

## Safety data sheet according to U.S.A. Federal Hazcom 2012

### 1. Identification

#### 1.1. Product identifier

Product name **DYE TRANSFER REMOVER**

**1.2. Relevant identified uses of the substance or mixture and uses advised against**  
Intended use **Colour transfer remover.**

#### 1.3. Details of the supplier of the safety data sheet

Name **Uniters Spa**  
Full address **Via E. De Nicola, 1**  
District and Country **36075 Montecchio Maggiore (VI)**  
**Italia**  
**Tel. 0039 0444 499099**  
**Fax 0039 0444 499106**

e-mail address of the competent person  
responsible for the Safety Data Sheet **safetydata@uniters.com**

#### 1.4. Emergency telephone number

For urgent inquiries refer to **Poison Center : 1 800 222 1222**

### 2. Hazards identification

#### 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200). The product thus requires a safety datasheet.  
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

#### Classification and Hazard Statement

Flammable liquid, category 4 **Combustible liquid.**

Hazard pictograms: --

Signal words: **Warning**

#### Hazard statements:

**H227** **Combustible liquid.**

#### Precautionary statements:

##### Prevention:

**P210** **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**  
**P280** **Wear protective gloves / eye protection / face protection.**

##### Response:

**P370+P378** **In case of fire: use water to extinguish.**

##### Storage:

**P403+P235** **Store in a well-ventilated place. Keep cool.**

##### Disposal:

**P501** **Dispose of contents / container in accordance with the rules on waste**

#### 2.2. Other hazards

Information not available

## DYE TRANSFER REMOVER

### 3. Composition/information on ingredients

#### 3.1. Substances

Information not relevant

#### 3.2. Mixtures

Contains:

Identification	Conc. %	Classification:
<b>4-HYDROXY-4-METHYLPENTAN-2-ONE</b>		
CAS 123-42-2	9.9	Flammable liquid, category 3 H226, Eye irritation, category 2 H319
EC 204-626-7		
INDEX 603-016-00-1		
<b>Alcohols, C12-14, ethoxylated</b>		
CAS 68439-50-9	0.33	Serious eye damage, category 1 H318, Hazardous to the aquatic environment, acute toxicity, category 1 H400
EC 500-213-3		
INDEX -		

The full wording of hazard (H) phrases is given in section 16 of the sheet

### 4. First-aid measures

#### 4.1. Description of first aid measures

**EYES:** Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

**SKIN:** Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

**INHALATION:** Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

**INGESTION:** Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

#### 4.2. Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Information not available

### 5. Fire-fighting measures

#### 5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

#### 5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

**DYE TRANSFER REMOVER**

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

**5.3. Advice for firefighters****GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

**6. Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

**6.2. Environmental precautions**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

**6.3. Methods and material for containment and cleaning up**

Collect the leaked product into a suitable container. If the product is flammable, use explosion-proof equipment. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

**6.4. Reference to other sections**

Any information on personal protection and disposal is given in sections 8 and 13.

**7. Handling and storage****7.1. Precautions for safe handling**

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

**7.2. Conditions for safe storage, including any incompatibilities**

Store only in the original container. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

**7.3. Specific end use(s)**

Information not available

**8. Exposure controls/personal protection****8.1. Control parameters**

Regulatory References:

USA	NIOSH-REL	NIOSH publication No. 2005-149, 3th printing, 2007.
USA	OSHA-PEL	Occupational Exposure Limits - Limits for Air Contaminants TABLE Z-1-1910.1000.
USA	CAL/OSHA-PEL	California Division of Occupational Safety and Health (Cal-OSHA) Permissible Exposure Limits (PELs).

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TLV-ACGIH

ACGIH 2016

**4-HYDROXY-4-METHYLPENTAN-2-ONE****Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV-ACGIH	-	238	50		
OSHA	USA	240	50		
CAL/OSHA	USA	240	50		
NIOSH	USA	240	50		

## Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

**8.2. Exposure controls**

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

**HAND PROTECTION**

Protect hands with category III work gloves (OSHA 29 CFR 1910.138).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

**SKIN PROTECTION**

Wear category I professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

**EYE PROTECTION**

Wear airtight protective goggles (OSHA 29 CFR 1910.133).

**RESPIRATORY PROTECTION**

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a NIOSH certified filter, whose class must be chosen according to the limit of use concentration (NIOSH 42 CFR 84, OSHA 29 CFR 1910.134). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus or external air-intake breathing apparatus. For a correct choice of respiratory protection device, see standard NIOSH 42 CFR 84 and OSHA 29 CFR 1910.134.

