

LAYOUT INK BLUE FLUID

Page: 1 Compilation date: 05/12/2014 **Revision date: 03/02/2016**

Revision No: 8

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: LAYOUT INK BLUE FLUID

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

Use of substance / mixture: Metal Marking Ink

1.3. Details of the supplier of the safety data sheet

Company name: ROCOL

| | ROCOL House |
|------|----------------------|
| | Swillington |
| | Leeds |
| | West Yorkshire |
| | LS26 8BS |
| | ENGLAND |
| Tel: | +44 (0) 113 232 2700 |
| Fax: | +44 (0) 113 232 2740 |

Email: customer-service@rocol.com

1.4. Emergency telephone number

Emergency tel: +44 (0) 113 232 2600

Section 2: Hazards identification

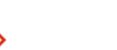
2.1. Classification of the substance or mixture

| Classification under CLP: | STOT SE 3: H336; Aquatic Chronic 3: H412; Eye Irrit. 2: H319; Flam. Liq. 2: H225; -: |
|---------------------------------|--|
| | EUH066 |
| Most important adverse effects: | Repeated exposure may cause skin dryness or cracking. Highly flammable liquid and |
| | vapour. Causes serious eye irritation. May cause drowsiness or dizziness. Harmful to |
| | aquatic life with long lasting effects. |

2.2. Label elements

| Label elements: | | |
|--------------------|---|--------|
| Hazard statements: | EUH066: Repeated exposure may cause skin dryness or cracking. | |
| | H225: Highly flammable liquid and vapour. | |
| | H319: Causes serious eye irritation. | |
| | H336: May cause drowsiness or dizziness. | |
| | H412: Harmful to aquatic life with long lasting effects. | |
| Hazard pictograms: | GHS02: Flame | |
| | GHS07: Exclamation mark | [cont] |

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Signal words:DangerPrecautionary statements:P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition
sources. No smoking.P241: Use explosion-proof electrical/ventilating/lighting/.. equipment.P280: Wear protective gloves/protective clothing/eye protection/face protection.P303+361+353: IF ON SKIN (or hair): Take off immediately all contaminated clothing.
Rinse skin with water/shower.P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove
contact lenses, if present and easy to do. Continue rinsing.23. Other hazards

Other hazards: In use, may form flammable / explosive vapour-air mixture.

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

ACETONE - REACH registered number(s): 01-2119471330-49-XXXX

| EINECS | CAS | PBT / WEL | CLP Classification | Percent |
|-----------|---------|-----------|---|---------|
| 200-662-2 | 67-64-1 | - | Flam. Liq. 2: H225; Eye Irrit. 2: H319; STOT SE 3: H336; -: EUH066 | 50-70% |

PROPAN-2-OL

| 200-661-7 | 67-63-0 | - | Flam. Liq. 2: H225; Eye Irrit. 2: H319; STOT SE 3: H336 | 10-30% |
|---------------|---------|---|--|--------|
| BASIC BLUE 26 | 3 | | | |

| 2 | 219-943-6 | 2580-56-5 | - | Acute Tox. 4: H302; Eye Irrit. 2: H319; | <1% | 1 |
|---|-----------|-----------|---|---|-----|---|
| | | | | Aquatic Chronic 1: H410 | | 1 |

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes. Consult a doctor.

Ingestion: Wash out mouth with water. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

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

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Exposure may cause coughing or wheezing.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

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

Immediate / special treatment: Eye bathing equipment should be available on the premises.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Alcohol resistant foam. Water spray. Carbon dioxide. Dry chemical powder. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Highly flammable. In combustion emits toxic fumes. Forms explosive air-vapour mixture.

Vapour may travel considerable distance to source of ignition and flash back.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

Personal precautions: Refer to section 8 of SDS for personal protection details. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid. Eliminate all sources of ignition.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Do not use equipment in clean-up procedure which may produce sparks.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

