



SAFETY DATA SHEET

according to Regulation (EU) 2015/830

Page 1/8

R&R® Wash-N-Etch pattern cleaner

Revision 1
Revision date 2021-06-23

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name R&R® Wash-N-Etch pattern cleaner

1.3. Details of the supplier of the safety data sheet

Company Ransom & Randolph
Address 3535 Briarfield Boulevard, PO Box 1570
Maumee, Ohio 43537 USA
Web www.ransom-randolph.com
Telephone +1 (419) 865-9497
Fax +1 (419) 865-9997
Email SDS@ransom-randolph.com
Email address of the competent person dyouel@ransom-randolph.com

1.4. Emergency telephone number

Emergency telephone number USA +1 419 865 9497
Company Ransom & Randolph Co.
08:00-17:00 (US Eastern Std. / GMT minus 5)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.2. Classification - EC 1272/2008 Flam. Liq. 3: H226; Skin Irrit. 2: H315; Skin Sens. 1: H317; Eye Irrit. 2: H319; Aquatic Chronic 1: H410;

2.2. Label elements

Hazard pictograms



Signal Word

Warning

Hazard Statement

Flam. Liq. 3: H226 - Flammable liquid and vapour.
Skin Irrit. 2: H315 - Causes skin irritation.
Skin Sens. 1: H317 - May cause an allergic skin reaction.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.

Precautionary Statement: Prevention

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting// equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.

R&R® Wash-N-Etch pattern cleaner

Revision 1

Revision date 2021-06-23

2.2. Label elements

Precautionary Statement: Response	P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P264 - Wash (hands) thoroughly after handling. P272 - Contaminated work clothing should not be allowed out of the workplace. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection.
	P302+P352 - IF ON SKIN: Wash with plenty of water/ . P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P321 - Specific treatment (see on this label). P332+P313 - If skin irritation occurs: Get medical advice/attention. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P337+P313 - If eye irritation persists: Get medical advice/attention. P370+P378 - In case of fire: Use to extinguish. P391 - Collect spillage.
Precautionary Statement: Storage	P403+P235 - Store in a well-ventilated place. Keep cool.
Precautionary Statement: Disposal	P501 - Dispose of contents/container to local and national regulations

Further information

PBT and vPvB assessment. Not applicable.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

EC 1272/2008

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification
D-Limonene	601-029-00-7	5989-27-5	227-813-5		20 - 30%	Flam. Liq. 3: H226; Skin Irrit. 2: H315; Skin Sens. 1: H317; Aquatic Acute 1: H400; Aquatic Chronic 1: H410;
2-(2-Butoxyethoxy)ethanol (2-(2-Butoxyethoxy) ethanol)	603-096-00-8	112-34-5	203-961-6		10 - 20%	Eye Irrit. 2: H319;
2,2'-Iminodiethanol	603-071-00-1	111-42-2	203-868-0		1 - 10%	Acute Tox. 4: H302; STOT RE 2: H373; Skin Irrit. 2: H315; Eye Dam. 1: H318;

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Inhalation may cause coughing, tightness of the chest and irritation of the respiratory system. Inhalation of vapour may cause shortness of breath. Move the exposed person to fresh air. Seek medical attention.
Eye contact	May cause irritation to eyes. Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.
Skin contact	May cause irritation to skin. Wash off immediately with plenty of soap and water. Remove contaminated clothing. Treat as for inhalation if any signs of poisoning are present. Seek medical attention if irritation or symptoms persist.
Ingestion	Ingestion is irritating to the respiratory tract and may cause damage to the central nervous system. DO NOT INDUCE VOMITING. Seek medical attention.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Alcohol resistant foam. Carbon oxides.

R&R® Wash-N-Etch pattern cleaner

Revision 1

Revision date 2021-06-23

5.2. Special hazards arising from the substance or mixture

. Burning produces irritating, toxic and obnoxious fumes.

5.3. Advice for firefighters

Wear: Self-contained breathing apparatus. Wear chemical protective clothing.

