



SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name PC155 RESIST STRIPPER
Product No. 600-019

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Printed circuit board manufacture

1.3. Details of the supplier of the safety data sheet

Supplier MEGA Electronics Ltd
MEGA House, Grip Industrial Estate
Linton, Cambridge CB21 4XN
United Kingdom
Tel: 01223 893900
Fax: 01223 893894
sales@megauk.com

1.4. Emergency telephone number

024 764 666 91 (Mon-Fri 8.30-17.00)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards Not classified.
Human health Acute Tox. 4 - H302; Acute Tox. 4 - H312; Acute Tox. 4 - H332; Skin Corr. 1B - H314; STOT SE 3 - H335
Environment Not classified.

Classification (1999/45/EEC)

Xn; R20/21/22. C; R34. Xi; R37.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Human health
Corrosive to skin and eyes.

2.2. Label elements

Contains 2-BUTOXYETHANOL
2-AMINOETHANOL
POTASSIUM HYDROXIDE

Label In Accordance With (EC) No. 1272/2008



Signal Word Danger

Hazard Statements
H302 Harmful if swallowed.

	H312	Harmful in contact with skin.
	H314	Causes severe skin burns and eye damage.
	H332	Harmful if inhaled.
	H335	May cause respiratory irritation.
Precautionary Statements	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P260	Do not breathe vapour/spray.
	P264	Wash contaminated skin thoroughly after handling.
	P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor/physician if you feel unwell.
	P312	
Supplementary Precautionary Statements	P301+330+331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
	P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P403+233	Store in a well-ventilated place. Keep container tightly closed. P501d Dispose of contents/container in accordance with local, regional and national regulations

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

2-BUTOXYETHANOL 30-60%

CAS-No.: 111-76-2 EC No.: 203-905-0 Registration Number: 01-2119475108-36-XXXX

Classification (EC 1272/2008)

Acute Tox. 4 - H302
Acute Tox. 4 - H312
Acute Tox. 4 - H332
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319

Classification (67/548/EEC)

Xn;R20/21/22
Xi;R36/38

2-AMINOETHANOL 25-40%

CAS-No.: 141-43-5 EC No.: 205-483-3

Classification (EC 1272/2008)

Acute Tox. 4 - H302
Acute Tox. 4 - H312
Acute Tox. 4 - H332
Skin Corr. 1B - H314
STOT SE 3 - H335

Classification (67/548/EEC)

C;R34
Xn;R20/21/22

POTASSIUM HYDROXIDE 1-5%

CAS-No.: 1310-58-3 EC No.: 215-181-3

Classification (EC 1272/2008)

Acute Tox. 4 - H302
Skin Corr. 1A - H314

Classification (67/548/EEC)

C;R35
Xn;R22

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information

Remove affected person from source of contamination. Get medical attention if any discomfort continues.

Inhalation

Move the exposed person to fresh air at once. Get medical attention. Provide rest, warmth and fresh air.

Ingestion

DO NOT INDUCE VOMITING! NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Drink plenty of water. Get medical attention immediately! Provide rest, warmth and fresh air.

Skin contact

Remove affected person from source of contamination. Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Get medical attention promptly if symptoms occur after washing.

Eye contact

Remove victim immediately from source of exposure. Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

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

Inhalation

Irritation of nose, throat and airway.

Skin contact

Chemical burns.

Eye contact

Irritation, burning, lachrymation, blurred vision after liquid splash.

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

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

5.2. Special hazards arising from the substance or mixture

Unusual Fire & Explosion Hazards

May develop highly toxic or corrosive fumes if heated.

5.3. Advice for firefighters

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Avoid discharge onto the ground.

6.3. Methods and material for containment and cleaning up

DO NOT touch spilled material. Wear necessary protective equipment. Provide ventilation and confine spill. Do not allow runoff to sewer. Neutralise small amounts with diluted hydrochloric acid (HCl) and flush to sewer with large amounts of water. Large Spillages: Absorb with inert, damp, non-combustible material, then flush area with water. Inform Authorities if large amounts are involved.

6.4. Reference to other sections

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid spilling, skin and eye contact. Eye wash facilities and emergency shower must be available when handling this product.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place. Store in closed original container at temperatures between 5°C and 30°C.

Storage Class

Chemical storage.

7.3. Specific end use(s)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	STD	TWA - 8 Hrs	STEL - 15 Min	Notes
2-AMINOETHANOL	WEL	3 ppm	7.6 mg/m3	6 ppm 15 mg/m3
2-BUTOXYETHANOL	WEL	25 ppm(Sk)		50 ppm(Sk)
POTASSIUM HYDROXIDE	WEL			2 mg/m3

WEL = Workplace Exposure Limit.

2-BUTOXYETHANOL (CAS: 111-76-2)

DNEL				
Industry	Dermal	Short Term	Local Effects	89 mg/kg/day
Industry	Inhalation.	Short Term	Local Effects	663 mg/m3
Industry	Inhalation.	Short Term	Local Effects	246 mg/m3
Industry	Dermal	Long Term	Systemic Effects	75 mg/kg/day
PNEC				
Industry	Freshwater	8.8	mg/l	
Industry	Marinewater	8.8	mg/l	
Industry	Sediment (Freshwater)	8.14	mg/kg	
Industry	Soil	2.8	mg/kg	

8.2. Exposure controls

Protective equipment



Process conditions

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station.

Engineering measures

Provide adequate general and local exhaust ventilation.