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| ection 7: Hand | ling and storage | | | | | | | |
|------------------|---|---------------|-----------------|------------|-----------------------|-------------------|--------|--|
| 7.1. Precaution | s for safe handling | | | | | | | |
| Handling re | Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. | | | | | | | |
| | Do not ha | ndle in a cor | nfined space. A | void the | formation or sprea | d of mists in the | e air. | |
| | Smoking | is forbidden. | Use non-spark | king tools | i. | | | |
| 7.2. Conditions | for safe storage, includ | ing any inc | ompatibilities | | | | | |
| Storage | e conditions: Store in a | cool, well ve | entilated area. | Keep cor | ntainer tightly close | d. Keep away fi | rom | |
| - | | | | • | ectrostatic charge i | • | | |
| | Ensure lig | hting and el | ectrical equipm | nent are r | not a source of igni | tion. | | |
| Suitabl | e packaging: Must only | be kept in o | riginal packagi | ng. | | | | |
| 7.3. Specific en | d use(s) | | | | | | | |
| Specifi | c end use(s): No data a | vailable. | | | | | | |
| - | sure controls/persona | | n | | | | | |
| | | | | | | | | |
| 8.1. Control par | rameters | | | | | | | |
| Hazardous in | aredients: | | | | | | | |
| ACETONE | 5 | | | | | | | |
| | | | | Decision | h la slovať | | | |
| _ | posure limits: | | | - | ble dust | | | |
| State | 8 hour TWA | 15 m | in. STEL | 8 | hour TWA | 15 min. | SIEL | |
| UK | 1210 mg/m3 | | 3620 mg/m3 | | - | | - | |
| PROPAN-2-O | | | | | | | | |
| UK | 400 ppm, 999 mg/m3 | 500 ppm, | , 1250 mg/m3 | | - | | - | |
| DNEL/PNEC Va | lues | | | | | | | |
| | | | | | | | | |
| Hazardous in | gredients: | | | | | | | |
| ACETONE | | | | | | | | |
| Туре | | Exposure | | Value | Popula | tion | Effect | |
| DNEL | | Dermal | | 186 | Work | ers | Local | |
| | | | 1 | | | 1 | | |

| DNEL | Dermal | 186 | Workers | Local |
|------|---------------------|------|-----------|----------|
| DNEL | Inhalation | 2420 | Workers | Local |
| DNEL | Oral | 62 | Consumers | Systemic |
| PNEC | Fresh water | 10.6 | - | - |
| PNEC | Marine water | 1.06 | - | - |
| PNEC | Soil (agricultural) | 33.3 | - | - |
| PNEC | - | - | - | - |

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Engineering measures:Ensure there is sufficient ventilation of the area. Ensure lighting and electrical
equipment are not a source of ignition.Respiratory protection:Self-contained breathing apparatus must be available in case of emergency.Hand protection:Gloves (solvent-resistant). Latex gloves.Eye protection:Safety glasses. Ensure eye bath is to hand.Skin protection:Protective clothing.Environmental:Prevent from entering in public sewers or the immediate environment.

Section 9: Physical and chemical properties

8.2. Exposure controls

9.1. Information on basic physical and chemical properties

| State: | Liquid | | |
|-------------------------------|--------------------------------|------------------------------|--------------------|
| Colour: | Blue | | |
| Odour: | Alcoholic | | |
| Evaporation rate: | Fast | | |
| Oxidising: | Non-oxidising (by EC criteria) | | |
| Solubility in water: | Insoluble | | |
| Also soluble in: | Acetone. | | |
| Viscosity: | Non-viscous | | |
| Boiling point/range°C: | 56 | Melting point/range°C: | No data available. |
| Flammability limits %: lower: | No data available. | upper: | No data available. |
| Flash point°C: | -18 | Part.coeff. n-octanol/water: | No data available. |
| Autoflammability°C: | No data available. | Vapour pressure: | No data available. |
| Relative density: | No data available. | pH: | No data available. |
| VOC g/I: | No data available. | | |

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions. Stable at room temperature.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

Decomposition may occur on exposure to conditions or materials listed below.

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10.4. Conditions to avoid

Conditions to avoid: Heat. Hot surfaces. Sources of ignition. Flames.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

ACETONE

| IVN | RAT | LD50 | 5500 | mg/kg |
|-----|-----|------|------|-------|
| ORL | MUS | LD50 | 3 | gm/kg |
| ORL | RAT | LD50 | 5800 | mg/kg |

PROPAN-2-OL

| IVN | RAT | LD50 | 1088 | mg/kg |
|-----|-----|------|------|-------|
| ORL | MUS | LD50 | 3600 | mg/kg |
| ORL | RAT | LD50 | 5045 | mg/kg |
| SCU | MUS | LDLO | 6 | gm/kg |

