

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

- 1.1 Product identifier
- Trade name: **MA 2004 dark blue**
- Article number: 100000001848
- Registration number
The ingredients of this ink have been pre-registered according to 1907/2006/EC (REACH)
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
Currently no such applications are identified
- Application of the substance / the mixture alcohol based permanent marking ink
- 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
DOKUMENTAL GmbH & Co KG Schreibfarben
Woellnerstraße 26
D-67065 Ludwigshafen
Phone + 49(0)621/5402321
Fax + 49(0)621/5402391
www. dokumental.de
- Further information obtainable from:
Technical Service, Dr. B. Polzin
Tel.: +49-621-5402322
Mobile +49-1726204412
E-Mail: bernd.polzin@dokumental.de
- 1.4 Emergency telephone number:
GBK Gefahrgut Büro GmbH
++49 (0) 6132 / 84463
Ingelheim, Deutschland

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

- 2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
- Hazard pictograms



GHS02



GHS05



GHS07

- Signal word **Danger**
- Hazard-determining components of labelling:
C. I. Solvent Blue 4 < 0,1% Michler's Ketone
Phosphoric acid mono-bis-(2-ethylhexyl)-ester
- Hazard statements
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
- Precautionary statements
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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P241 Use explosion-proof electrical/ventilating/lighting/equipment.
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.
P310 Immediately call a POISON CENTER/doctor.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- 2.3 Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- 3.2 Chemical characterisation: Mixtures
Mixture of the following substances, containing non-hazardous substances and colouring agents.
- Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 64-17-5 EINECS: 200-578-6	ethanol ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319	50-100%
CAS: 107-98-2 EINECS: 203-539-1	1-methoxy-2-propanol ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	10-25%
CAS: 6786-83-0 EINECS: 229-851-8	C. I. Solvent Blue 4 < 0,1% Michler's Ketone ⚠ Eye Dam. 1, H318; ⚠ Skin Sens. 1B, H317	2,5-10%
CAS: 12645-31-7 EINECS: 235-741-0	Phosphoric acid mono-bis-(2-ethylhexyl)-ester ⚠ Skin Corr. 1B, H314	2,5-10%
CAS: 84281-86-7 EINECS: 282-630-8	C. I. Solvent Violet 8 ⚠ Acute Tox. 4, H302; ⚠ Eye Irrit. 2, H319; ⚠ Aquatic Chronic 4, H413	≤ 2,5%

- Additional information: For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

- 4.1 Description of first aid measures
- After inhalation:
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- After skin contact:
Immediately wash with water and soap and rinse thoroughly.
Immediately rinse with water.
- After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- 4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- Suitable extinguishing agents:
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- 5.3 Advice for firefighters
- Protective equipment: No special measures required.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Wear protective clothing.
- 6.2 Environmental precautions:
Prevent seepage into sewage system, workpits and cellars.
Dilute with plenty of water.
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).
Ensure adequate ventilation.
- 6.4 Reference to other sections
See Section 7 for information on safe handling.

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See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **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**
Storage:
Requirements to be met by storerooms and receptacles: Store in a cool location.
Information about storage in one common storage facility: Not required.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

107-98-2 1-methoxy-2-propanol (10-25%)

IOELV	Short-term value: 568 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm Skin
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- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **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 and skin.
- **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.
- **Protection of hands:**



Protective gloves

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 can not 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.
- **Eye protection:**



Tightly sealed goggles

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SECTION 9: Physical and chemical properties

<ul style="list-style-type: none"> · 9.1 Information on basic physical and chemical properties · General Information · Appearance: <ul style="list-style-type: none"> Form: Liquid Colour: Dark blue · Odour: Product specific · Odour threshold: Not determined. 	
<ul style="list-style-type: none"> · Important information on protection of health and environment, and on safety. <ul style="list-style-type: none"> - - 	
· pH-value:	Not determined.
<ul style="list-style-type: none"> · Change in condition <ul style="list-style-type: none"> Melting point/Melting range: Undetermined. Boiling point/Boiling range: 78 °C 	
· Flash point:	13 °C
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	287 °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.
<ul style="list-style-type: none"> · Explosion limits: <ul style="list-style-type: none"> Lower: 1,7 Vol % Upper: 15,0 Vol % 	
· Vapour pressure at 20 °C:	59 hPa
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
<ul style="list-style-type: none"> · Viscosity: <ul style="list-style-type: none"> Dynamic: Not determined. Kinematic: Not determined. 	
<ul style="list-style-type: none"> · Solvent content: <ul style="list-style-type: none"> Organic solvents: 80,0 % 	
<ul style="list-style-type: none"> · Solids content: 17,0 % 	
· 9.2 Other information	The physical and chemical properties given in Section 9.1 are rough data only, which are partially derived from the component's data of the mixture. These data are no binding product specifications.

