

TESTFLUX #1 / TESTFLUX #2

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

1.1. Product identifikator

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

Use of the substance/mixture

Reference flux according to. DIN EN 60069-2-20 Appendix B / J-STD-002 / J-STD-003

Uses advised against

any improper use.

1.3. Details of the supplier of the safety data sheet

Company name: Microtronic Microelectronic Vertriebs GmbH
Street: Kleingrötzing 1
Place: 84494 Neumarkt - Sankt Veit
Telephone: +49 8722 96200-0 Fax: +49 8722 9620-30

Responsible Department:: support@microtronic.de

1.4. Emergency telephone number:

8:00 am - 5:00 pm (CET) +49 8722 96200-0

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EG) Nr. 1272/2008

Hazard categories::

Flam.Liq.2 H225 Highly flammable liquid and vapour.
Eye Irrit. 2 H319 Causes serious eye irritation
STOT SE 3 H336 May cause drowsiness and dizziness.

2.2. Labelling elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled in accordance with the CLP Regulation.

Hazard-determining components of labelling

2-Propanol; Isopropylalcohol; Isopropanol

Piktogramm:



GHS02 GHS07

Signal word: Danger

Hazard statements

H225 Highly flammable liquid and vapour
H319 Causes serious eye irritation.
H336 May cause drowsiness and dizziness.

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Sicherheitshinweise

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Do not smoke.
- P233 Keep container tightly closed.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes Remove contact lenses, if present and easy to do. Continue rinsing.
- P312 Call a POISON CENTER/doctor if you feel unwell.
- P337+P313 If eye irritation persists: Get medical advice/attention
- P403+P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information

EUH208 Contains diethylammonium chloride. May cause allergic reactions.

2.3. Other hazards

Flux / flux gels:

Avoid inhaling vapours released during the soldering process. Flux vapours irritate the nose, throat and respiratory tract and can lead to allergic reactions (asthma) after prolonged or repeated contact. Active suction is therefore recommended.

Wash hands with soap and water after working with the product and before eating, drinking or smoking. Keep out of reach of children.

Results of PBT and vPvB assessment:

PPT: not applicable.

vPvB: not applicable.

SECTION 3: Compositions/Information on ingredients

3.2. Mixtures

Description:

Mixture of substances listed below with non-hazardous additives.

Dangerous components

CAS-Nr.	Name			Anteil
	EINECS	Index number	RTECS	
	Classification according to Regulation (EC) No 1272/2008 [CLP]			
67-63-0	2-propanol; Isopropanol			75 %
	200-661-7	603-117-00-0	NT 8050000	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336			
660-68-4	Diethylammoniumchlorid			< 1%
	211-541-9	607-682-00-4	IA 3084000	
	Skin Corr. 1A, H314; Eye Dam. 1, H318 Acute Tos. 4, H301, Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE3, H335			

For the wording of the listed hazard statements: see section 16.

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Change contaminated clothing.

After inhalation

Move the person to fresh air and ensure unobstructed breathing. If respiratory tract irritation occurs, consult a doctor.

After skin contact

Remove soiled, soaked clothing immediately. Wash off with plenty of water. If skin irritation occurs, consult a doctor.

After eye contact

Rinse gently with water for a few minutes. Remove any contact lenses if possible. Continue rinsing. If eye irritation persists: Seek medical advice/attention.

After swallowing

Consult a doctor if symptoms persist.

4.2. Wichtigste akute und verzögert auftretende Symptome und Wirkungen

No further relevant information available.

4.3. Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung

No further relevant information available.

SECTION 5: Firefighting measures

5.1. Extinguishing agents

Suitable extinguishing agents

Carbon dioxide (CO₂). Dry extinguishing agent. Alcohol-resistant foam. Larger fires and large quantities: Fight with water spray or alcohol-resistant foam.

Unsuitable extinguishing agents

Water with a full jet.

5.2. Special hazards arising from the substance or mixture

Flammable. In case of insufficient ventilation and/or use, formation of explosive/highly flammable vapour/air mixtures possible. Solvent vapours are heavier than air and spread over the floor. The presence of flammable substances or mixtures is to be expected in areas not covered by ventilation, e.g. unventilated low-lying areas such as pits, ducts, cellars and shafts.

5.3. Instructions for firefighting

Do not inhale explosion and fire gases. Fight fire with usual precautions from an appropriate distance.

Wear self-contained breathing apparatus.

