

SAFETY DATA SHEET

In accordance with 453/2010 and 1272/2008

(All references to EU regulations and directives are abbreviated into only the numeric term)

Issued 11.01.2024

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

1.1. Product identifier

Trade name

DS 270

Supplier's product number

760270

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

Identified uses

Making printed circuit board

1.3. Details of the supplier of the safety data sheet

Company: Bungard Elektronik GmbH & Co. KG

Address: Rilkestraße 1
D - 51570 Windeck

Tel.: +49/2292/92828-0

Fax: +49/2292/92828-29

E-Mail: info@bungard.de

1.4. Emergency telephone number

Medical Emergency information in case of poisoning: Poison Information Center Mainz – 24h – Phone: +49 6131 19240

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification in accordance with 1272/2008

Skin Irritant (Category 2)

Irritates eyes (Category 2)

2.2. Label elements

Label information in accordance with 1272/2008

Hazard pictograms



Signal words

Warning

Hazard statements

H315

Causes skin irritation

H319

Causes serious eye irritation

Precautionary statements

P280

Wear protective gloves and face protection

P302+P352

IF ON SKIN: Wash with plenty of soap and water

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P332+P313

If skin irritation occurs: Get medical advice/attention

P337+P313

If eye irritation persists: Get medical advice/attention

2.3. Other hazards

Not relevant.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is composed of a homogeneous aqueous solution.

3.2. Mixtures

Note that the table shows known hazards of the ingredients in a pure form. These hazards are reduced or eliminated when mixed or diluted, see Section 16d.

Constituent	Classification	Concentration
2-AMINOETHANOL		
CAS No 141-43-5 EC No 205-483-3 Index No 603-030-00-8	Acute Tox 4 <i>dermal</i> , Acute Tox 4 <i>oral</i> , Acute Tox 4 <i>vapour</i> , Skin Corr 1B; H312, H302, H332, H314	5 - 10%
SECONDARY ALCOHOLS (C12-C14) ETHOXYLATE (APPROX 40EO)		
CAS No 84133-50-6 EC No 617-534-0	-	1 - 5%

Explanations to the classification and labelling of the ingredients are given in Section 16e. Official abbreviations are printed in normal font. Text in italics are specifications and/or complement used in the calculation of the hazards of this mixture, see Section 16b.

Also contains component(s) not necessary to label.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Generally

Immediately call a POISON CENTER or doctor/physician.

Upon breathing in

Call a doctor/physician or Poison Information Centre (Emergency tel 112), even if no symptoms are noticeable.

Upon contact with the eyes

Immediately rinse with lukewarm water 15 - 20 minutes with eyes wide open; Transport the injured person to the hospital immediately.

Remove solid particles.

Upon skin contact

Wash with large quantities of water (emergency shower) and seek medical assistance.

Remove contaminated clothes.

Upon ingestion

First rinse your mouth carefully and SPIT OUT the water. Then drink at least half a litre of water, if possible with active carbon, and then induce vomiting. Contact Poison Information Centre (emergency number 112).

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

Information on symptoms are ambiguous or missing for this product.

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

Not relevant.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Recommended extinguishing agents

All normal extinguishing agents may be used.

Unsuitable extinguishing agents

Among common extinguishing agents there are none that are overtly unsuitable.

5.2. Special hazards arising from the substance or mixture

Produces fumes containing harmful gases (carbon monoxide and carbon dioxide) when burning, and, in case of incomplete combustion, aldehydes and other toxic, harmful, irritant or environmentally harmful substances.

In case of fire, substances hazardous to health, or substances harmful in other respects, may be dispersed.

Note that the extinguishing water may contain toxic substances or other hazardous substances.

6.3. Advice for fire-fighters

Protective measures should be taken regarding other material at the site of the fire.

In case of fire use a respirator mask.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Chemical protection suits should be worn for all salvage and decontamination work.

Avoid discharge into sewers.

In case of spillage in protected water, call the emergency services immediately, tel. 112 (in Europe).

Avoid inhalation and exposure to skin and eyes.

6.2. Environmental precautions

Avoid discharge into soil, water or air.

Avoid discharge into sewers.

6.3. Methods and material for containment and cleaning up

To be collected with caution and transported to a waste disposal facility.

Wash off with large quantities of water (50-100 volume parts). Dry up afterwards.