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| ORL RAT LD50 900 mg/kg | |
|--|--|
|--|--|

Relevant hazards for product:

| Hazard | Route | Basis |
|-------------------------------|-------|-----------------------|
| Serious eye damage/irritation | OPT | Hazardous: calculated |
| STOT-single exposure | - | Hazardous: calculated |

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Exposure may cause coughing or wheezing.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

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| Section 12: Ecological information | | | | | | |
|---|---|--------------------------|---------------------|---------------------|--|--|
| 12.1. Toxicity | | | | | | |
| | | | | | | |
| Hazardous ingredients: | | | | | | |
| ACETONE | | | | | | |
| BLUEGILL (Lepomis macro | chirus) | LC50 | 8300 | mg/l | | |
| BASIC BLUE 26 | | | | | | |
| | | 00111.050 | 400 | | | |
| TROUT | | 96H LC50 | 100 | mg/l | | |
| 12.2. Persistence and degrad | lability | | | | | |
| Persistence and degradability: | Biodegradable. | | | | | |
| 12.3. Bioaccumulative potent | tial | | | | | |
| Bioaccumulative potential: | No bioaccumulation poter | ntial | | | | |
| 12.4. Mobility in soil | | | | | | |
| · · · · · · · · · · · · · · · · · · · | | | | | | |
| Mobility: Readily absorbed into soil. | | | | | | |
| 12.5. Results of PBT and vPvB assessment | | | | | | |
| PBT identification: This product is not identified as a PBT/vPvB substance. | | | | | | |
| 12.6. Other adverse effects | | | | | | |
| Other adverse effects: Negligible ecotoxicity. | | | | | | |
| Section 13: Disposal conside | erations | | | | | |
| 13.1. Waste treatment metho | ds | | | | | |
| | | | | lie e delie e e e d | | |
| Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal | | | | | | |
| company. | | | | | | |
| | Recovery operations: No data available Waste code number: 08 01 11 | | | | | |
| | Dispose of in a regulated | landfill site or other m | ethod for hazardous | or toxic wastes. | | |
| | The user's attention is dra | | | | | |
| | regulations regarding disp | oosal. | | | | |
| Section 14: Transport inform | nation | | | | | |
| 14.1. UN number | | | | | | |
| | | | | | | |
| UN number: | UN1993 | | | | | |

14.2. UN proper shipping name

Shipping name: FLAMMABLE LIQUID, N.O.S.

(contains acetone, propan-2-ol)

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Marine pollutant: No

14.3. Transport hazard class(es)

Transport class: 3

14.4. Packing group

Packing group: ||

14.5. Environmental hazards

Environmentally hazardous: No

14.6. Special precautions for user

Special precautions: No special precautions.

Section 15: Regulatory information

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

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

| Other information: | This safety data sheet is prepared in accordance with Commission Regulation (EU) No |
|------------------------------|--|
| | 2015/830. |
| Phrases used in s.2 and s.3: | EUH066: Repeated exposure may cause skin dryness or cracking. |
| | H225: Highly flammable liquid and vapour. |
| | H302: Harmful if swallowed. |
| | H319: Causes serious eye irritation. |
| | H336: May cause drowsiness or dizziness. |
| | H410: Very toxic to aquatic life with long lasting effects. |
| | H412: Harmful to aquatic life with long lasting effects. |
| Legal disclaimer: | The above information is believed to be correct but does not purport to be all inclusive |
| | and shall be used only as a guide. This company shall not be held liable for any |
| | damage resulting from handling or from contact with the above product. |



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Revision date: 14/01/2016

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: LAYOUT INK SPRAY BLUE

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

Use of substance / mixture: Metal Marking Ink

1.3. Details of the supplier of the safety data sheet

Company name: ROCOL

| | ROCOL House | | |
|------|----------------------|--|--|
| | Swillington | | |
| | Leeds | | |
| | West Yorkshire | | |
| | LS26 8BS | | |
| | ENGLAND | | |
| Tel: | +44 (0) 113 232 2700 | | |
| Fax: | +44 (0) 113 232 2740 | | |

Email: <u>customer-service@rocol.com</u>

1.4. Emergency telephone number

Emergency tel: +44 (0) 113 232 2600

Section 2: Hazards identification

2.1. Classification of the substance or mixture

| Classification under CLP: Flam. Aerosol 1: H222; Eye Irrit. 2: H319; STOT SE 3: H336; -: EUH066; | |
|--|--|
| Most important adverse effects: | Repeated exposure may cause skin dryness or cracking. Extremely flammable aerosol. |
| | Pressurised container: May burst if heated. Causes serious eye irritation. May cause |
| | drowsiness or dizziness. |

