/45/EC-Preparation Labelling, 2001/58/EC-MSDS Content, and 1907/2006/EC-REACH) and a MSDS/SDS is not required for this product because when used as recommended or intended under ordinary conditions, it should not present a health and safety exposure or other hazard. If heated, charred, burned, or shredded the health and safety information presented below may apply.

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: S1251 and S1243 mastics are not hazardous during proper installation, but may emit hazardous thermal decomposition and combustion byproducts if overheated to degradation. Overheating the product to charring or burning may produce vapors that may cause eye, skin, nose and throat irritation. Persons with pre-existing eye, skin, or respiratory disorders (e.g., asthma conditions) may be more susceptible to the effects of these vapors.

POTENTIAL HEALTH EFFECTS:

ACUTE HEALTH HAZARDS:

- EYES:** Contact with the molten material may cause thermal burns.
- SKIN:** This product is not expected to be a skin irritant. Repeated contact may cause an allergic skin reaction in sensitized individuals. Persons with pre-existing skin disorders may be more susceptible to the effects of this material. Contact with the molten material may cause thermal burns. Skin absorption of this material is unlikely.
- INGESTION:** Ingestion of this product is highly unlikely. However, if swallowed no harmful effects are expected from this material.
- INHALATION:** In common with most organic materials, thermal degradation and combustion byproducts may be toxic and should not be inhaled. (See Comments below and the Thermal Degradation and Combustion Byproducts Section for more specific information.)

CHRONIC HEALTH HAZARDS: None Known.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Overheating the product to charring or burning may produce vapors that may cause eye, skin, nose and throat irritation. Persons with pre-existing eye, skin, or respiratory disorders (e.g., asthma conditions) may be more susceptible to the effects of these vapors.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS



INGREDIENTS (Chemical/Common Names):

Proprietary Mixture

Base polymer materials are olefin copolymers.

SECTION 4: FIRST AID MEASURES

- EYE CONTACT:** If eye irritation occurs, hold eyelids apart and flush affected area(s) with clean water. Seek medical attention.
- SKIN CONTACT:** First Aid is normally not required. After handling product, it is good work practice to wash your hands. If molten material contact skin, cool area immediately in water. **DO NOT** attempt to remove material from the skin. Treat as a burn, and seek medical attention.
- INGESTION:** Not a normal route of exposure. However, if swallowed and symptoms develop seek medical attention.
- INHALATION:** If respiratory symptoms or other symptoms of exposure develop, move victim to fresh air. If symptoms persist, seek medical attention. If breathing difficulties develop, qualified personnel should administer oxygen. Seek immediate medical attention. If victim is not breathing, immediately begin artificial respiration. Keep victim warm and quiet; seek immediate medical attention.

NOTE TO PHYSICIANS:

Not applicable

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT: Not applicable
METHOD USED: Not applicable

FLAMMABLE LIMITS

UPPER FLAMMABILITY LIMIT (% BY VOLUME): Not applicable
LOWER FLAMMABILITY LIMIT (% BY VOLUME): Not applicable

AUTOIGNITION TEMPERATURE: Not applicable

SUITABLE EXTINGUISHING MEDIA:

carbon dioxide water dry chemical foam other

Selection of extinguishing media should be based upon the size of the fire, the firefighting training/experience of the individual attempting to extinguish or control the fire, and the packaging materials exposed to the fire.

SPECIAL FIRE FIGHTING PROCEDURES & PROTECTIVE EQUIPMENT:

Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive demand mode when fighting fires. Avoid any vapors given off if the product is heated to decomposition, as shown by a darkening and browning. Avoid contact with molten material. Heat-resistant gloves are required if hot products are handled after installation. Do not consume food, beverages or tobacco in the immediate work area. Wash hands before eating, drinking or smoking.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Toxic fumes may be given off in a fire. See also sections on Thermal Degradation and Combustion Byproducts and Other Precautions.