Residues left behind after cleaning shall be treated as hazardous waste. For further information, contact the local authority sanitisation works. Present this safety data sheet.

6.4. Reference to other sections

See section 8 and 13 for personal protection equipment and disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

When working with dangerous substances a fume cupboard ought to be used, or else utilise a space which is well ventilated.

Keep out of reach of children and pets.

The product should be stored in a manner which prevents hazards to health and the environment. Avoid exposure to humans and animals and do not discharge the product in a sensitive environment.

Store this product separately from food items and keep it out of the reach of children and pets.

Do not eat, drink or smoke in premises where this product is stored.

7.2. Conditions for safe storage, including any incompatibilities

Do not store above normal room temperature.

Handle in premises which have modern ventilation standards.

Store in a well-ventilated area, not above eye-level.

Emergency showers and eye-rinsing facilities must be available at the workplace.

Store only in the original package.

7.3. Specific end uses

Not relevant.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1. National limit values, United Kingdom

All ingredients (cf. Section 3) lack occupational exposure limit values.

8.2. Exposure controls

In terms of minimizing risks, attention must be paid to the health hazards (see Sections 2, 3 and 10) of this product or any of its ingredients according to EU directives 89/391 and 98/24 and national occupational legislation.

Use protective glasses, safety goggles, or a visor.

Eye protection should be worn if there is any danger of direct exposure or splashing.

Gloves labelled "Low Chemical resistant" or "Waterproof" or with the pictogram indicated here are recommended.



Choose a mechanical wear strength in line with the nature of the work in accordance to this pictogram with four digits that indicate resistance against abrasion, cutting effects, tear and puncture, where 1 is the lowest and 4 or 5 is the best.

Protect all exposed skin from coming into contact with the product.

A protective mask, with a B filter (grey) or an IIb (P2) dust filter, may be required.

For limitation of environmental exposure, see Section 12.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance	Form: liquid Colour: yellow
b) Odour	Not applicable
c) Odour threshold	Not applicable
d) pH	9-11
e) Melting point/freezing point	Not applicable
f) Initial boiling point and boiling range	Not applicable
g) Flash point	Not applicable
h) Evaporation rate	Not applicable
i) Flammability (solid, gas)	Not applicable
j) Upper/lower flammability or explosive limits	Not applicable
k) Vapour pressure	Not applicable
l) Vapour density	Not applicable
m) Relative density	1.0 -1,10 kg/L
n) Solubility	Solubility in water: Unlimited solubility
o) Partition coefficient: n-octanol/water	Not applicable
p) Auto-ignition temperature	Not applicable
q) Decomposition temperature	Not applicable
r) Viscosity	Not applicable
s) Explosive properties	Not applicable
t) Oxidising properties	Not applicable

9.2. Other information

No data available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

The product contains no substances which can lead to hazardous reactions at normal use.

10.2. Chemical stability

The product is stable at normal storage and handling conditions.

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

Not indicated

10.5. Incompatible materials

Not indicated

10.6. Hazardous decomposition products

Not indicated

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute effects

Not classified as an acutely toxic substance.

Repeated dose toxicity

Prolonged exposure to the substance is dangerous.

Sensibilisation

Eczema (atopical or unidentified) may occur.

Corrosive and irritating effects

The substance is a powerful irritant to skin, eyes and mucous membranes.

Synergism and antagonism

Enhances the risk of allergy for other substances.

Effect on human microflora

Harmful effects on human micro-flora can not be ruled out.

Relevant toxicological properties

2-AMINOETHANOL

LD50 rabbit (Dermally) 24h = 1025 mg/kg

LD50 rat (Orally) 24h = 1720 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

2-AMINOETHANOL

LC50 Rainbow trout (*Oncorhynchus mykiss*) 96h = 150 mg/L

EC10 Bacteria 17h = 87 mg/l

LC50 Bluegill (*Lepomis macrochirus*) 96h = 329 mg/l

EC50 Algae 72 h = 15 mg/l

EC50 Freshwater water flea (*Daphnia magna*) 24h 120 - 140 mg/L

The product is, or contains, a substance which has been classified as an irritant. Harmful effects on animals, plants and micro-organisms in the local environment cannot be ruled out.

12.2. Persistence and degradability

No information about persistence or degradability exists but there is no reason to suppose that the product is persistent.

12.3. Bioaccumulative potential

No information exists on bioaccumulation, but there is no cause for concern in respect of this.