Additional Info:

ERI-Card 3-09

SECTION 6: Measures in the event of accidental release

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing. Do not inhale vapour/aerosol. Avoid sources of ignition sources.

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6.2. Environmental protection measures

Prevent the product from entering the sewage system or surface and ground water. Retain and dispose of contaminated wash water.

6.3. Methods and material for retention and cleaning

Absorb with liquid-binding material (sand, diatomaceous earth, acid binder, universal binder). Ventilate the affected area.

Treat the absorbed material according to section Disposal .

Thoroughly clean contaminated objects and surfaces in compliance with environmental regulations .

6.4. Reference to other sections

Hazardous combustion products: see section 5

Personal protective equipment: see section 8.

incompatible materials: see section 10

disposal information: see section 13.

SECTION 7: Handling and storage

7.1. Schutzmaßnahmen zur sicheren Handhabung

Instructions for safe handling

Ensure adequate ventilation and localised extraction at critical points. Do not inhale gas/vapour/aerosol. Avoid contact with skin, eyes and clothing.

Wear suitable protective clothing when working. (See SECTION 8.)

Information on fire and explosion protection

Keep ignition sources away. Do not smoke. Take measures against electrostatic charges.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and containers

Keep container tightly closed and store in a cool, well-ventilated place.

Storage instructions

Observe storage instructions, Keep away from oxidising substances / store at a distance.

Storage class: 3

7.3. Specific end uses

No further relevant information available.

SECTION 8: Exposure controls/personal protective equipment

8.1. control parameter

Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:** The lists valid during the making were used as basis.

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8.2. Exposure controls and monitoring



Appropriate technical control equipment

Ensure adequate ventilation and localised exhaust at critical points.

General protective and hygiene measures

The usual precautions for handling chemicals must be observed.

Keep away from food, drink and animal feed.

Always close containers tightly after removing the product.

Do not eat, drink, smoke or sniff at the workplace.

Wash hands before breaks and at the end of work

Take off contaminated clothing.

Avoid contact with eyes and skin

Respiratory protection

Respiratory protection is not required when used correctly and under normal conditions

Respiratory protection is required if ventilation is insufficient: Filter type A

insufficient ventilation limit value exceeded Augen-/Gesichtsschutz

Schutzbrille mit Seitenschutz

Hand protection

Solvent-resistant gloves

Rubber gloves

Synthetic rubber gloves

To avoid skin problems, gloves should be worn as little as possible.

The glove material must be impermeable and resistant to the product / substance / preparation.

Due to a lack of tests, no recommendation can be made regarding the glove material for the product/ preparation/chemical mixture.

Selection of the glove material under consideration of breakthrough times, permeation rates and degradation.

Glove material

Nitrile rubber

The selection of a suitable glove depends not only on the material, but also on other quality features.

quality features and varies from manufacturer to manufacturer. As the product is a

preparation of several substances, the resistance of glove materials cannot be calculated in advance and must therefore be checked before use.

Body protection

Wear suitable protective clothing when working.

Limiting and monitoring environmental exposure

Do not allow uncontrolled release of the product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on the basic physical and chemical properties

Physical state	liquid
Colour	amber
Odour:	alcoholic
Odour threshold	not determined
pH value	not determined
Melting point	not applicable
Initial boiling point and boiling range	isopropanol: 82°C
Flash point	isopropanol 12°C

according to Regulation (EC)

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Flammability	High flammable
Explosion limits	
lower limit	not determined
upper limit	not determined
Ignition temperature	not determined
Decomposition temperature	not determined
Density at 20°C:	0,85 g/cm ³
Relative density	not determined
Vapour density	not determined
Water solubility:	not or only limitedly miscible
Dyn. viscosity: (bei 20 °C)	not determined
Kin. viscosity: (bei 20 °C)	not determined
Partition coefficient n-octanol/water (log value)	not determined
Vapour pressure	not determined