SPECIFIC HAZARDS IN CASE OF FIRE:

Avoid any vapors given off if the product is heated to decomposition, as shown by a darkening and browning. Avoid contact with molten material. Heat-resistant gloves are required if hot products are handled after installation. Do not consume food, beverages or tobacco in the immediate work area. Wash hands before eating, drinking or smoking.

HAZARDOUS COMBUSTION PRODUCTS:

In common with most organic materials, degradation and combustion byproducts may be toxic and should not be inhaled. Thermal degradation is not significant at temperatures achieved during proper installation, as directed by product installation guides. At temperatures higher than those recommended for proper installation, most significantly if the product burns, the thermal degradation and combustion byproducts may include, but are not limited to carbon monoxide, carbon dioxide, organic acids, aldehydes (including formaldehyde) and alcohols, oxides of nitrogen and silicon, acetic acid, vinyl acetate, and aromatic and aliphatic hydrocarbons.



Additional Information

Avoid heating products beyond temperatures required for normal installation. See installation instructions for proper installation procedures. If product chars or burns, immediately stop heating. Avoid inhaling any fumes, which may be given off under such circumstances. Allow any vapors to disperse and ventilate before continuing work in the area.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Wear appropriate personal protection when responding, as specified under Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION below. Evacuate all personnel from affected area. Use self-contained breathing apparatus, if necessary, to enter area. Ventilate area of leak or move leaking container to a well-ventilated area.

ENVIRONMENTAL PRECATIONS:

Prevent spilled material from entering sewers and waterways.

SPILL CONTAINMENT & CLEANUP METHODS/MATERIALS:

Take measures to stop the leak at the source.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING AND STORAGE:

Handling: Refer to Tyco product installation instructions. Operating temperature range is between 40 to 130°C. Ensure adequate ventilation of the work place; avoid breathing vapors and contact with skin and eyes. Do not eat, drink, or smoke in the work area. Wash hands after handling material.

Storage: Keep container tightly closed. Store in a cool, dry, and well-ventilated location away from direct sunlight. Keep away from ignition sources, oxidizing agents, and acids.

OTHER PRECAUTIONS (e.g.; Incompatibilities):

None Known

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS/SYSTEM DESIGN INFORMATION:

None required under normal use conditions.

VENTILATION:

Ensure adequate ventilation during installation.

RESPIRATORY PROTECTION:

If installation occurs in a confined, unventilated area, NIOSH/MSHA-approved air-supplied respirators are recommended.

EYE PROTECTION:

Wear protective glasses with side shields. Chemical goggles should be used if eye contact is anticipated.

SKIN PROTECTION:

If it is necessary to handle grossly overheated or fire-damaged products, wear natural rubber gloves to prevent possible contact with potentially corrosive inorganic acid residues.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

OSHA, ANSI, or NIOSH guidelines should be followed. If there is a danger of molten material contacting the skin or eyes, use eye/face protection and heat resistant gloves.

EXPOSURE GUIDELINES & LIMITS:

None of the ingredients appear on the lists below.

OSHA	Permissible Exposure Limit (PEL/TWA)
ACGIH	Threshold Limit Value (TLV)
	Short-Term Exposure Limit
Quebec	Permissible Exposure Value (PEV)
	Short Term Exposure Limit
Ontario	Occupational Exposure Level (OEL)
	Short Term Exposure Value
Germany	Maximale Arbeitsplatzkonzentrationen (MAK)
	Short-Term Limit (30-minutes)



United Kingdom

Occupational Exposure Standard (OES)
Short-term Exposure Standard

TWA - 8-Hour Time Weighted Average/ NE - Not Established

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Red or black solid tape.
 ODOR: No odor
 ODOR THRESHOLD: Not available
 PHYSICAL STATE: Solid
 pH: Not available
 BOILING POINT: Not applicable
 MELTING POINT: Not available
 FREEZING POINT: Not available
 VAPOR PRESSURE (mmHg @ 20°C): Not applicable
 VAPOR DENSITY (AIR = 1): Not applicable
 SPECIFIC GRAVITY (H2O = 1): 0.93
 EVAPORATION RATE (Butyl acetate=1): Not applicable
 SOLUBILITY IN WATER: Insoluble
 FLASH POINT: Not available
 AUTO-IGNITION TEMPERATURE: Not available
 LOWER EXPLOSIVE LIMIT (LEL): Not applicable
 UPPER EXPLOSIVE LIMIT (UEL): Not applicable
 PARTITION COEFFICIENT: Not applicable
 VISCOSITY (centipoise @ 25° C): Not available
 DECOMPOSITION TEMPERATURE: Not available