2.2. Label elements

| Label elements: | |
|--------------------|---|
| Hazard statements: | EUH066: Repeated exposure may cause skin dryness or cracking. |
| | H222: Extremely flammable aerosol. |
| | H229: Pressurised container: May burst if heated |
| | H319: Causes serious eye irritation. |
| | H336: May cause drowsiness or dizziness. |
| Hazard pictograms: | GHS02: Flame |
| | GHS07: Exclamation mark |

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 Signal words:
 Danger

 Precautionary statements:
 P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

 P211: Do not spray on an open flame or other ignition source.
 P251: Do not pierce or burn, even after use.

 P280: Wear protective gloves/protective clothing/eye protection/face protection.

 P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

 P410+412: Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

ACETONE - REACH registered number(s): 01-2119471330-49-XXXX

| EINECS | CAS | PBT / WEL | CLP Classification | Percent |
|-----------|---------|-----------|---|---------|
| 200-662-2 | 67-64-1 | - | Flam. Liq. 2: H225; Eye Irrit. 2: H319; STOT SE 3: H336; -: EUH066 | 30-50% |

HYDROCARBON AEROSOL PROPELLANT (<0.1% 1,3-BUTADIENE) - REACH registered number(s): EXEMPT

| 270-704-268476-85-7Substance with a Community workplace exposure limit.Flam. Gas 1: H220; Press. Gas: H280 | 30-50% | , |
|---|--------|---|
|---|--------|---|

PROPAN-2-OL

| 200-661-7 | 67-63-0 | - | Flam. Liq. 2: H225; Eye Irrit. 2: H319; | 10-30% |
|-----------|---------|---|---|--------|
| | | | STOT SE 3: H336 | |

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes. Consult a doctor.

Ingestion: Wash out mouth with water. Do not induce vomiting. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

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

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

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Ingestion: There may be soreness and redness of the mouth and throat. May cause dizziness.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Drowsiness or mental confusion may occur.

Delayed / immediate effects: No data available.

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

Immediate / special treatment: No data available.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Do not use water. Alcohol resistant foam. Carbon dioxide. Dry chemical powder. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Extremely flammable. Forms explosive air-vapour mixture. In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. Eliminate all sources of

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers.

ignition.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Do not use equipment in clean-up procedure which may produce sparks. Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 13 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Smoking is forbidden.

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7.2. Conditions for safe storage, including any incompatibilities

 Storage conditions:
 Store in a cool, well ventilated area. Keep away from sources of ignition. Keep away from direct sunlight. Ensure lighting and electrical equipment are not a source of ignition.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

ACETONE

| Workplace e | exposure limits: | F | Respirable dust | |
|-------------|---------------------|-------------------------|-----------------|--------------|
| State | 8 hour TWA | 15 min. STEL | 8 hour TWA | 15 min. STEL |
| UK | 1210 mg/m3 | 3620 mg/m3 | - | - |
| HYDROCAR | BON AEROSOL PROPELI | -ANT (<0.1% 1,3-BUTADIE | NE) | |
| UK | 1000ppm 1750mg/m3 | 1250ppm 2180mg/m3 | - | - |
| PROPAN-2- | OL | | | |
| UK | 400 ppm, 999 mg/m3 | 500 ppm, 1250 mg/m3 | - | - |

DNEL/PNEC Values

Hazardous ingredients:

ACETONE

| Туре | Exposure | Value | Population | Effect |
|------|---------------------|-------|------------|----------|
| DNEL | Dermal | 186 | Workers | Local |
| DNEL | Inhalation | 2420 | Workers | Local |
| DNEL | Oral | 62 | Consumers | Systemic |
| PNEC | Fresh water | 10.6 | - | - |
| PNEC | Marine water | 1.06 | - | - |
| PNEC | Soil (agricultural) | 33.3 | - | - |
| PNEC | - | - | - | - |

8.2. Exposure controls

 Engineering measures:
 Ensure there is sufficient ventilation of the area. Ensure lighting and electrical equipment are not a source of ignition.

 Respiratory protection:
 Respiratory protection not normally required.

