

D&S Posi-Coat (Red)

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 12/10/2015 Date of issue: 12/10/2015

Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: D&S Posi-Coat (Red)

1.2. Intended Use of the Product

Positive-working photosensitive coating for images and resists.

1.3. Name, Address, and Telephone of the Responsible Party

US Fluids

198 – 202 Benton Drive

East Longmeadow, MA 01028

413-525-0660

www.us-fluids.com

1.4. Emergency Telephone Number

Emergency Number : CHEMTREC: 1-800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Flammable Liquid 3 H226

Acute Toxicity Oral 4 H302

Skin Irritation 2 H315

Skin Sensitization 1 H317

Eye Damage 1 H318

Respiratory Tract Irritation H335

Full text of H-phrases: see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US) : Danger

Hazard Statements (GHS-US) : H226 – Flammable liquid and vapor, Hazard Category 3

H302 – Harmful if swallowed

H315 – Skin irritation

H317 – May cause an allergic skin reaction

H318 - Causes serious eye damage, Hazard Category 1

H335 – Respiratory Tract Irritation, Hazard Category 3

Precautionary Statements (GHS-US) : P210 - Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking.
P234 - Keep only in original container.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P280 - Wear protective gloves, protective clothing, and eye protection.
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - If inhaled: Remove person 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

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contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER or doctor/ physician if you feel unwell
P337+P313 - If eye irritation persists: Get medical advice/attention.
P363 - Wash contaminated clothing before reuse.
P390 - Absorb spillage to prevent material damage.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P410 - Protect from sunlight.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US): No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

3.2. Mixture

Name	Product Identifier	% (w/w)*	Classification (GHS-US)
Ethyl Lactate	(CAS No) 97-64-3	75 - 85	Flam. Liquid 3 Eye Dam. 1 Resp. Irrit. 3
Novolak Resin	(CAS No) Proprietary	15 - 25	Not classified
Positive Diazo Sensitizer	(CAS No) Proprietary	1 - 10	Acute Tox. (oral) 4 Skin Irrit. 2 Skin Sens. 1

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Immediately flush skin with plenty of water for at least 15 minutes. Wash contaminated clothing before reuse. Wash with soap and water.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention. Immediately call a POISON CENTER or doctor.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Inhalation: May cause moderate irritation. May irritate respiratory tract. May cause shortness of breath.

Skin Contact: Causes mild to moderate irritation. Symptoms may include itching. Prolonged or repeated contact may cause defatting and drying of the skin which may result in skin irritation and dermatitis.

Eye Contact: Causes moderate irritation. May cause pain, tearing, redness, swelling, and/or stinging.

Ingestion: May cause mild to severe irritation. May cause irritation of the mucous membranes.

Chronic Symptoms: Not available

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, dry chemical, foam, carbon dioxide.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

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5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: During fire, gases hazardous to health may be formed.

Explosion Hazard: Solvent vapors may form explosive mixtures with air.

Reactivity: Hazardous polymerization will not occur. Product will be chemically altered by sunlight.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Oxides of carbon and nitrogen.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store above 45 °F. Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in original container.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s)

Positive-working photosensitive coating for images and resists.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

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8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves.

Eye Protection: Chemical goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Red
Odor	: Mild, light solvent
Odor Threshold	: Not available
pH	: Not available
Evaporation Rate	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: 154 °C (309.2 °F)
Flash Point	: 133 °F
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: 1.6% @ 212 °F
Upper Flammable Limit	: 10.6% @ 212 °F
Vapor Pressure	: 1.7 mm HG @ 20 °C
Relative Vapor Density at 20 °C	: 4.07 (Air = 1)
Relative Density	: Not available
Specific Gravity	: 1.025 – 1.045
Solubility	: Water: Partially soluble
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge.
Evaporation Rate	: 0.22 (Butyl Acetate = 1)

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SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Hazardous reactions will not occur under normal conditions. Will crosslink in sunlight.
- 10.2. Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, and incompatible materials.
- 10.5. Incompatible Materials:** Strong acids, strong oxidizers.
- 10.6. Hazardous Decomposition Products:** Oxides of nitrogen and carbon.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects – Product

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: May cause mild skin irritation.

Serious Eye Damage/Irritation: Causes serious eye irritation and damage.

Respiratory or Skin Sensitization: May cause sensitization.

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Vapors may cause drowsiness and dizziness.

Symptoms/Injuries After Skin Contact: May cause defatting and/or redness of the skin.

Symptoms/Injuries After Eye Contact: Can cause corneal opacity.

Symptoms/Injuries After Ingestion: May cause irritation of the linings of the mouth, throat, and gastrointestinal tract.