**ENVIRONMENTAL EXPOSURE CONTROLS**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

**9. Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Appearance	liquid
Colour	transparent
Odour	Not available
Odour threshold	Not available
pH	N.D.
Melting point / freezing point	Not available
Initial boiling point	100 °C (212 °F)
Boiling range	Not available

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Flash point	> 65 °C (>149°F)
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	0.99
Solubility	in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

**9.2. Other information**

Information not available

**10. Stability and reactivity****10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

4-HYDROXY-4-METHYLPENTAN-2-ONE

Decomposes at temperatures above 90°C/194°F.

**10.2. Chemical stability**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions**

The vapours may also form explosive mixtures with the air.

4-HYDROXY-4-METHYLPENTAN-2-ONE

Risk of explosion on contact with: air, sources of heat. May react dangerously with: alkaline metals, amines, oxidising agents, acids.

**10.4. Conditions to avoid**

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

4-HYDROXY-4-METHYLPENTAN-2-ONE

Avoid exposure to: light, sources of heat, naked flames.

**10.5. Incompatible materials**

Information not available

**10.6. Hazardous decomposition products**

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

**11. Toxicological information****11.1. Information on toxicological effects**

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

4-HYDROXY-4-METHYLPENTAN-2-ONE

WORKERS: inhalation; contact with the skin.

**DYE TRANSFER REMOVER**Delayed and immediate effects as well as chronic effects from short and long-term exposure

## 4-HYDROXY-4-METHYLPENTAN-2-ONE

Acute toxicity causes irritation of the eyes, nose and throat in humans at 100 ppm (476 mg/kg) and pulmonary disorders at 400 ppm. No chronic effects on humans have been reported. The substance may have a depressive effect on the respiratory centres and cause death from respiratory failure.

Interactive effects

Information not available

ACUTE TOXICITY

LC50 (Inhalation) of the mixture: Not classified (no significant component)

LD50 (Oral) of the mixture: Not classified (no significant component)

LD50 (Dermal) of the mixture: Not classified (no significant component)

## 4-HYDROXY-4-METHYLPENTAN-2-ONE

LD50 (Oral) 4000 mg/kg Rat

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

**12. Ecological information**

No specific data are available for this product. Handle it according to good working practices. Avoid littering. Do not contaminate soil and waterways. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation. Please take all the proper measures to reduce harmful effects on aquifers.

**12.1. Toxicity**

Information not available

**12.2. Persistence and degradability**

4-HYDROXY-4-METHYLPENTAN-2-ONE

Solubility in water

1000 - 10000 mg/l

Rapidly degradable

**12.3. Bioaccumulative potential**

4-HYDROXY-4-METHYLPENTAN-2-ONE

Partition coefficient: n-octanol/water

-0.09

**12.4. Mobility in soil**

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Information not available

**12.5. Results of PBT and vPvB assessment**

Information not available

**12.6. Other adverse effects**

Information not available

**13. Disposal considerations****13.1. Waste treatment methods**

Reuse, when possible. Neat product residues should be considered special non-hazardous waste.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

**14. Transport information**

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

**14.1. UN number**

Not applicable

**14.2. UN proper shipping name**

Not applicable

**14.3. Transport hazard class(es)**

Not applicable

**14.4. Packing group**

Not applicable

**14.5. Environmental hazards**

Not applicable

**14.6. Special precautions for user**

Not applicable

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

Information not relevant

**15. Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

U.S. Federal Regulations

Clean Air Act Section 112(b):

34590-94-8

DIPROPYLENE GLYCOL  
MONOMETHYL ETHER (Glycol  
ethers)

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Clean Air Act Section 602 Class I Substances:

No component(s) listed.

Clean Air Act Section 602 Class II Substances:

No component(s) listed.

Clean Water Act –Priority Pollutants:

No component(s) listed.

Clean Water Act –Toxic Pollutants:

No component(s) listed.

DEA List I Chemicals (Precursor Chemicals):

No component(s) listed.

DEA List II Chemicals (Essential Chemicals):

No component(s) listed.

EPA List of Lists:

313 Category Code:

34590-94-8

DIPROPYLENE GLYCOL  
MONOMETHYL ETHER (Glycol  
ethers)

EPCRA 302 EHS TPQ:

No component(s) listed.

EPCRA 304 EHS RQ:

No component(s) listed.

CERCLA RQ:

No component(s) listed.