FLAMMABILITY/HMIS HAZARD CLASSIFICATIONS (US/CN/EU):
HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0

SECTION 10: STABILITY AND REACTIVITY

STABILITY: This product is stable under normal conditions, at ambient temperature.
 INCOMPATIBILITY (MATERIAL TO AVOID): Strong oxidizers, acids and reducing agents (peroxides or nitrosating agents).
 HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: See Section 5: FIRE FIGHTING MEASURES (Hazardous Combustion Products).
 HAZARDOUS POLYMERIZATION: Will not occur. No known polymerization conditions to avoid.
 CONDITIONS TO AVOID: Avoid overheating of product.

SECTION 11: TOXICOLOGICAL INFORMATION

ROUTES OF ENTRY/EFFECTS OF ACUTE OVEREXPOSURE:

Eye Contact: Contact with the molten material may cause thermal burns.

Skin Contact: This product is not expected to be a skin irritant. Repeated contact may cause an allergic skin reaction in sensitized individuals. Persons with pre-existing skin disorders may be more susceptible to the effects of this material. Contact with the molten material may cause thermal burns. Skin absorption of this material is unlikely.

Ingestion (Swallowing): Ingestion of this product is highly unlikely. However, if swallowed no harmful effects are expected from this material.



Inhalation (Breathing): In common with most organic materials, thermal degradation and combustion byproducts may be toxic and should not be inhaled. (See Comments below and the Thermal Degradation and Combustion Byproducts Section for more specific information.)

EFFECTS OF CHRONIC OVEREXPOSURE

Carcinogenicity:

Warning: This chemical contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

Reproductive Toxicity: This chemical contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

Teratogenicity: This chemical contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

Mutagenicity: This chemical contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

Toxicologically Synergistic Products: None known

SECTION 12: ECOLOGICAL INFORMATION

PERSISTENCE & DEGRADABILITY:

No data available on biodegradation.

BIO-ACCUMULATIVE POTENTIAL (Including Mobility):

No data available on bioaccumulation.

AQUATIC TOXICITY (Test Results & Comments):

No data available on aquatic toxicity.

Additional Information

- No known effects on stratospheric ozone depletion.
- Water Endangering Class (WGK): NA

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: This material is classified as a hazardous waste.

HAZARDOUS WASTE: This material is classified as a hazardous waste. All the components of this product are listed on the Domestic Substances List (DSL) or Non-Domestic substances List (NDSL).

CLASS/CODE: US - Not applicable to material as manufactured for distribution into commerce.
CN - Not applicable to material as manufactured for distribution into commerce.
EWC - Not applicable to material as manufactured for distribution into commerce.

Additional Information

Not Included - Dispose/Recycle as allowed by local jurisdiction for the end-of-life characteristics as-disposed.



SECTION 14: TRANSPORT INFORMATION

GROUND - US-DOT/CAN-TDG/EU-ADR/APEC-ADR:

Proper Shipping Name	Not regulated	ID Number	NA
Hazard Class	NA	Labels	NA
Packing Group	NA		

AIRCRAFT - ICAO-IATA:

Proper Shipping Name	Not regulated	ID Number	NA
Hazard Class	NA	Labels	NA
Packing Group	NA		

VESSEL - IMO-IMDG:

Proper Shipping Name	Not regulated	ID Number	NA
Hazard Class	NA	Labels	NA
Packing Group	NA		

Additional Information

- Transport requires proper packaging and paperwork, including the Nature and Quantity of goods, per applicable origin/destination/customs points as-shipped. Statement of Jurisdictional/Modal Special Provision(s) required.
- Not restricted for any mode of international transport as finished goods.
- Not a Marine Pollutant as-shipped per IMO/IMDG.