Respiratory equipment

Respiratory protection must be used if air contamination exceeds acceptable level.

Hand protection

Use protective gloves.

Eye protection

Use approved safety goggles or face shield.

Other Protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly with soap & water if skin becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Clear Liquid
Colour	Colourless.
Solubility	Soluble in water.
Relative density	0.97 - 0.98 @ 20 °C
pH-Value, Conc. Solution	>12

9.2. Other information

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

10.2. Chemical stability

Stable under normal temperature conditions.

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid

Avoid contact with acids and oxidising substances.

10.5. Incompatible materials

Materials To Avoid

Strong oxidising substances. Strong acids.

10.6. Hazardous decomposition products

None under normal conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Inhalation

May cause irritation to the respiratory system. Harmful by inhalation.

Ingestion

May cause chemical burns in mouth and throat.

Skin contact

Causes burns.

Eye contact

Causes burns. Risk of serious damage to eyes.

Route of entry

Inhalation. Ingestion. Skin and/or eye contact.

Toxicological information on ingredients.

POTASSIUM HYDROXIDE (CAS: 1310-58-3)

Toxic Dose 1 - LD 50
365 mg/kg (oral rat)

Aspiration hazard:

Inhalation

May cause irritation to the respiratory system.

Ingestion

Causes severe burns.

Skin contact

Causes severe burns.

Eye contact

Causes burns. Risk of serious damage to eyes.

Route of entry

Inhalation. Ingestion. Skin and/or eye contact.

2-BUTOXYETHANOL (CAS: 111-76-2)

Toxic Dose 1 - LD 50
1480 mg/kg (oral rat)

Aspiration hazard:

Inhalation

Prolonged inhalation of high concentrations may damage respiratory system.

Ingestion

Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Skin contact

Harmful in contact with skin.

Eye contact

Irritating to eyes.

Health Warnings

The product causes irritation of mucous membranes and may cause abdominal discomfort if swallowed.

2-AMINOETHANOL (CAS: 141-43-5)

Toxic Dose 1 - LD 50
1720 mg/kg (oral rat)

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

12.1. Toxicity

Ecological information on ingredients.

POTASSIUM HYDROXIDE (CAS: 1310-58-3)

Acute Fish Toxicity

Concentrations which give high pH may be fatal to fish and aquatic organisms.

2-BUTOXYETHANOL (CAS: 111-76-2)

Acute Fish Toxicity

Not considered toxic to fish.

LC 50, 96 Hrs, Fish mg/l

>100

EC 50, 48 Hrs, Daphnia, mg/l

>100

2-AMINOETHANOL (CAS: 141-43-5)

LC 50, 96 Hrs, Fish mg/l

125

12.2. Persistence and degradability

Ecological information on ingredients.

POTASSIUM HYDROXIDE (CAS: 1310-58-3)

Degradability
The product is not readily biodegradable.

2-BUTOXYETHANOL (CAS: 111-76-2)

Degradability
The product is easily biodegradable.
Biodegradation
Degradation (70%) > 28 days

2-AMINOETHANOL (CAS: 141-43-5)

Degradability
The product is easily biodegradable.

12.3. Bioaccumulative potential

12.4. Mobility in soil

Ecological information on ingredients.

POTASSIUM HYDROXIDE (CAS: 1310-58-3)

Mobility:
The product is soluble in water.

2-AMINOETHANOL (CAS: 141-43-5)

Mobility:
The product is soluble in water.

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

UN No. (ADR/RID/ADN)	1760
UN No. (IMDG)	1760
UN No. (ICAO)	1760

14.2. UN proper shipping name

Proper Shipping Name CORROSIVE LIQUID, N.O.S. (2-AMINOETHANOL, POTASSIUM HYDROXIDE)

14.3. Transport hazard class(es)

ADR/RID/ADN Class	8
ADR/RID/ADN Class	Class 8: Corrosive substances.
ADR Label No.	8
IMDG Class	8
ICAO Class/Division	8
Transport Labels	



14.4. Packing group

ADR/RID/ADN Packing group	III
IMDG Packing group	III
ICAO Packing group	III

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant
No.

14.6. Special precautions for user

EMS	F-A, S-B
Emergency Action Code	2X
Hazard No. (ADR)	80
Tunnel Restriction Code	(E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

SECTION 15: REGULATORY INFORMATION

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

Uk Regulatory References

Health and Safety at Work Act 1974. The Control of Substances Hazardous to Health Regulations.

Statutory Instruments

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716). Control of Substances Hazardous to Health.

Guidance Notes

Workplace Exposure Limits EH40.

National Regulations

Regulation (EC) No 1907/2006 of the European Parliament and of the Council 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, including amendments.

15.2. Chemical Safety Assessment

SECTION 16: OTHER INFORMATION

Information Sources

Dangerous Properties of Industrial Chemicals, N.Sax, Croner's: Dangerous Substances. Croner's: Emergency Spillage Guide. Croner's: Substances Hazardous to Health. Material Safety Data Sheet, Misc. manufacturers.

Revision Date	27/05/2014
Revision	5
Supersedes date	30/04/2008

Risk Phrases In Full

- R34 Causes burns.
- R35 Causes severe burns.
- R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
- R22 Harmful if swallowed.
- R36/38 Irritating to eyes and skin.
- R37 Irritating to respiratory system.

Hazard Statements In Full

- H319 Causes serious eye irritation.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H332 Harmful if inhaled.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H335 May cause respiratory irritation.

Disclaimer

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 process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.