

MATERIAL SAFETY DATA SHEET according to 1907/2006/EC, article 31

Trade name: MARTIN Flux Pen (lead free)
Article No: HT00.0009
Issue: May 2021

1. Identification of the substance / preparation and of the company

1.1 Identification of the substance / preparation

MARTIN Flux pen lead free
0405 C, no clean, RELO

1.2 Application of the substance / preparation

Rosin- spray- and foam flux, halogen free
In accordance with: DIN EN 29454-1: 1.2.3.;A ANSI J STD-004; RO L0

1.3 Company/undertaking identification

MARTIN GmbH
Industriestrasse 17
D-82110 Germering
Phone: +49-(0)89-8941898-0
Fax: +49-(0)89-8941898-19
www.martin-smt.de

1.4 Emergency telephone

Please contact the nearest poison emergency center.

2. Hazards identification

2.1 Classification of the substance or mixture:

Classification according to Regulation (EC) No. 1272/2008 (CLP- Regulation):

Flam. Liq. 2 H225 Highly flammable liquid and vapor.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness and dizziness.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazards pictograms



GHS07

GHS02

Signal word

Warning

Hazard-determining components of labelling

Proban-2-ol

Hazard statements

H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.
H319 Causes severe eye irritation.
H336 May cause drowsiness and dizziness.

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Precautionary statements

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 / eye protection / 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. If possible
Remove contact lenses if possible. Continue to rinse.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P403+P235 Keep in a well-ventilated place. Keep cool

Other hazards

Flux : Avoid inhalation of vapors released during the soldering process. Flux vapors irritate the nose, throat and respiratory tract and may cause allergic reactions (asthma) after prolonged or repeated contact. Therefore, active exhaust ventilation is recommended. Be sure to wash hands with soap and water after working with the product and before eating, drinking or smoking.
Keep out of the reach of children.

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

3. Composition/Information on ingredients

3.1 Chemical characterization:

Mixtures

3.2 Description:

Mixture of substances listed below with nonhazardous additions.

3.3 Dangerous components:

CAS: 67-63-0 EINECS: 200-661-7 Index number: 603-117-00-0 RTECS: NT 8050000	Propan-2-ol	Flam. Liq. 2, H225 Eye Irrit. 2, H319; STOT SE 3, H336	40-80%
CAS: 64-17-5 EINECS: 200-578-6 Indexnumber: 603-002-00-5 RTECS: KQ 6300000	Ethanol	Flam. Liq. 2, H225 Eye Irrit. 2, H319	2,5-15%
CAS: 124-04-9 EINECS: 204-673-3 Indexnumber: 607-144-00-9 RTECS: AU	Hexanedioic acid	Eye Irrit. 2, H319	2,5-15%

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CAS: 110-94-1 EINECS: 203-817-2 RTECS: MA 3740000	Pentanedioic acid	Skin Corr. 1A, H314	2,5-15%
CAS: 1076-97-7 EINECS: 214-068-6	Cyclohexane-1,4-dicarboxylic acid	Eye Irrit. 2, H319	2,5-15%

3.4 Additional information:

For the wording of the listed risk phrases refer to section 16.

4. First aid measures

4.1 General information:

Immediately remove any clothing soiled by the product.

4.2 After inhalation:

Supply fresh air; consult doctor in case of complaints.

4.3 After Skin Contact:

Immediately rinse with water.

4.4 After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist consult doctor

4.5 After swallowing:

If symptoms persist consult doctor.

4.6 Information for doctor

4.6.1 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.6.2 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5. Firefighting measures

5.1 Suitable extinguishing agents

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 For safety reasons unsuitable extinguishing agents

Water with full jet

5.3 Special hazards arising from the substance or mixture:

No further relevant information available.

5.4 Protective equipment:

No special measures required

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions

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Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

6.4 Additional information

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7. Handling and storage

7.1 Handling

7.1.1 Information for safe handling:

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

7.1.2 Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges

7.2 Conditions for safe storage, including any incompatibilities

7.2.1 Requirements to be met by storerooms and receptacles:

Store in a cool location

7.2.2 Information about storage in one common storage facility

No special requirements.

7.2.3 Further information on storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed receptacles.

7.2.4 Specific end use(s)

No further relevant information available.

8. Exposure controls / personal protection

8.1 Additional information about design of technical facilities:

No further data; see item 7.

8.2 Control parameters

8.2.1 Ingredients with limit values that require monitoring at the workplace:

CAS: 67-63-0 propan-2-ol	
WEL	Long-term value 500mg/m ³ , 200ml/m ³ 2(II);DFG, Y
CAS: 64-17-5 ethanol	
WEL	Long-term value: 380mg/m ³ , 200ml/m ³ 4(II);DFG, Y
CAS: 124-04-9 Hexanedioic acid	
WEL	Long-term value: 2 E mg/m ³ 2(I);DFG, Y

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CAS: 110-94-1 Pentanedioic acid	
Long-term value: 2 E mg/m ³ 2(I);DFG, Y	
WEL	Long-term value: 2E mg/m ³ 2(I);DFG, Y

Legal regulations AGW (Germany): TRGS 900

Components with biological limits:

CAS: 67-63-0 propan-2-ol

BGW (Germany) 25 mg/l Test material: whole blood

Sampling time: end of exposure or end of shift

Parameter: Acetone

25 mg/l Test material: urine

Sampling time: end of exposure or end of shift

Parameter: Acetone

Additional information:

The lists valid during the making were used as basis.