12.4. Mobility in soil

No information about mobility in the nature exists but there is no reason to suppose the product to be ecologically harmful because of this.

12.5. Results of PBT and vPvB assessment

Not indicated

12.6. Other adverse effects

Not indicated

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste handling for the product

See also national waste regulations.

Recycling of the product

This product is not usually recycled.

Transportation of waste

Waste class J(1) - Substances classified as harmful or irritating.

SECTION 14: TRANSPORT INFORMATION

This product is only supposed to be transported by road or railway and just the transport regulations ADR/RID thus apply. If other means of transport are to be used, contact the publisher of this safety data sheet.

14.1. UN number

Not classified as dangerous goods

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 MARPOL73/78 and the IBC Code

Not applicable

SECTION 15: REGULATORY INFORMATION

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

Not applicable.

15.2. Chemical safety assessment

Chemical safety report according to 1907/2006 Annex I is not required for this product.

SECTION 16: OTHER INFORMATION

16a. Indication of where changes have been made to the previous version of the safety data sheet

Revisions of this document

Earlier versions

2015-05-25 The composition of this product was changed

2011-06-07 The composition of this product was changed

16b. Legend to abbreviations and acronyms used in the safety data sheet

Full texts for Hazard Class and Category Code mentioned in section 3

Acute Tox 4 <i>dermal</i>	Acute toxicity (Category 4 skin)
Acute Tox 4 <i>oral</i>	Acute toxicity (Category 4 oral)
Acute Tox 4 <i>vapour</i>	Acute toxicity (Category 4 vapours)
Skin Corr 1B	Corrosive (Category 1B)
No <i>phys haz</i>	Non-assigned physical hazard

Comprehensive definition of the hazards mentioned in Section 2

Skin Irrit 2

One or more criteria 1-3 for irritation of skin is applicable

Eye Irrit 2

If, when applied to the eye of an animal, a substance produces at least in 2 of 3 tested animals, a positive response of:

- corneal opacity ≥ 1 and/or
- iritis ≥ 1 , and/or
- conjunctival redness ≥ 2 and/or
- conjunctival oedema (chemosis) ≥ 2

calculated as the mean scores following grading at 24, 48 and 72 hours after installation of the test

material, and which fully reverses within an observation period of 21 days

Explanations of the abbreviations in Section 14

ADR European Agreement concerning the International Transport of Dangerous Goods by Road

RID Regulations concerning the International Transport of Dangerous Goods by Rail

16c. Key literature references and sources for data

Sources for data

Primary data for the calculation of the hazards has preferentially been taken from the official European classification list, 1272/2008 Annex I, as updated to 2015-09-16.

Where such data was lacking, on the second hand the documentation on which this official classification is based was used, e.g. IUCLID (International Uniform Chemical Information Database). On the third hand, information was used from reputable international chemical suppliers, and on the fourth hand from other available information, e.g. safety data sheets from other suppliers or information from non-profit associations, whereby the reliability of the source was judged by an expert. If, in spite of this, reliable information was not found, the hazards were judged by expert opinions based on the known properties of similar substances, and according to the principles in 1907/2006 and 1272/2008.

Full texts for Regulations mentioned in this Safety Data Sheet

- 453/2010 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)
- 1272/2008 REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
- 89/391 COUNCIL DIRECTIVE (89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work
- 98/24 COUNCIL DIRECTIVE 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC)
- 1907/2006 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 Annex I

16d. Methods of evaluating information referred to in 1272/2008 Article 9 which was used for the purpose of classification

The calculation of the hazards of this mixture has been performed as an evaluation by applying a weight of evidence determination using expert judgement in accordance with 1272/2008 Annex I, weighing all available information having a bearing on the determination of the hazards of the mixture, and in accordance with 1907/2006 Annex XI.

16e. List of relevant hazard statements and/or precautionary statements

Full texts for hazard statements mentioned in section 3

H312 Harmful in contact with skin

H302 Harmful if swallowed

H332 Harmful if inhaled

H314 Causes severe skin burns and eye damage

16f. Advice on any training appropriate for workers to ensure protection of human health and the environment

Warning for misuse

This product can cause harm if used improperly. The manufacturer, the distributor or the supplier are not responsible for adverse effects if the product is not handled in accordance with the directions for use.

Other relevant information**Directions for use**

Directions for use is distributed with the product

Editorial information

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