SECTION 10: Stability and reactivity

- 10.1 Reactivity
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided:
 - 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.

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity

· LD/LC50 values relevant for classification:

84281-86-7 C. I. Solvent Violet 8

Oral	LD50	700 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation** Sensitisation possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**
6786-83-0 C. I. Solvent Blue 4 < 0,1% Michler's Ketone
EC50 / 48h 0,025 mg/l (Daphnie)
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN1263
- **14.2 UN proper shipping name**
- **ADR** 1263 PAINT
- **IMDG, IATA** PAINT
- **14.3 Transport hazard class(es)**
- **ADR**
- 
- **Class** 3 (F1) Flammable liquids.
- **Label** 3
- **IMDG, IATA**
- 
- **Class** 3 Flammable liquids.
- **Label** 3
- **14.4 Packing group**
- **ADR, IMDG, IATA** II
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
- **14.6 Special precautions for user** Warning: Flammable liquids.

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· Danger code (Kemler):	33
· EMS Number:	F-E, S-E
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN1263, PAINT, 3, II

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- National regulations:
- Technical instructions (air):

Class	Share in %
NK	50-100
- Waterhazard class: Water hazard class 3 (Self-assessment): extremely hazardous for water.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
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.
H336 May cause drowsiness or dizziness.
H413 May cause long lasting harmful effects to aquatic life.
- **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Aquatic Chronic 4: Hazardous to the aquatic environment - Chronic Hazard, Category 4
- * Data compared to the previous version altered.

1 Identification

- **Product identifier**
- **Trade name:** MA 3031 green
- **Article number:** 100000001171
- **Relevant identified uses of the substance or mixture and uses advised against**
Currently no such applications are identified
- **Application of the substance / the mixture** alcohol based permanent marking ink
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
DOKUMENTAL GmbH & Co KG Schreibfarben
Woellnerstraße 26
D-67065 Ludwigshafen
Phone + 49 (0)621/5402321
Fax + 49 (0)621/5402391
www.dokumental.de
- **Information department:**
Technical Service, Dr. B. Polzin
Tel.: +49-621-5402322
Mobile +49-1726204412
E-Mail: bernd.polzin@dokumental.de
- **Emergency telephone number:**
24-hour-Emergency- Telephone-Number (GBK Contract ID: 94050): (001) 352 323 3500

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS05



GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**

propan-1-ol
1-Methoxy-2-propanol
C.I. Basic Yellow 37

- **Hazard statements**

Flammable liquid and vapor.
Causes serious eye damage.
May cause drowsiness or dizziness.

- **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves / eye protection / face protection.
Wear eye protection / face protection.
Ground/bond container and receiving equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Use only outdoors or in a well-ventilated area.

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IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Classification system:**

• **NFPA ratings (scale 0 - 4)**



• **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

• **Other hazards**

• **Results of PBT and vPvB assessment**

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

3 Composition/information on ingredients

• **Chemical characterization: Mixtures**

Mixture of the following substances, containing non-hazardous substances and colouring agents.

• **Description:** Mixture of the substances listed below with nonhazardous additions.

• **Dangerous components:**

107-98-2	1-Methoxy-2-propanol	50-100%
71-23-8	propan-1-ol	25-50%
6358-36-7	C.I. Basic Yellow 37	≤ 2.5%
2390-60-5	C. I. Basic Blue 7	≤ 1.0%

• **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First-aid measures

• **Description of first aid measures**

• **After inhalation:** Supply fresh air; consult doctor in case of complaints.

• **After skin contact:** Generally the product does not irritate the skin.