8.3 Personal protective equipment:

8.3.1 General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

8.3.2 Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

8.3.3 Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the Degradation

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

8.3.4 Eye Protection:

Tightly sealed goggles



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9. Physical and chemical properties

· Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Fluid
Colour:	According to product specification
· Odour:	Characteristic
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	82 °C
· Flash point:	20 °C
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	425 °C
· Decomposition temperature:	Not determined.
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure at 20°C:	Not determined.
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water): Not determined.	
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.

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Solvent content:	
· Organic solvents:	82.5 %
· VOC (EC)	3.8 %
· Water	82,50 %
· Other information	No further relevant information available.

10. Stability and Reactivity

10.1 Reactivity

No further relevant information available.

10.2 Chemical stability

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions

No dangerous reactions known.

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous decomposition products:

No dangerous decomposition products known.

11. Toxicological information

11.1 Acute toxicity:

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

· LD/LC50 values relevant for classification:		
67-63-0 propan-2-ol		
Oral	LD50	5045 mg/kg (rat)
Dermal	LD50	12800 mg/kg (rabbit)
Inhalative	LC50/4 h	30 mg/l (rat)

11.2 Primary irritant effect:

11.2.1 Skin corrosion/irritation

Based on available data, the classification criteria are not met

11.2.2 Serious eye damage/irritation

Causes serious eye irritation

11.2.3 Respiratory or skin sensitization

Based on available data, the classification criteria are not met

11.3 CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

11.3.1 Germ cell mutagenicity

Based on available data, the classification criteria are not met

11.3.2 Carcinogenicity

Based on available data, the classification criteria are not met

11.3.3 Reproductive toxicity

Based on available data, the classification criteria are not met

11.3.4 STOT-single exposure

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May cause drowsiness or dizziness

11.3.5 STOT-repeated exposure

Based on available data, the classification criteria are not met

11.3.6 Aspiration hazard

Based on available data, the classification criteria are not met

12. Ecological information

12.1 Toxicity

12.1.1 Aquatic toxicity:

No further relevant information available.

12.1.2 Persistence and degradability

No further relevant information available.

12.2 Behaviour in environmental systems:

12.2.1 Bioaccumulative potential

No further relevant information available

12.2.2 Mobility in soil

No further relevant information available

12.3 General Notes

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.

12.4 Results of PBT and vPvB assessment

PBT: Not applicable

vPvB: Not applicable

12.5 Other adverse effects

No further relevant information available

13. Disposal considerations

13.1 Waste treatment methods

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste list

HP3 flammable

HP4 irritant - skin irritation and eye damage

HP5 Specific target organ toxicity (STOT)/Aspiration hazard

13.2 Uncleaned packaging:

Disposal must be made according to official regulations.

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14. Transport information

· UN-Number · ADR, IMDG, IATA	UN1993
· UN proper shipping name · ADR	1993 ENTZÜNDBARER FLÜSSIGER STOFF, N.A.G. (ISOPROPANOL (ISOPROPYLALKOHOL), ETHANOL (ETHYLALKOHOL))
· IMDG	FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL (ISOPROPYL ALCOHOL) , ETHANOL (ETHYL ALCOHOL))
· IATA	FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL (ISOPROPYL ALCOHOL), ETHANOL)
· Transport hazard class(es) · ADR, IMDG, IATA	
	
· Class · Label	3 Flammable liquids. 3
· Packing group · ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category	Warning: Flammable liquids. 30 F-E, <u>S-E</u> A
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category · Tunnel restriction code	2 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

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· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL (ISOPROPYL ALCOHOL), ETHANOL (ETHYL ALCOHOL)), 3, II
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15. Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- 15.2 Directive 2012/18/EU**
- 15.3 Named dangerous substances - ANNEX I**
None of the ingredients is listed.
- 15.4 Seveso category**
P5c FLAMMABLE LIQUIDS
- 15.5 Qualifying quantity (tonnes) for the application of lower-tier requirements**
5,000 t
- 15.6 Qualifying quantity (tonnes) for the application of upper-tier requirements**
50,000 t
- 15.7 Chemical safety assessment:**
A Chemical Safety Assessment has not been carried out.

16. Other Information

The information in this data sheet is based on our present state of knowledge and is provided without warranty of product features and shall not establish a legally valid contractual relationship.

16.1 Relevant phrases

H225 Highly flammable liquid and vapor.
H314 Causes severe skin burns and eye damage.
H319 Causes severe eye irritation.
H336 May cause drowsiness and dizziness.

Abbreviations and Acronyms:

ADR: Accord européen sur le transport 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, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3