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

Ensure adequate ventilation of the working area. Evacuate personnel to a safe area. Eliminate all sources of ignition. Wear suitable protective equipment.

6.2. Environmental precautions

Do not allow product to enter drains. Prevent further spillage if safe.

6.3. Methods and material for containment and cleaning up

Absorb with inert, absorbent material. Transfer to suitable, labelled containers for disposal. Clean spillage area thoroughly with plenty of water.

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

Avoid contact with eyes and skin. Ensure adequate ventilation of the working area. Keep away from sources of ignition - No smoking. Use explosion proof equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep in a cool, dry, well ventilated area. Keep containers tightly closed. Store in correctly labelled containers.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****8.1.1. Exposure Limit Values**

2-(2-Butoxyethoxy)ethanol (2-Butoxyethoxy) ethanol	WEL 8-hr limit ppm: 10	WEL 8-hr limit mg/m3: 67.5
	WEL 15 min limit ppm: 15	WEL 15 min limit mg/m3: 101.2
	WEL 8-hr limit mg/m3 total - inhalable dust:	WEL 15 min limit mg/m3 total - inhalable dust:
	WEL 8-hr limit mg/m3 total - respirable dust:	WEL 15 min limit mg/m3 total - respirable dust:

8.2. Exposure controls

8.2.1. Appropriate engineering controls	Ensure adequate ventilation of the working area.
8.2.2. Individual protection measures	Wear chemical protective clothing. EN13982, ANSI 103 or =.
Eye / face protection	Avoid contact with eyes. Wear: Approved safety goggles. safety glasses with side-shields. EN166, ANSI Z87.1 or =.
Skin protection - Handprotection	Avoid contact with skin. Chemical resistant gloves (PVC). EN374, ASTM F1001 or =.
Respiratory protection	Exposure above the recommended occupational exposure limit (OEL) may cause adverse health effects. In case of insufficient ventilation, wear suitable respiratory equipment. Wear: Suitable half mask respirator with filter P2 (EN 143). EN140, EN143, ASTM F2704-10 or =.
8.2.3. Environmental exposure controls	Use appropriate container to avoid environmental contamination.

SECTION 9: Physical and chemical properties

R&R® Wash-N-Etch pattern cleaner

Revision 1
Revision date 2021-06-23

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Light yellow
Odour	Pleasant
Odour threshold	No data available
pH	9 - 10
Freezing Point	≈ 0 °C
Initial boiling point	= 100 °C
Flash point	= 51 °C
Flammability (solid, gas)	No data available
Upper Explosive Limit	No data available
Lower Explosive Limit	Not applicable.
Vapour pressure	No data available
Vapour density	> 2.3
Fat Solubility	No data available
Partition coefficient	No data available
Melting point	Not applicable.
Autoignition temperature	No data available
Viscosity	No data available
Explosive properties	>
Oxidising properties	No data available
Evaporation rate	Not applicable.
Solubility	Soluble in water

9.2. Other information

Conductivity	No data available
Surface tension	No data available
Specific gravity	0.94 - 0.95
Gas group	No data available
Benzene Content	Not applicable.
Lead content	Not applicable.
VOC (Volatile organic compounds)	≈ 420 g/l

SECTION 10: Stability and reactivity

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No Significant Hazard.

10.4. Conditions to avoid

Heat, sparks and open flames.

10.5. Incompatible materials

Avoid contact with: Acids, Strong oxidising agents.

10.6. Hazardous decomposition products

Carbon oxides, Nitrogen oxides, Ammonia, vapour, Carbon oxides may be formed in fire conditions.

SECTION 11: Toxicological information

11.1.12. Mixture versus substance information

d-Limonene [CASRN 005989-27-5]

R&R® Wash-N-Etch pattern cleaner

Revision 1

Revision date 2021-06-23

11.1.12. Mixture versus substance information

ACUTE TOXICITY

Oral LD50 (rat) > 5g/kg Eye irritation (rabbit): Severely irritating.