• **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

• **After swallowing:** If symptoms persist consult doctor.

• **Information for doctor:**

• **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

• **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

• **Extinguishing media**

• **Suitable extinguishing agents:**

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

• **Special hazards arising from the substance or mixture** No further relevant information available.

• **Advice for firefighters**

• **Protective equipment:** No special measures required.

6 Accidental release measures

• **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Wear protective clothing.

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Trade name: MA 3031 green

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- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
- **Reference to other sections**
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

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

Components with limit values that require monitoring at the workplace:

107-98-2 1-Methoxy-2-propanol (50-100%)

REL	Short-term value: 540 mg/m ³ , 150 ppm Long-term value: 360 mg/m ³ , 100 ppm
TLV	Short-term value: 369 mg/m ³ , 100 ppm Long-term value: 184 mg/m ³ , 50 ppm

71-23-8 propan-1-ol (25-50%)

REL	Long-term value: 500 mg/m ³ , 200 ppm
REL	Short-term value: 625 mg/m ³ , 250 ppm Long-term value: 500 mg/m ³ , 200 ppm Skin
TLV	Long-term value: 246 mg/m ³ , 100 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **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 can not 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.

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Trade name: MA 3031 green

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· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:

Fluid

Color:

According to product specification

· Odor:

Product specific

· Odour threshold:

Not determined.

· Important information on protection of health and environment, and on safety.

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· pH-value:

Not determined.

· Change in condition

Melting point/Melting range:

Undetermined.

Boiling point/Boiling range:

96 °C (205 °F)

· Flash point:

23 °C (73 °F)

· Flammability (solid, gaseous):

Not applicable.

· Ignition temperature:

287 °C (549 °F)

· Decomposition temperature:

Not determined.

· Auto igniting:

Product is not selfigniting.

· Danger of explosion:

Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

Lower:

1.7 Vol %

Upper:

13.5 Vol %

· Vapor pressure at 20 °C (68 °F):

19 hPa (14 mm Hg)

· Density at 20 °C (68 °F):

0.92 g/cm³ (7.677 lbs/gal)

· Relative density

Not determined.

· Vapour density

Not determined.

· Evaporation rate

Not determined.

· Solubility in / Miscibility with

Water:

Fully miscible.

· Partition coefficient (n-octanol/water):

Not determined.

· Viscosity:

Dynamic at 20 °C (68 °F):

4.5 mPas

Kinematic:

Not determined.

· Solvent content:

Organic solvents:

86.2 %

Solids content:

13.8 %

· Other information

No further relevant information available.

10 Stability and reactivity

· Reactivity

· Chemical stability

· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· Possibility of hazardous reactions No dangerous reactions known.

· Conditions to avoid No further relevant information available.

· Incompatible materials: No further relevant information available.

· Hazardous decomposition products: No dangerous decomposition products known.

US
(Contd. on page 5)

Trade name: MA 3031 green

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11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

LD/LC50 values that are relevant for classification:

71-23-8 propan-1-ol

Oral	LD50	8000 mg/kg (rat)
Dermal	LD50	4000 mg/kg (rab)
Inhalative	LC50/4 h	9.8 mg/l (rat)

6358-36-7 C.I. Basic Yellow 37

Oral	LD50	3160 mg/kg (rat)
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- Primary irritant effect:**
 - on the skin: No irritant effect.
 - on the eye: Strong irritant with the danger of severe eye injury.
- Sensitization:** No sensitizing effects known.
- Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
- Carcinogenic categories**

IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

NTP (National Toxicology Program)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- Toxicity
- Aquatic toxicity:** No further relevant information available.
- Persistence and degradability** No further relevant information available.
- Behavior in environmental systems:**
- Bioaccumulative potential** No further relevant information available.
- Mobility in soil** No further relevant information available.
- Additional ecological information:**
- General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
- Results of PBT and vPvB assessment**
- PBT:** Not applicable.
- vPvB:** Not applicable.
- Other adverse effects** No further relevant information available.

