

Henkel

PRODUCT NUMBER: 24436A

ISSUE DATE: 14-December-2010

IDH# 1215968



*** MATERIAL SAFETY DATA SHEET ***

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	TRA-COAT 15D
COMPANY ADDRESS	Henkel Electronic Materials LLC 14000 Jamboree Road Irvine, CA 92606
EMERGENCY CONTACT NUMBERS:	
MEDICAL: 1-877-671-4608 (toll free) or 1-303-592-1711 (24 hours - Poison Control Center)	
TRANSPORT: CHEMTREC: 1-800-424-9300 (24 hours) CHEMTREC International: 1-703-527-3887 (call collect)	
Contact Information: 1-888-9-HENKEL (1-888-943-6535)	
Internet: www.henkel.com/electronics	

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING.
EYE IRRITANT.
HARMFUL IF SWALLOWED.
SKIN IRRITANT.
Water-reactive.
SKIN SENSITIZER.
Colorless Liquid Slight Pungent Odor

EYE	Will cause eye irritation. Contact with eyes causes redness and discomfort which is transient. Vapors, mists, or fumes are irritating.
SKIN CONTACT	Slight/mild irritant. Repeated or prolonged skin contact may result in moderate irritation. Repeated and/or prolonged contact may cause skin sensitization.
INHALATION	Vapor or aerosol, if generated, can cause irritation of the eyes, nose and respiratory tract. Symptoms may include sore throat, coughing, headache, fatigue and dizziness. Avoid breathing vapors or mists.
INGESTION	Ingestion may cause irritation of the gastrointestinal tract. May cause nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	CONCENTRATION (% by weight)
Triallyl-1,3,5-triazine-2,4,6(1H,3H,5H)-trione	1025-15-6	35 - 50
Pentaerythritol tetra-3-Mercaptopropionate	7575-23-7	20 - 35
Isophorone diisocyanate, dihydroxyhydantoin, trimethylolpropane diallyl ether reaction product	68855-40-3	10 - 20
Propanoic acid, 3-mercapto-,2-ethyl-2-[(3-mercapto-1-oxopropoxy)methyl]-1,3-propanediyl ester	33007-83-9	10 - 20

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Di and tri esters and isomers of pentaerythritol and 3-mercaptopropionate

PROPRIETARY

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4. FIRST-AID MEASURES

EYE	Immediately irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain immediate medical attention.
SKIN CONTACT	Flush exposed areas thoroughly with soap and water until all chemical is removed. Remove contaminated clothing and launder before reuse. If symptoms develop, obtain medical attention.
INHALATION	Remove to fresh air. Get medical attention if irritation persists.
INGESTION	DO NOT attempt to give anything by mouth to an unconscious person. If swallowed, DO NOT induce vomiting. Keep at rest. Treat symptomatically and supportively. Get medical attention.

5. FIREFIGHTING MEASURES

AUTOIGNITION	Not available
FLASH POINT	> 250 °F
EXTINGUISHING MEDIA	Foam; Water spray or fog, CO2, Dry Chemical; Do not use direct water stream on burning liquid.
SPECIAL FIREFIGHTING PROCEDURES	Fire fighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.
FIRE & EXPLOSION HAZARDS	Combustible at high temperatures. Combustion will evolve toxic and irritant vapors. In larger quantities, could undergo polymerization generating significant heat and pressure.
HAZARDOUS COMBUSTION PRODUCTS	Thermal decomposition could result in the formation of oxides of carbon and sulfur.
	May evolve hydrogen sulfide.
LOWER EXPLOSION LIMIT (%)	Not applicable
UPPER EXPLOSION LIMIT (%)	Not applicable

6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK PROCEDURES	Ventilate area. Avoid breathing vapors or mists. NIOSH approved respirator if required. Self-contained breathing apparatus in emergency and non-routine situations. May cause allergic skin reaction. Use suitable protective clothing. No smoking, flames or flares in hazard area. Keep unnecessary people away; isolate hazard area and deny entry. Provided it is safe to do so, isolate the source of the leak. Contain the spillage and pump up as much as possible. Absorb the remaining material on sand, sawdust, etc, for landfill or incineration. Do not allow to enter drains, sewers or watercourses. Scrape absorbed material into proper waste containers. Wash area with soap and water; prevent entry of wash water into drains or other waterways. Dispose of wastes and water in accordance with all applicable federal, state and local regulations.
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For safety and environmental precautions, please review entire Material Safety Data Sheet for necessary information.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE	Room <= 30 °C
SHELF LIFE, (Days)	365
HANDLING/STORAGE	Keep containers properly sealed and store indoors in a well ventilated area. Store in a cool, dry area away from water.