SECTION 15: REGULATORY INFORMATION

INVENTORY STATUS:

All components are listed on the TSCA; EINECS/ELINCS; and DSL, unless noted otherwise below.

U.S. FEDERAL REGULATIONS:

TSCA Section 8b - Inventory Status: All chemicals comprising this product are either exempt or listed on the TSCA Inventory.

TSCA Section 12b - Export Notification: If the product contains chemicals subject to TSCA Section 12b export notification they are listed below:

<u>Chemical</u>	<u>CAS #</u>
None	NA

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT)

Chemicals present in the product which could require reporting under the statute:

<u>Chemical</u>	<u>CAS #</u>
None	NA

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

If the product contains chemicals subject to the reporting requirements of Section 313 of SARA Title III, they are listed below.

<u>Chemical</u>	<u>CAS #</u>	<u>% wt</u>
None	NA	NA

CERCLA SECTION 311/312 HAZARD CATEGORIES: Note that this product is exempt from these regulations.

Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No
Immediate Hazard	No
Delayed Hazard	No

STATE REGULATIONS (US):

California Proposition 65

The following chemicals identified to exist in the product as distributed into commerce are known to the State of California to cause cancer, birth defects, or other reproductive harm:

<u>Chemical</u>	<u>CAS #</u>	<u>% Wt</u>
None	NA	NA

INTERNATIONAL REGULATIONS (Non-US):

Canadian Domestic Substance List (DSL)



All ingredients remaining in the product as distributed into commerce are included on the Domestic Substances List.

WHMIS Classifications

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all of the information required by the *Controlled Products Regulations*."

NPRI and Ontario Regulation 127/01

This product contains the following chemicals subject to the reporting requirements of Canada NPRI and/or Ont. Reg. 127/01:

<u>Chemical</u>	<u>CAS #</u>	<u>% Wt</u>
None	None	None

European Inventory of Existing Commercial Chemical Substances (EINECS)

All ingredients remaining in the product as distributed into commerce are exempt from, or included on, the European Inventory of Existing Commercial Chemical Substances.

European Communities (EC) Hazard Classification according to directives 67/548/EEC and 1999/45/EC.

<u>R-Phrases</u>	<u>S-Phrases</u>
None	None

Additional Information

This product may be regulated under additional regulations and laws not identified above, such as for uses other than described or as-designed/as-intended by the manufacturer, or for distribution into specific domestic destinations.

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

Distribution into Quebec to follow Canadian Controlled Product Regulations (CPR) 24(1) and 24(2).
Distribution into the EU to follow applicable Directives to the Use, Import/Export of the product as-sold.

MSDS/SDS PREPARATION INFORMATION:

DATE OF ISSUE: March 17, 2009

SUPERCEDES: March 1997

DISCLAIMER:

Tyco Electronics makes no warranties as to the accuracy or completeness of this information and disclaims any liability in connection with its use. Tyco Electronics' obligation shall be only as set forth in Tyco Electronics' standard terms and conditions of sale for this product. In no case will Tyco Electronics be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product.

The information presented herein was prepared at Tyco Electronics by qualified technical personnel, and to our knowledge it is true and accurate. The information and recommendations are furnished for this product with the understanding that the purchaser/user will independently determine the suitability of the product for this purpose. The data do not constitute a warranty, expressed or implied, statutory or otherwise, nor are they a representation for which Tyco Electronics assumes legal responsibility. The data are submitted for the user's information and consideration only. Any use of this product must be determined by the user to be in accordance with the applicable federal, State/Provincial, and local laws and regulations.

Users are advised that they may have additional disclosure obligations under other national and local laws. Users are advised to ensure that this information is brought to the attention of all employees, agents, and contractors handling this product. Users of Tyco Electronics products should make their own evaluation to determine the suitability of each such product for the specific application and to establish safe handling and installation procedures. Distributors of this product are advised to forward this document, or the information contained herein, to every purchaser of this product.

END