Dermal LD50 (rabbit) > 5 g/kg Dermal irritation (rabbit): Severely irritating. Oral TDLO (mouse) = 67 mg/kg/39w-l:ETA

IPR TDLO (mouse) = 4800 mg/kg/8w-l:ETA

CHRONIC EFFECTS: Prolonged or repeated exposure can cause drying, defatting, and dermatitis of skin. d-limonene is NOT listed as carcinogenic by OSHA, NTP, IARC or ACGIH. FDA and WHMIS list d-limonene as GRAS -"generally recognized as safe". [5,2-3,11-031197] ; 15,3-3,11-0198

Ethanol, 2-(2-butoxyethoxy) [CASRN 000112-34-5] ACUTE TOXICITY

Oral LD50 (rat) = 5.1-5.7 g/kg Eye Irritation: Moderate [Rabbit] Oral LD50 (mouse) = 2.4 g/kg Skin Irritation: Slight [Rabbit]

Dermal LD50 (rabbit) ~ 4 g/kg Inhalation LC50 (rat) > 18 ppm; 7 hours

Other Information: Kidney effects in male rats were observed in laboratory animals exposed to this material. Effects were consistent with male rat hyaline droplet nephropathy, which is of questionable significance to human health.

Mutagenicity: Animal mutagenicity studies were negative. In vitro mutagenicity studies were negative in some cases and positive in other cases. [3-3,3,1,6,4-121600], [18,7-1,3,6,4-020901], & [4,16-6,4,3,1-022001]

Diethanolamine:

TOXICITY DATA: Recently conducted National Toxicology Program (NTP) subchronic toxicity studies with diethanolamine (DEA) in rats and mice suggest that the kidney, liver, and blood are potential target systems for DEA toxicity, following both oral and dermal exposures. In addition, effects in the brain and spinal cord of rats, and in the hearts of mice were observed only at extremely high dosages of DEA. Effects on several other tissues were reported, although these occurred only at dose levels which caused severe debilitation of the animals, and were considered secondary effects (not directly caused by DEA)

by the NTP peer review pathology group. Furthermore, most of the effects reported in these studies were observed in only one of the species tested, and clear dose response trends were not always evident in treated groups, making the relevance of these findings across species questionable. NTP has initiated chronic studies in rats and mice by the dermal route of exposure. These studies may clarify the results of the subchronic studies as well as provide information on the potential carcinogenicity of DEA. Preliminary findings from a developmental toxicity study in the rat with dermal application of DEA has shown that this chemical has a potential to cause developmental delay in the fetus. The effect seen was a general delay in ossification (i.e., bone substance formation) in the skull at doses shown to cause severe maternal toxicity. A definitive developmental study is currently underway to clarify the above findings. [7,20-H,F,A,J,J,19,I,F-070194].

SECTION 12: Ecological information

12.3. Bioaccumulative potential

Partition coefficient

R&R® Wash-N-Etch pattern cleaner No data available

Further information

R&R® Wash-N-Etch pattern cleaner

Revision 1
Revision date 2021-06-23

Further information

	<p>d-Limonene [CASRN 005989-27-5] Ecotoxicological Information: Product may be toxic to aquatic organisms. [5,2-3,11-031197]</p> <p>Ethanol, 2-(2-butoxyethoxy) [CASRN 000112-34-5] ECOTOXICITY LC50 (Poecilia reticulata) = 1150 mg/L LC50 (Lepomis macrochirus) = 1300 mg/L LC50 (Leuciscus idus) = 1805-2304 mg/L LC50 (Menidia beryllina) = 2000 mg/L LC50 (Carassius auratus) = 2700 mg/L LC50 (Daphnia magna) = 2850 mg/L LC50 (Notropis atherinoides) > 500 mg/L Growth inhibition IC50 (bacteria) = 255 mg/L MOVEMENT & PARTITIONING: Bioconcentration potential is low (BCF less than 100 or Log Pow less than 3). Log octanol/water partition coefficient (log Pow) is 0.56. Potential for mobility in soil is high (Koc between 50 and 150). Log soil organic carbon partition coefficient (log Koc) is estimated to be 1.88. Henry's Law Constant (H) is estimated to be 1.52E-9 atm.m³/mol. DEGRADATION & PERSISTENCE: Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD greater than 40%). Degradation is expected in the atmospheric environment within minutes to hours. 5-Day biochemical oxygen demand (BOD5) is 0.05 p/p. 10-Day biochemical oxygen demand (BOD10) is 0.39 p/p. 20-Day biochemical oxygen demand (BOD20) is 1.08 p/p. Theoretical oxygen demand (ThOD) is calculated to be 2.17 p/p. Biodegradation rate may increase in soil and/or water with acclimation. [3-3,3,1,6,4-121600].</p>
--	--