13 Disposal considerations

- Waste treatment methods**
- Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:**
- Recommendation:** Disposal must be made according to official regulations.
- Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- UN-Number
- DOT, ADR, IMDG, IATA UN1263
- UN proper shipping name
- DOT Paint
- ADR 1263 Paint
- IMDG, IATA PAINT

(Contd. on page 6)

Trade name: MA 3031 green

(Contd. of page 5)

· Transport hazard class(es)

· DOT



· Class 3 Flammable liquids
· Label 3

· ADR



· Class 3 (F1) Flammable liquids
· Label 3

· IMDG, IATA



· Class 3 Flammable liquids
· Label 3

· Packing group

· DOT, ADR, IMDG, IATA III

· Environmental hazards:

· Marine pollutant: No

· Special precautions for user

Warning: Flammable liquids

· Danger code (Kemler):

30

· EMS Number:

F-E,S-E

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

Not applicable.

· Transport/Additional information:

· DOT

· Quantity limitations

On passenger aircraft/rail: 60 L
On cargo aircraft only: 220 L

· ADR

· Excepted quantities (EQ)

Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· IMDG

· Limited quantities (LQ)

5L

· Excepted quantities (EQ)

Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation":

UN1263, Paint, 3, III

15 Regulatory information

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

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

(Contd. on page 7)

Trade name: MA 3031 green

(Contd. of page 6)

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

• **DSL/NDSL (Canada)** All ingredients are listed

Cancerogenity categories

• **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

• **TLV (Threshold Limit Value established by ACGIH)**

71-23-8	propan-1-ol	A4
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• **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

• **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS02



GHS05



GHS07

• **Signal word** Danger

Hazard-determining components of labeling:

propan-1-ol
1-Methoxy-2-propanol
C.I. Basic Yellow 37

Hazard statements

Flammable liquid and vapor.
Causes serious eye damage.
May cause drowsiness or dizziness.

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves / eye protection / face protection.
Wear eye protection / face protection.
Ground/bond container and receiving equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Use only outdoors or in a well-ventilated area.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
In case of fire: Use for extinction: CO2, powder or water spray.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations:

Technical instructions (air):

Class	Share in %
NK	50-100

• **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• **Date of preparation / last revision** 05/12/2015 / 14

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation

(Contd. on page 8)

Trade name: MA 3031 green

(Contd. of page 7)

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
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
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
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)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

• *** Data compared to the previous version altered.**

US

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

- **1.1 Product identifier**
- **Trade name:** MA 3020 red
- **Article number:** 100000000828
- **Registration number**
The ingredients of this ink have been pre-registered according to 1907/2006/EC (REACH)
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Currently no such applications are identified
- **Application of the substance / the mixture** alcohol based permanent marking ink
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
DOKUMENTAL GmbH & Co KG Schreibfarben
Woellnerstraße 26
D-67065 Ludwigshafen
Phone + 49(0)621/5402321
Fax + 49(0)621/5402391
www.dokumental.de
- **Further information obtainable from:**
Technical Service, Dr. B. Polzin
Tel.: +49-621-5402322
Mobile +49-1726204412
E-Mail: bernd.polzin@dokumental.de
- **1.4 Emergency telephone number:**
GBK Gefahrgut Büro GmbH
++49 (0) 6132 / 84463
Ingelheim, Deutschland

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 2 H351 Suspected of causing cancer.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

Trade name: MA 3020 red

(Contd. of page 1)

• **Hazard pictograms**



• **Signal word** Danger

• **Hazard-determining components of labelling:**

propan-1-ol
1-Methoxy-2-propanol
C. I. Solvent Orange 3
C.I. Basic Red 1

• **Hazard statements**

H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H336 May cause drowsiness or dizziness.
H410 Very toxic to aquatic life with long lasting effects.

• **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P303+P361+P353 IF ON SKIN (or hair): Remove/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.
P310 Immediately call a POISON CENTER/doctor.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **2.3 Other hazards**

• **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

• **3.2 Chemical characterisation: Mixtures**

Mixture of the following substances, containing non-hazardous substances and colouring agents.

• **Description:** Mixture of substances listed below with nonhazardous additions.