 Hand protection:
 Nitrile gloves.

Eye protection: Safety glasses with side-shields.

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Flammability limits %: lower: 1.8

Flash point°C: -100

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Skin protection: Protective clothing.

Environmental: No special requirement.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| State: | Aerosol |
|------------------------|--------------------------------|
| Colour: | Blue |
| Odour: | Characteristic odour |
| Evaporation rate: | Fast |
| Oxidising: | Non-oxidising (by EC criteria) |
| Solubility in water: | Insoluble |
| Viscosity: | Non-viscous |
| Boiling point/range°C: | -42 |
| upper: | 9.4 |

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

10.4. Conditions to avoid

Conditions to avoid: Direct sunlight. Heat. Sources of ignition.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong reducing agents.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

Section 11: Toxicological information

11.1. Information on toxicological effects

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Hazardous ingredients:

ACETONE

| IVN | RAT | LD50 | 5500 | mg/kg |
|-----|-----|------|------|-------|
| ORL | MUS | LD50 | 3 | gm/kg |
| ORL | RAT | LD50 | 5800 | mg/kg |

PROPAN-2-OL

| IVN | RAT | LD50 | 1088 | mg/kg |
|-----|-----|------|------|-------|
| ORL | MUS | LD50 | 3600 | mg/kg |
| ORL | RAT | LD50 | 5045 | mg/kg |
| SCU | MUS | LDLO | 6 | gm/kg |

Relevant hazards for product:

| Hazard | Route | Basis |
|-------------------------------|-------|-----------------------|
| Serious eye damage/irritation | OPT | Hazardous: calculated |
| STOT-single exposure | - | Hazardous: calculated |

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat. May cause dizziness.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Drowsiness or mental confusion may occur.

Delayed / immediate effects: No data available.

Section 12: Ecological information

12.1. Toxicity

Hazardous ingredients:

ACETONE

| BLUEGILL (Lepomis macrochirus) | LC50 | 8300 mg/l | |
|--------------------------------|------|-------------|--|

12.2. Persistence and degradability

Persistence and degradability: Only slightly biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Highly volatile. Absorbed only slowly into soil.

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12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: No data available.

Section 13: Disposal considerations

13.1. Waste treatment methods

| Disposal operations: | Transfer to a suitable container and arrange for collection by specialised disposal |
|------------------------|--|
| | company. |
| Recovery operations: | No data available |
| Waste code number: | 16 05 05 |
| Disposal of packaging: | Dispose of in a regulated landfill site or other method for hazardous or toxic wastes. |
| NB: | The user's attention is drawn to the possible existence of regional or national |
| | regulations regarding disposal. |

Section 14: Transport information

14.1. UN number

UN number: UN1950

14.2. UN proper shipping name

Shipping name: AEROSOLS, Flammable

14.3. Transport hazard class(es)

Transport class: 2.1

14.4. Packing group

Packing group: n/a

14.5. Environmental hazards

Environmentally hazardous: No

Marine pollutant: No

14.6. Special precautions for user

Special precautions: No data available

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

Transport in bulk: No data available.

Section 15: Regulatory information

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

Specific regulations: No data available

LAYOUT INK SPRAY BLUE

| | Page: |
|------------------------------|--|
| 15.2. Chemical Safety Assess | sment |
| Chemical safety assessment: | A chemical safety assessment has not been carried out for the substance or the mixture |
| | by the supplier. |
| ection 16: Other informatio | n |
| | |
| Other information | |
| Other information: | This safety data sheet is prepared in accordance with Commission Regulation (EU) No |
| | 2015/830. |
| | EC Directive 94/1/EC adapting some technicalities of Council Directive 75/324/EEC on |
| | the approximation of the laws of Member States relating to aerosol dispensers. |
| | Compiled in accordance with REACH. |
| Phrases used in s.2 and s.3: | EUH066: Repeated exposure may cause skin dryness or cracking. |
| | H220: Extremely flammable gas. |
| | H222: Extremely flammable aerosol. |
| | H225: Highly flammable liquid and vapour. |
| | H229: Pressurised container: May burst if heated |
| | H280: Contains gas under pressure; may explode if heated. |
| | H319: Causes serious eye irritation. |
| | H336: May cause drowsiness or dizziness. |
| Legal disclaimer: | The above information is believed to be correct but does not purport to be all inclusive |
| | and shall be used only as a guide. This company shall not be held liable for any |
| | damage resulting from handling or from contact with the above product. |
| | |