11.2. Information on Toxicological Effects – Ingredient(s)

LD50 and LC50 Data:

Ethyl Lactate (97-64-3)	
LD50 Oral (Rat)	> 2,000 mg/kg
LC50 Inhalation (Rat)	> 5.4 mg/l, 4 hours

Positive Diazo Sensitizer (Proprietary)	
LD50 Oral (Rat)	> 2,000 mg/kg
LD50 Dermal (Rabbit)	> 2,000 mg/kg

Novolak Resin (Proprietary)	
LD50 Oral (Rat)	500 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology – General: Not classified.

Ethyl Lactate (97-64-3)	
EC50 Daphnia	683 mg/l (Exposure time: 48 h – Species: Daphnia magna)
LC 50 Fish	320 mg/l (Exposure time: 96 h – Species: Brachydanio rerio)

Novolak Resin (Proprietary)	
LC50 Fish 1	>1000 mg/l, 48 hours

12.2. Persistence and Degradability

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Persistence and Degradability	Not established.

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12.3. Bioaccumulative Potential

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Bioaccumulative Potential	Not established.

12.4. Mobility in Soil Not available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.

Ecology – Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT

UN number UN1993

UN proper shipping name Flammable liquid, n.o.s. (Ethyl lactate)

Class 3

Transport hazard class(es)

Subsidiary risk -

Label(s) 3

Packing group III

Marine pollutant No

Environmental hazards

Read safety instructions, SDS and emergency procedures before handling.

This material can be reclassified as a combustible liquid and is considered not regulated by ground transport when packaged in non-bulk packaging (<119 G). This exception is found in 49 CFR 173.150(f).

Special precautions for user

Special provisions B1, B52, IB3, T4, TP1, TP29

Packaging exceptions 150

Packaging non bulk 203

Packaging bulk 242

14.2. In Accordance with IMDG

UN number UN1993

UN proper shipping name Flammable liquid, n.o.s. (Ethyl lactate)

Class 3

Transport hazard class(es)

Subsidiary risk -

Label(s) 3

Packing group III

Marine pollutant No

Environmental hazards

EmS F-E, S -E

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to None known.

Annex II of MARPOL

14.3. In Accordance with IATA

UN number UN1993

UN proper shipping name Flammable liquid, n.o.s. (Ethyl lactate)

Class 3

Transport hazard class(es)

Subsidiary risk -

Label(s) 3

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Packing group III

Environmental hazards No

ERG Code 3L

Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

This product is hazardous according to OSHA 29 CFR 1910.1200.

TSCA Section 4(a) Final Test Rules & Testing Consent Orders: Not regulated.

TSCA Section 5(e) PMN-Substance Consent Orders: Not regulated.

Drug Enforcement Administration (DEA). List 1(i), Precursor Chemicals (21 CFR 1310.02(a) and 1310.04(f)(1))

Not listed.

TSCA Section 5(a)(2) Final Significant New Use Rules (SNURs)(40CFR 721, Subpt. E)

Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Novolak Resin (CAS Proprietary) 1.0 % One-Time Export Notification only.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

CERCLA (Superfund) reportable quantity (lbs.) (40 CFR 302.4)

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes

Delayed Hazard - No

Fire Hazard - Yes

Pressure Hazard - No

Reactivity Hazard - No

Section 302 extremely

hazardous substance (40

CFR 355, Appendix A)

No

Section 311/312 (40 CFR

370)

Yes

Drug Enforcement

Administration (DEA) (21 CFR

1308.11-15)

Not controlled

Inventory status

Country(s) or region Inventory Name On inventory (yes/no)*

Australia Australian Inventory of Chemical Substances (AICS) Yes

Country(s) or region Inventory Name On inventory (yes/no)*

Canada Domestic Substances List (DSL) Yes

Canada Non-Domestic Substances List (NDSL) Yes

New Zealand New Zealand Inventory Yes

Philippines Philippine Inventory of Chemicals and Chemical Substances Yes

(PICCS)

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

15.2. US State Regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

US. Massachusetts RTK - Substance List

Ethyl lactate (CAS 97-64-3) Listed.

US. New Jersey Worker and Community Right-to-Know Act

Ethyl lactate (CAS 97-64-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Ethyl lactate (CAS 97-64-3)

US. Rhode Island RTK

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SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 12/10/2015
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Further information HMIS® is a registered trade and service mark of the NPCA.

G - Safety Glasses, Gloves, Vapor Respirator

HMIS® ratings Health: 3

Flammability: 2

Physical hazard: 0

Personal protection: G

GHS Full Text Phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Flam. Liq. 3	Flammable Liquids, Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
H226	Flammable liquid Category 3
H302	Acute toxicity (oral), hazard category 4
H315	Skin irritation, hazard Category 2
H317	Skin sensitization, hazard categories 1 and 1A and 1B
H318	Serious eye damage, hazard category 1
H335	Respiratory tract irritation, hazard category 3

Party Responsible for the Preparation of This Document

US Fluids

413-525-0660

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

NA GHS SDS