• **Dangerous components:**

CAS: 107-98-2 EINECS: 203-539-1	1-Methoxy-2-propanol ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	25-50%
CAS: 71-23-8 EINECS: 200-746-9	propan-1-ol ⚠ Flam. Liq. 2, H225; ⚠ Eye Dam. 1, H318; ⚠ STOT SE 3, H336	25-50%
CAS: 989-38-8 EINECS: 213-584-9	C.I. Basic Red 1 ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	2,5-10%
CAS: 85536-14-7 EINECS: 287-494-3	Benzenesulfonic acid, 4-C10-13-sec-alkylderivs. ⚠ Skin Corr. 1C, H314; ⚠ Acute Tox. 4, H302; Aquatic Chronic 3, H412	2,5-10%
CAS: 495-54-5 EINECS: 207-803-7	C. I. Solvent Orange 3 ⚠ Muta. 2, H341; Carc. 2, H351; ⚠ Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317	2,5-10%

• **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

• **4.1 Description of first aid measures**

• **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

• **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

• **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

• **After swallowing:** If symptoms persist consult doctor.

• **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

(Contd. on page 3)

Trade name: MA 3020 red

(Contd. of page 2)

- 4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- Suitable extinguishing agents:
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- 5.3 Advice for firefighters
- Protective equipment: No special measures required.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Wear protective clothing.
- 6.2 Environmental precautions:
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
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 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- Information about fire - and explosion protection:
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
- 7.2 Conditions for safe storage, including any incompatibilities
- Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions:
Keep container tightly sealed.
Protect from heat and direct sunlight.
- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

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

107-98-2 1-Methoxy-2-propanol (25-50%)

IOELV	Short-term value: 568 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm Skin
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- Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

- Personal protective equipment:

- 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 skin.
Avoid contact with the eyes and skin.

- 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.

(Contd. on page 4)

Trade name: MA 3020 red

(Contd. of page 3)

• **Protection of hands:**



Protective gloves

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 can not 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.

• **Eye protection:**



Tightly sealed goggles

SECTION 9: Physical and chemical properties

• **9.1 Information on basic physical and chemical properties**

• **General Information**

• **Appearance:**

Form:

Fluid

Colour:

According to product specification

• **Odour:**

Product specific

• **Odour threshold:**

Not determined.

• **Important information on protection of health and environment, and on safety.**

-
-

• **pH-value:**

Not determined.

• **Change in condition**

Melting point/Melting range:

Undetermined.

Boiling point/Boiling range:

96 °C

• **Flash point:**

23 °C

• **Flammability (solid, gaseous):**

Not applicable.

• **Ignition temperature:**

287 °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:

1,7 Vol %

Upper:

13,5 Vol %

• **Vapour pressure at 20 °C:**

19 hPa

• **Density at 20 °C:**

0,85 g/cm³

• **Relative density**

Not determined.

• **Vapour density**

Not determined.

• **Evaporation rate**

Not determined.

• **Solubility in / Miscibility with water:**

Fully miscible.

• **Partition coefficient (n-octanol/water):**

Not determined.

• **Viscosity:**

Dynamic at 20 °C:

4,5 mPas

Kinematic:

Not determined.

(Contd. on page 5)

Trade name: MA 3020 red

(Contd. of page 4)

- **Solvent content:**
 - Organic solvents: 81,7 %
- **Solids content:** 11,9 %
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
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.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

71-23-8 propan-1-ol

Oral LD50 8000 mg/kg (rat)

Dermal LD50 4000 mg/kg (rab)

Inhalative LC50/4 h 9,8 mg/l (rat)

989-38-8 C.I. Basic Red 1

Oral LD50 250 mg/kg (rat)

85536-14-7 Benzenesulfonic acid, 4-C10-13-sec-alkylderivs.

Oral LD50 1350 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitisation:** Sensitisation possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Muta. 2, Carc. 2

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

989-38-8 C.I. Basic Red 1

EC50 / 48h 0,1-0,5 mg/l (Daphnie)

LC50 / 96h 1-5 mg/l (Fish)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

EU

(Contd. on page 6)

Trade name: MA 3020 red

(Contd. of page 5)

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods
- Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- 14.1 UN-Number
- ADR, IMDG, IATA UN1263
- 14.2 UN proper shipping name
- ADR 1263 PAINT, ENVIRONMENTALLY HAZARDOUS
- IMDG PAINT (chrysoidine, xanthene dye, red), MARINE POLLUTANT
- IATA PAINT

• 14.3 Transport hazard class(es)

• ADR



- Class 3 (F1) Flammable liquids.
- Label 3

• IMDG



- Class 3 Flammable liquids.
- Label 3

• IATA



- Class 3 Flammable liquids.
- Label 3

• 14.4 Packing group

- ADR, IMDG, IATA III

• 14.5 Environmental hazards:

- Marine pollutant: Yes
- Special marking (ADR): Symbol (fish and tree)

• 14.6 Special precautions for user

- Danger code (Kemler): 30
- EMS Number: F-E,S-E

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

Not applicable.