SECTION 13: Disposal considerations

General information

	Dispose of in compliance with all local and national regulations.
--	---

Disposal methods

	Contact a licensed waste disposal company.
--	--

Disposal of packaging

	Do not pierce or burn, even after use.
--	--

Further information

	For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.
--	--

SECTION 14: Transport information

Hazard pictograms

	
--	---

14.1. UN number

	UN1993
--	--------

14.2. UN proper shipping name

	FLAMMABLE LIQUID, N.O.S. (Diethanolamine, Dlimonene)
--	--

14.3. Transport hazard class(es)

ADR/RID	3
Subsidiary risk	-
IMDG	3
Subsidiary risk	-
IATA	3
Subsidiary risk	-

R&R® Wash-N-Etch pattern cleaner

Revision 1

Revision date 2021-06-23

14.4. Packing group	
Packing group	III
14.5. Environmental hazards	
Environmental hazards	No
Marine pollutant	No
ADR/RID	
Hazard ID	30
Tunnel Category	(D/E)
IMDG	
EmS Code	F-E S-E
IATA	
Packing Instruction (Cargo)	366
Maximum quantity	220 L
Packing Instruction (Passenger)	355
Maximum quantity	60 L
Further information	
	(DIETHANOLAMINE, DLIMONENE). Initial boiling point. 100. degree C. Flash point. 51. degree C. Domestic ground non-bulk: NOT REGULATED per 49 CFR 173.150(f) Domestic ground bulk: UN1993, Flammable Liquid, N.O.S., (DIETHANOLAMINE, DLIMONENE), 3, PG III, International: UN1993, Flammable Liquid, N.O.S., (DIETHANOLAMINE, DLIMONENE), 3, PG III, (51 C (c.c.)). S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

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

Regulations	<p>U.S. FEDERAL REGULATIONS: Wash-N-Etch. CERCLA 103 Reportable Quantity: This product is subject to CERCLA toxic chemical reporting requirements. Diethanolamine (100. RQ). Product (4545 lbs. RQ = 752 US Gallons RQ). Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.</p> <p>SARA TITLE III: Hazard Category For Section 311/312: acute and chronic hazards</p> <p>Section 313 Toxic Chemicals: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): diethanolamine CAS 111-42-2 < 5%, 2-(2-butoxyethoxy) ethanol CAS 112-34-5 < 30%.</p> <p>Section 302 Extremely Hazardous Substances (TPQ): None</p> <p>EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.</p> <p>REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL</p>
--------------------	--

R&R® Wash-N-Etch pattern cleaner

Revision 1

Revision date 2021-06-23

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

of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

SECTION 16: Other information**Other information**

Revision	This document differs from the previous version in the following areas: 12 - 12.1. Toxicity.
Text of Hazard Statements in Section 3	Flam. Liq. 3: H226 - Flammable liquid and vapour. Skin Irrit. 2: H315 - Causes skin irritation. Skin Sens. 1: H317 - May cause an allergic skin reaction. Aquatic Acute 1: H400 - Very toxic to aquatic life. Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects. Eye Irrit. 2: H319 - Causes serious eye irritation. Acute Tox. 4: H302 - Harmful if swallowed. Eye Dam. 1: H318 - Causes serious eye damage. STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure .
Maximum content of VOC	420 g/l.

Further information

The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.