9.2. Other information

Appearance:	
Form	Fluid
Important information on health, environmental protection and safety	
Ignition temperature:	The product is not self-igniting.
Explosive properties:	The product is not explosive, however the formation of explosive vapour/air mixtures is possible.
Solvent content:	
Organic solvents	74,6 %
VOC (EC)	74,61 %
Change of state	
Evaporation rate	Not determined.
Information on physical hazard classes	
Explosive substances/mixtures and articles containing	
Explosives	Not applicable
Flammable gases	Not applicable
Aerosols	Not applicable
Oxidising gases	Not applicable
Gases under pressure	Not applicable
Flammable liquids	Highly flammable liquid and vapour
Flammable solids	Not applicable
Self-reactive substances and mixtures	Not applicable
Pyrophoric liquids	Not applicable
Pyrophore Feststoffe	Not applicable
Self-heating substances and mixtures	Not applicable
Substances and mixtures that come into contact with water	
develop flammable gases	Not applicable
Oxidising liquids	Not applicable
Oxidising solids	Not applicable
Organic peroxides	Not applicable
Substances and mixtures that have a corrosive effect on metals and	Not applicable
Desensitised substances/mixtures and articles with explosive	Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

There is no information available.

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10.2. Chemical stability

The mixture is chemically stable under the recommended storage, use and temperature conditions.

10.3. Possibility of hazardous reactions

There is no information available.

10.4. Conditions to avoid

Protect against: Heat.

May form explosive/flammable vapour/air mixtures during use. Heating leads to increased pressure and risk of bursting.

10.5. Incompatible materials

Substances to avoid: Oxidising agent, strong. Reducing agents, strong. Strong acids. Strong alkalis (base)

10.6. Hazardous decomposition products

In case of fire may be liberated: Gases/vapours, irritant. Carbon monoxide. Carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects Toxicokinetics,

Acute toxicity

Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification

CAS-Nr.	Name				
	Expositionsweg	Endpunkt	Dosis	Species	Source
67-63-0	2-ropanol; Isopropanol				
	oral	LD50	5045 mg/kg	rat	RTECS
	dermal	LD50	128000 mg/kg	rabbit	RTECS
	inhalativ	LC50/4h	37,5mg/l	rat	OECD-403

Irritant and corrosive effect on the skin

Based on available data, the classification criteria are not met.

Serious eye damage/irritation:

Causes serious eye irritation.

Sensitisation of the respiratory tract/skin:

Based on available data, the classification criteria are not met.

Germ cell mutagenicity:

Based on available data, the classification criteria are not met.

Carcinogenicity:

Based on available data, the classification criteria are not met.

Reproductive toxicity:

Based on available data, the classification criteria are not met.

Specific target organ toxicity at single exposure:

May cause drowsiness and dizziness.

Specific target organ toxicity with repeated exposure:

Based on available data, the classification criteria are not met.

Danger of aspiration:

according to Regulation (EC)

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Based on available data, the classification criteria are not met.

11.1. Information on other hazards

Endocrine-disrupting intrinsic juices

None of the ingredients are included.

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity:

No further relevant information available.

12.2. Persistence and degradability

No further relevant information available.

12.3. Bioaccumulative potential

Does not accumulate significantly in organisms.

CAS-Nr.	Name	Log Pow
67-63-0	2-propanol; Isopropanol	0,05

12.4. Mobility in soil

No further relevant information available.

12.5. Results of the PBT and vPvB assessment

The substances in the mixture do not fulfil the PBT/vPvB criteria according to REACH.

12.6. Endocrine disrupting properties

The product does not contain any substances with endocrine-disrupting properties.

12.7. Other harmful effects

Further ecological information:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recommendations

Dispose of in accordance with official regulations. Contact the responsible authorised disposal company for waste disposal. Must not be disposed of together with household waste.

Do not allow to enter the sewage system.

European waste catalogue

HP3 Flammable

HP4 Irritant - skin irritation and eye damage

HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

uncleaned packaging

Recommendation: packaging that cannot be cleaned should be disposed of in the same way as the substance itself.

according to Regulation (EC)

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SECTION 14: Transport information

Landtransport (ADR/RID)

<u>14.1. UN-number:</u>	UN 1219
<u>14.2. UN proper shipping name</u>	ISOPROPANOL (ISOPROPYL ALCOHOL), Mixture
<u>Note on the transport document</u>	UN 1219 ISOPROPANOL (ISOPROPYL ALCOHOL) MIXTURE, 3, II
<u>UN-Versandbezeichnung:</u>	
<u>14.3. Transport hazard class(es):</u>	3
<u>14.4. Packing group:</u>	II
Hazard label:	3



Classification code:	F1
Special Provisions:	601
Limited quantity:	1L
Excepted quantity:	E2
Beförderungskategorie:	2
Hazard No:	33
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