• Transport/Additional information:

- ADR
- Limited quantities (LQ) 5L
- Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
- Transport category 3
- Tunnel restriction code D/E

(Contd. on page 7)

Trade name: MA 3020 red

(Contd. of page 6)

- | | |
|-----------------------------------|--|
| • IMDG | 5L |
| • Limited quantities (LQ) | Code: E1 |
| • Excepted quantities (EQ) | Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml |
| • Remarks: | 1263 Paint (dye-stuff C.I. Solvent Orange 3),
Marine Pollutant |
| • UN "Model Regulation": | UN1263, PAINT, ENVIRONMENTALLY HAZARDOUS, 3, III |

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- National regulations:
- Technical instructions (air):

Class	Share in %
NK	50-100
- **Waterhazard class:** Water hazard class 3 (Self-assessment): extremely hazardous for water.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
 - H225 Highly flammable liquid and vapour.
 - H226 Flammable liquid and vapour.
 - H302 Harmful if swallowed.
 - H314 Causes severe skin burns and eye damage.
 - H315 Causes skin irritation.
 - H317 May cause an allergic skin reaction.
 - H318 Causes serious eye damage.
 - H336 May cause drowsiness or dizziness.
 - H341 Suspected of causing genetic defects.
 - H351 Suspected of causing cancer.
 - H400 Very toxic to aquatic life.
 - H410 Very toxic to aquatic life with long lasting effects.
 - H412 Harmful to aquatic life with long lasting effects.
- **Abbreviations and acronyms:**
 - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 - IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 - ICAO: International Civil Aviation Organisation
 - ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
 - 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)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - Flam. Liq. 2: Flammable liquids, Hazard Category 2
 - Flam. Liq. 3: Flammable liquids, Hazard Category 3
 - Acute Tox. 4: Acute toxicity, Hazard Category 4
 - Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C
 - Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
 - Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
 - Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
 - Muta. 2: Germ cell mutagenicity, Hazard Category 2
 - Carc. 2: Carcinogenicity, Hazard Category 2
 - STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
 - Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
 - Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
 - Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3
- *** Data compared to the previous version altered.**

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

- **1.1 Product identifier**
- **Trade name:** MA 2015 black
- **Article number:** 100000001453
- **Registration number**
The ingredients of this ink have been pre-registered according to 1907/2006/EC (REACH)
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Currently no such applications are identified
- **Application of the substance / the mixture** alcohol based permanent marking ink
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
DOKUMENTAL GmbH & Co KG Schreibfarben
Woellnerstraße 26
D-67065 Ludwigshafen
Phone + 49(0)621/5402321
Fax + 49(0)621/5402391
www. dokumental.de
- **Further information obtainable from:**
Technical Service, Dr. B. Polzin
Tel.: +49-621-5402322
Mobile +49-1726204412
E-Mail: bernd.polzin@dokumental.de
- **1.4 Emergency telephone number:**
GBK Gefahrgut Büro GmbH
++49 (0) 6132 / 84463
Ingelheim, Deutschland

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS08 health hazard

Muta. 2 H341 Suspected of causing genetic defects.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02



GHS05



GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**
Benzenesulfonic acid, 4-C10-13-sec-alkylderivs.
C. I. Solvent Orange 3

Trade name: MA 2015 black

(Contd. of page 1)

Hazard statements

- H225 Highly flammable liquid and vapour.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H341 Suspected of causing genetic defects.
- H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- 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.
- P310 Immediately call a POISON CENTER/doctor.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

- EUH208 Contains C. I. Solvent Blue 4 < 0,1% Michler's Ketone. May produce an allergic reaction.

2.3 Other hazards

Results of PBT and vPvB assessment

- PBT:** Not applicable.
- vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Mixture of the following substances, containing non-hazardous substances and colouring agents.

- Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 64-17-5 EINECS: 200-578-6	ethanol Flam. Liq. 2, H225; Eye Irrit. 2, H319	50-100%
CAS: 107-98-2 EINECS: 203-539-1	1-methoxy-2-propanol Flam. Liq. 3, H226; STOT SE 3, H336	2,5-10%
CAS: 85536-14-7 EINECS: 287-494-3	Benzenesulfonic acid, 4-C10-13-sec-alkylderivs. Skin Corr. 1C, H314; Acute Tox. 4, H302; Aquatic Chronic 3, H412	2,5-10%
CAS: 84281-86-7 EINECS: 282-630-8	C. I. Solvent Violet 8 Aquatic Chronic 4, H413	2,5-10%
CAS: 495-54-5 EINECS: 207-803-7	C. I. Solvent Orange 3 Muta. 2, H341; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Irrit. 2, H315	≤ 2,5%
CAS: 6786-83-0 EINECS: 229-851-8	C. I. Solvent Blue 4 < 0,1% Michler's Ketone Eye Dam. 1, H318; Skin Sens. 1B, H317	≤1,0%

- Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation:

In case of unconsciousness place patient stably in side position for transportation.

- After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

- After swallowing:** If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

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

- 5.2 Special hazards arising from the substance or mixture** No further relevant information available.

5.3 Advice for firefighters

- Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

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- Wear protective clothing.
- **6.2 Environmental precautions:**
Prevent seepage into sewage system, workpits and cellars.
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
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 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

107-98-2 1-methoxy-2-propanol (2,5-10%)

IOELV	Short-term value: 568 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm Skin
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- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **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 skin.
Avoid contact with the eyes and skin.
- **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.
- **Protection of hands:**



Protective gloves

- 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 can not be calculated in advance and has therefore to be checked prior to the application.

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- **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.
- **Eye protection:**



Tightly sealed goggles

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
 - Form: Fluid
 - Colour: According to product specification
- **Odour:** Product specific
- **Odour threshold:** Not determined.
- **Important information on protection of health and environment, and on safety.**
 -
 -
- **pH-value:** Not determined.
- **Change in condition**
 - Melting point/Melting range: Undetermined.
 - Boiling point/Boiling range: 78 °C
- **Flash point:** 13 °C
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** 287 °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: 1,7 Vol %
 - Upper: 15,0 Vol %
- **Vapour pressure at 20 °C:** 59 hPa
- **Density:** Not determined.
- **Relative density:** Not determined.
- **Vapour density:** Not determined.
- **Evaporation rate:** Not determined.
- **Solubility in / Miscibility with water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic: Not determined.
 - Kinematic: Not determined.
- **Solvent content:**
 - Organic solvents: 84,6 %
- **Solids content:** 9,6 %
- **9.2 Other information**

The physical and chemical properties given in Section 9.1 are rough data only, which are partially derived from the component's data of the mixture. These data are no binding product specifications.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
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.

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- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**

- **LD/LC50 values relevant for classification:**

85536-14-7 Benzenesulfonic acid, 4-C10-13-sec-alkylderivs.

Oral	LD50	1350 mg/kg (rat)
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84281-86-7 C. I. Solvent Violet 8

Oral	LD50	700 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitisation** No sensitising effects known.
- **Additional toxicological information:**
 The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
 Irritant
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 Muta. 2

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** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Harmful to aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN1263
- **14.2 UN proper shipping name**
- **ADR** 1263 PAINT
- **IMDG, IATA** PAINT

- **14.3 Transport hazard class(es)**
- **ADR**



- **Class** 3 (F1) Flammable liquids.

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· Label	3
· IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· 14.4 Packing group	
· ADR, IMDG, IATA	II
· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	33
· EMS Number:	F-E, S-E
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN1263, PAINT, 3, II

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- National regulations:
- Technical instructions (air):

Class	Share in %
NK	50-100
- Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H341 Suspected of causing genetic defects.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.
- Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B
Muta. 2: Germ cell mutagenicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3
Aquatic Chronic 4: Hazardous to the aquatic environment - Chronic Hazard, Category 4

• *** Data compared to the previous version altered.**

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