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SENSITIVITY TO STATIC ELECTRICITY	Keep away from oxidizing agents. Keep away from heat, sources of ignition and direct sunlight. Empty containers may contain product residue; follow MSDS and label warnings even after they have been emptied.
SPECIAL SENSITIVITY	No Avoid moisture contamination. Product is a UV curing adhesive. Avoid excessive light or heat.
SENSITIVITY TO MECHANICAL IMPACT	No
OTHER PRECAUTIONS	This material should not be spilled, dumped, or flushed into sewers or public waterways.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION REQUIREMENTS	Use in a well-ventilated area.
EYE PROTECTION REQUIREMENTS	Goggles. Protect against splashing.
GLOVE REQUIREMENTS	Employee must wear appropriate protective gloves to prevent contact with this substance. Impervious neoprene or rubber gloves are recommended. Cotton or other absorbent gloves should not be worn.
CLOTHING REQUIREMENTS	Employee must wear appropriate protective clothing and equipment to prevent any possibility of skin contact with this substance. Uniforms, coveralls, or a lab coat should be worn.
CHANGE/REMOVAL OF CLOTHING	Remove contaminated clothing and launder before reuse. Discard shoes, belts, wallets, and any other contaminated leather items.
WASH REQUIREMENTS	Wash exposed areas with soap and water.
RESPIRATOR REQUIREMENTS	No respiratory protection is recommended while working with this material. However, if operating conditions create high vapor or mist concentration, use of an approved respirator is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

PURE SUBSTANCE OR MIXTURE	Mixture
PHYSICAL FORM	Liquid
COLOR	Colorless
ODOR	Slight Pungent
ODOR THRESHOLD	Not available
OXIDIZING PROPERTIES	Water-reactive.
BOILING POINT	Not applicable
	Polymerizes > 60 °C
MELTING/FREEZING POINT	Not available
SOLUBILITY IN WATER	Insoluble
PARTITION COEFFICIENT (n-octanol/water)	Not applicable
SPECIFIC GRAVITY (WATER=1)	1.000
BULK DENSITY	8.5 lb/gal
EVAPORATION RATE	Not applicable
VAPOR PRESSURE (mmHg)	Not applicable
VAPOR DENSITY (air = 1)	Not applicable
VOLATILES	None
VOLATILE ORGANIC COMPOUNDS	Not available
AUTOIGNITION	Not available
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10. STABILITY AND REACTIVITY

STABILITY	Stable
STABILITY DETAIL	Material is normally stable. Avoid moisture contamination.
MATERIALS TO AVOID	Oxidizers, Water, Moisture, Free radical initiators
CONDITIONS TO AVOID	Avoid moisture contamination. Material is light sensitive. Store in a dark area. Elevated temperatures
HAZARDOUS DECOMPOSITION PRODUCTS	Thermal decomposition products are hazardous and/or toxic. Thermal decomposition could result in the formation of oxides of carbon, nitrogen, and sulfur. May evolve hydrogen sulfide. Possible formation of cyanide compounds upon incomplete combustion.
HAZARDOUS POLYMERIZATION CONDITIONS	Heat, oxidizing/reducing agents, oxygen-free atmosphere may cause hazardous polymerization.

11. TOXICOLOGICAL INFORMATION

ROUTE OF ENTRY		Skin Absorption; Inhalation; Eye Contact; Ingestion	
CARCINOGEN	<u>IARC</u> <u>(group)</u>	<u>NTP</u>	<u>OSHA Substance</u> <u>Specific Regulation</u>
COMPONENT			
There is no evidence that this product poses a carcinogenic risk under normal conditions of handling and use.			
CHRONIC (LONG TERM) EFFECTS OF EXPOSURE			
EFFECTS OF CHRONIC EXPOSURE		The toxicological properties of this product have not been fully evaluated. Use of good industrial hygiene practices is required. Avoid direct contact with skin or eyes. Do not ingest or inhale. A component(s) of this product was found to be positive in one or more mutagenetic assays.	
TARGET ORGANS		Skin; Eyes	
SKIN SENSITIZATION		Sensitizer. May cause allergic reaction.	
PRODUCT TOXICOLOGY			
PRODUCT INFORMATION		Vapors and/or aerosols may cause irritation. Symptoms may include sore throat, coughing, headache, fatigue and dizziness.	
EYE IRRITATION		Will cause eye irritation. Slightly irritant to skin. Vapor released during hot processing may be irritant to the respiratory system.	
COMPONENT		ORAL TOXICITY	NOTES ON ORAL TOXICITY
Triallyl-1,3,5-triazine-2,4,6(1H,3H,5H)-trione		Oral LD50: Rat 1000 mg/kg	Slightly toxic.
Pentaerythritol tetra-3-Mercaptopropionate			Ingestion may cause irritation of the gastrointestinal tract. May cause nausea, vomiting and diarrhea.
Propanoic acid, 3-mercapto-,2-ethyl-2-[(3-mercapto-1-oxopropoxy)methyl]-1,3-propanediyl ester			Ingestion may cause irritation of the gastrointestinal tract. May cause nausea, vomiting and diarrhea.