<u>14.1. UN-number:</u>	UN 1219
<u>14.2. UN proper shipping name</u>	ISOPROPANOL (ISOPROPYL ALCOHOL), Mixture
<u>Note on the transport document</u>	UN 1219 ISOPROPANOL (ISOPROPYL ALCOHOL) MIXTURE, 3, II
<u>UN-Versandbezeichnung:</u>	
<u>14.3. Transport hazard class(es):</u>	3
<u>14.4. Packing group:</u>	II
Hazard label:	3



Classification code:	F1
Special Provisions:	601
Limited quantity:	1L
Excepted quantity:	E2

Sea transport (IMDG)

according to Regulation (EC)
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<u>14.1. UN-number:</u>	UN 1219
<u>14.2. UN proper shipping name</u>	ISOPROPANOL (ISOPROPYL ALCOHOL), Mixture
<u>Note on the transport document</u>	UN 1219 ISOPROPANOL (ISOPROPYL ALCOHOL) MIXTURE, 3, II
<u>UN-Versandbezeichnung:</u>	
<u>14.3. Transport hazard class(es):</u>	3
<u>14.4. Packing group:</u>	II
Hazard label:	3



Marine pollutant:	NO
Special Provisions:	-
Limited quantity:	1L
Excepted quantity:	E2
EmS	F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

<u>14.1. UN-number:</u>	UN 1219
<u>14.2. UN proper shipping name</u>	ISOPROPANOL (ISOPROPYL ALCOHOL), Mixture
<u>Note on the transport document</u>	UN 1219 ISOPROPANOL (ISOPROPYL ALCOHOL) MIXTURE, 3, II
<u>UN-Versandbezeichnung:</u>	
<u>14.3. Transport hazard class(es):</u>	3
<u>14.4. Packing group:</u>	II
Hazard label:	3



Special Provisions:	A180
Limited quantity Passenger:	1L
Excepted quantity:	E2
IATA-packing instructions - Passenger:	353
IATA-packing instructions - Cargo:	364
IATA-max. quantity - Cargo:	60L

14.5. Environmental hazards

Not hazardous to the environment according to dangerous goods regulations

14.6. Special precautions for the user

See SECTION 8.

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

not applicable.

SECTION 15: Regulatory information

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

according to Regulation (EC)

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Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled in accordance with the CLP Regulation.

Hazard-determining components of labelling

2-propan; isopropanol

Hazard pictograms:



GHS02 GHS07

Signal word: Danger

Hazard statements

- | | |
|------|-------------------------------------|
| H225 | Highly flammable liquid and vapour |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness and dizziness. |

Sicherheitshinweise

- | | |
|----------------|---|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Do not smoke. |
| P233 | Keep container tightly closed. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes Remove contact lenses, if present and easy to do. Continue rinsing. |
| P312 | Call a POISON CENTER/doctor if you feel unwell. |
| P337+P313 | If eye irritation persists: Get medical advice/attention |
| P403+P235 | Store in a well-ventilated place. Keep cool. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |

Directiv 2012/18/EU

Named dangerous substances - ANNEX I

None of the ingredients is listed.

Seveso-category

P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements

5.000 t

Qualifying quantity (tonnes) for the application of upper-tier requirements

50.000 t

REGULATION (EC) No 1907/2006 ANNEX XVII

Conditions of restrictions: 3

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II:

None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - MELDEPFLICHTIGE AUSGANGSSTOFFE FÜR EXPLOSIVSTOFFE

None of the ingredients is listed.

Regulation (EG) Nr. 273/2004 on drug precursors

None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third

according to Regulation (EC)
No 1907/2006 , Article 31
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countries in drug precursors

None of the ingredients is listed.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out for the following substances in this mixture: 2-propanol; isopropyl alcohol; isopropanol

SECTION 16: Other information

The information is based on our current state of knowledge, but does not constitute a guarantee of product properties and does not establish a contractual legal relationship.
product properties and do not constitute a contractual legal relationship (the data on hazardous ingredients were taken from the latest safety data sheet of the upstream supplier).

Relevant phrases

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

Datenblatt ausstellender Bereich: Abteilung Produktsicherheit

Ansprechpartner: Hr. Sieber

Datum der Vorgängerversion: 17.01.2023

Versionsnummer der Vorgängerversion: 1.4

Department issuing SDS: Product Safety Department

Contact: Hr. Sieber

Date of previous version: 17.01.2023

Version number of previous version: 1.4

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2