EPCRA 313 TRI:

34590-94-8

DIPROPYLENE GLYCOL  
MONOMETHYL ETHER (Glycol  
ethers)

RCRA Code:

No component(s) listed.

CAA 112 (r) RMP TQ:

No component(s) listed.

State RegulationsMassachusetts:

34590-94-8

DIPROPYLENE GLYCOL  
MONOMETHYL ETHER (Glycol  
ethers)

123-42-2

4-HYDROXY-4-METHYLPENTAN-2-  
ONE



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Minnesota:

34590-94-8

DIPROPYLENE GLYCOL  
MONOMETHYL ETHER (Glycol  
ethers)

57-55-6

1,2-PROPANEDIOL

123-42-2

4-HYDROXY-4-METHYLPENTAN-2-  
ONENew Jersey:

34590-94-8

DIPROPYLENE GLYCOL  
MONOMETHYL ETHER (Glycol  
ethers)

57-55-6

1,2-PROPANEDIOL

123-42-2

4-HYDROXY-4-METHYLPENTAN-2-  
ONENew York:

No component(s) listed.

Pennsylvania:

25265-71-8

Oxydipropanol

34590-94-8

DIPROPYLENE GLYCOL  
MONOMETHYL ETHER (Glycol  
ethers)

57-55-6

1,2-PROPANEDIOL

123-42-2

4-HYDROXY-4-METHYLPENTAN-2-  
ONECalifornia:

34590-94-8

DIPROPYLENE GLYCOL  
MONOMETHYL ETHER (Glycol  
ethers)

123-42-2

4-HYDROXY-4-METHYLPENTAN-2-  
ONEProposition 65:International RegulationsSubstances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Canadian WHMIS

Information not available

**16. Other information**

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Flam. Liq. 3</b>	Flammable liquid, category 3
<b>Flam. Liq. 4</b>	Flammable liquid, category 4
<b>Eye Dam. 1</b>	Serious eye damage, category 1
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<b>Aquatic Acute 1</b>	Hazardous to the aquatic environment, acute toxicity, category 1
<b>H226</b>	Flammable liquid and vapour.

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<b>H227</b>	Combustible liquid.
<b>H318</b>	Causes serious eye damage.
<b>H319</b>	Causes serious eye irritation.
<b>H400</b>	Very toxic to aquatic life.

**LEGEND:**

- 313 CATEGORY CODE: Emergency Planning and Community Right-to Know Act Section 313 Category Code
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAA 112 © RMP TQ: Risk Management Plan Threshold Quantity (Clean Air Act Section 112©)
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CERCLA RQ: Reportable Quantity (Comprehensive Environment Response, Compensation, and Liability Act)
- CLP: EC Regulation 1272/2008
- DEA: Drug Enforcement Administration
- EmS: Emergency Schedule
- EPA: US Environmental Protection Agency
- EPCRA: Emergency Planning and Community Right-to Know Act
- EPCRA 302 EHS TPQ: Extremely Hazardous Substance Threshold Planning Quantity (Section 302 Category Code)
- EPCRA 304 EHS RQ: Extremely Hazardous Substance Reportable Quantity (Section 304 Category Code)
- EPCRA 313 TRI: Toxics Release Inventory (Section 313 Category Code)
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PEL: Predicted exposure level
- RCRA Code: Resource Conservation and Recovery Act Code
- REL: Recommended exposure limit
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TSCA: Toxic Substances Control Act
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- WHMIS: Workplace Hazardous Materials Information System.

**GENERAL BIBLIOGRAPHY:**

- GHS rev. 3
- The Merck Index. 10th Edition
- Handling Chemical Safety
- Niosh - Registry of Toxic Effects of Chemical Substances
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy
- 6 NYCRR part 597
- Cal/OSHA website
- California Safe Drinking Water and Toxic Enforcement Act
- EPA website
- Hazard Communication Standard (HCS 2012)
- IARC website
- List Of Lists EPA: Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112© of the Clean Air Act
- Massachusetts 105 CMR Department of public health 670.000: "Right to Know"
- Minnesota Chapter 5206 Departemnt Of Labor and Industry Hazardous Substances, Employee "Right to Know".
- New Jersey Worker and Community Right to know Act N.J.S.A.
- NTP. 2011. Report on Carcinogens, 12th Edition.
- OSHA website
- Pennsylvania, Hazardous Substance List, Chapter 323

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and

**DYE TRANSFER REMOVER**

thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 04 / 08 / 09 / 10 / 11 / 12 / 14 / 15 / 16.