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COMPONENT	DERMAL TOXICITY	NOTES ON DERMAL TOXICITY
Triallyl-1,3,5-triazine-2,4,6(1H,3H,5H)-trione Pentaerythritol tetra-3-Mercaptopropionate		Non-irritant. Slight/mild irritant. Repeated or prolonged skin contact may result in moderate irritation. Repeated and/or prolonged contact may cause skin sensitization.
Propanoic acid, 3-mercapto-,2-ethyl-2-[(3-mercapto-1-oxopropoxy)methyl]-1,3-propanediyl ester		Irritating to the skin.
COMPONENT	INHALATION TOXICITY	NOTES ON INHALATION TOXICITY
Triallyl-1,3,5-triazine-2,4,6(1H,3H,5H)-trione Pentaerythritol tetra-3-Mercaptopropionate		Non-irritant. Vapor or aerosol, if generated, can cause irritation of the eyes, nose and respiratory tract. Symptoms may include sore throat, coughing, headache, fatigue and dizziness. Avoid breathing vapors or mists.
Propanoic acid, 3-mercapto-,2-ethyl-2-[(3-mercapto-1-oxopropoxy)methyl]-1,3-propanediyl ester		Vapors and/or aerosols may cause irritation.
COMPONENT		NOTES ON EYE IRRITATION
Triallyl-1,3,5-triazine-2,4,6(1H,3H,5H)-trione Pentaerythritol tetra-3-Mercaptopropionate		Slight/mild irritant. Will cause eye irritation. Contact with eyes causes redness and discomfort which is transient. Vapors, mists, or fumes are irritating.
Propanoic acid, 3-mercapto-,2-ethyl-2-[(3-mercapto-1-oxopropoxy)methyl]-1,3-propanediyl ester		Will cause eye irritation. Contact with eyes causes redness and discomfort which is transient. Vapors, mists, or fumes are irritating.

12. ECOLOGICAL INFORMATION

POTENTIAL EFFECT ON ENVIRONMENT	Do not allow to enter drains, sewers or watercourses.
MOBILITY	Insoluble
POTENTIAL TO BIOACCUMULATE	Unknown.
AQUATIC TOXICITY	None Established

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS	Disposal should be in accordance with local, state or national legislation.
EMPTY CONTAINER WARNINGS	Empty containers may contain product residue; follow MSDS and label warnings even after they have been emptied.

14. TRANSPORTATION INFORMATION

This section provided for general information only. The shipping description below may not represent requirements for all modes of transportation, packaging, shipping methods or locations outside of the United States.

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FOR MORE COMPLETE TRANSPORTATION REGULATORY INFORMATION PLEASE REFER TO THE SHIPPING DOCUMENTS ACCOMPANYING THE SHIPMENT OF THIS PRODUCT.

DOT CLASSIFICATION

Not regulated

The information provided herein may not include the impact of additional regulatory requirements (eg, for materials meeting the definition of a hazardous waste under RCRA, hazardous substances under CERCLA, and/of marine pollutants under CWA or other similar federal, state or local laws) or any associated exceptions or exemptions under regulations applicable to the transport of this material.

15. REGULATORY INFORMATION

TSCA

This product is manufactured in compliance with all provisions of the Toxic Substances Control Act, 15 U.S.C. 2601 et. seq.

SARA - Section 313 (Superfund Amendments and Reauthorization Act of 1986 - 40CFR 372)

CAS NUMBER

Contains no substances at or above the reporting threshold under Section 313.

CALIFORNIA PROPOSITION 65

WARNING: This product contains the following chemicals that are known to the State of California to cause cancer, birth defects or other reproductive harm.

Unless a concentration is specified in Section 2 of the MSDS, the below chemical/s are present in trace amounts.

COMPONENT

CAS NUMBER

None reportable.

16. OTHER INFORMATION

HMIS® Hazard Ratings

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs by OSHA's 29 CFR 1910.1200, we choose to provide them as a service to our customers using HMIS®. These ratings are to be used only with a fully implemented HMIS® program. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

NPCA recommends that employers must determine appropriate PPE for the actual conditions under which this product is used in their workplace. For information on PPE codes, consult the HMIS® Implementation Manual.

When two ratings are provided for Health, the first represents the material 'as supplied', and the second represents the material 'in use'.

* = chronic health hazard

HMIS® is a registered trademark of the National Paint and Coatings Association (NPCA).

Health

Flammability

Physical Hazard

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PREPARED BY:

Regulatory Affairs

The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no

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