LAYOUT INK SPRAY WHITE

Page: 1 Compilation date: 27/11/2014 Revision date: 14/01/2016

Revision No: 8

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: LAYOUT INK SPRAY WHITE

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

Use of substance / mixture: Metal Marking Ink

1.3. Details of the supplier of the safety data sheet

Company name: ROCOL

| | ROCOL House | | |
|------|----------------------|--|--|
| | Swillington | | |
| | Leeds | | |
| | West Yorkshire | | |
| | LS26 8BS | | |
| | ENGLAND | | |
| Tel: | +44 (0) 113 232 2700 | | |
| Fax: | +44 (0) 113 232 2740 | | |

Email: <u>customer-service@rocol.com</u>

1.4. Emergency telephone number

Emergency tel: +44 (0) 113 232 2600

Section 2: Hazards identification

2.1. Classification of the substance or mixture

| Classification under CLP: | Flam. Aerosol 1: H222; Eye Irrit. 2: H319; STOT SE 3: H336; -: EUH066; -: H229 |
|---------------------------------|--|
| Most important adverse effects: | Repeated exposure may cause skin dryness or cracking. Extremely flammable aerosol. |
| | Pressurised container: May burst if heated. Causes serious eye irritation. May cause |
| | drowsiness or dizziness. |

2.2. Label elements

| Label elements: | | | | |
|--|--|--|--|--|
| Hazard statements: EUH066: Repeated exposure may cause skin dryness or cracking. | | | | |
| | H222: Extremely flammable aerosol. | | | |
| | H229: Pressurised container: May burst if heated | | | |
| | H319: Causes serious eye irritation. | | | |
| | H336: May cause drowsiness or dizziness. | | | |
| Hazard pictograms: | GHS02: Flame | | | |
| | GHS07: Exclamation mark | | | |

LAYOUT INK SPRAY WHITE

Page: 2



 Signal words:
 Danger

 Precautionary statements:
 P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

 P211: Do not spray on an open flame or other ignition source.
 P251: Do not pierce or burn, even after use.

 P280: Wear protective gloves/protective clothing/eye protection/face protection.

 P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

 P410+412: Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

ACETONE - REACH registered number(s): 01-2119471330-49-XXXX

| EINECS | CAS | PBT / WEL | CLP Classification | Percent |
|-----------|---------|-----------|---|---------|
| 200-662-2 | 67-64-1 | - | Flam. Liq. 2: H225; Eye Irrit. 2: H319; | 50-70% |
| | | | STOT SE 3: H336; -: EUH066 | |

HYDROCARBON AEROSOL PROPELLANT (<0.1% 1,3-BUTADIENE) - REACH registered number(s): EXEMPT

| 270-704-2 | 68476-85-7 | Substance with a Community | Flam. Gas 1: H220; Press. Gas: H280 | 30-50% |
|-----------|------------|----------------------------|-------------------------------------|--------|
| | | workplace exposure limit. | | |

TITANIUM DIOXIDE

| - | 13463-67-7 | Substance with a Community | - | 1-10% |
|---|------------|----------------------------|---|-------|
| | | workplace exposure limit. | | |

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes. Consult a doctor.

Ingestion: Wash out mouth with water. Do not induce vomiting. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

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

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

LAYOUT INK SPRAY WHITE

Ingestion: There may be soreness and redness of the mouth and throat. May cause dizziness.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Drowsiness or mental confusion may occur.

Delayed / immediate effects: No data available.

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

Immediate / special treatment: No data available.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Do not use water. Alcohol resistant foam. Carbon dioxide. Dry chemical powder. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Extremely flammable. Forms explosive air-vapour mixture. In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. Eliminate all sources of

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers.

ignition.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Do not use equipment in clean-up procedure which may produce sparks. Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 13 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Smoking is forbidden.

LAYOUT INK SPRAY WHITE

7.2. Conditions for safe storage, including any incompatibilities

 Storage conditions:
 Store in a cool, well ventilated area. Keep away from sources of ignition. Keep away from direct sunlight. Ensure lighting and electrical equipment are not a source of ignition.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

ACETONE

| Workplace e | exposure limits: | | | | | |
|--|--------------------------|-------------------|------------|--------------|--|--|
| State | 8 hour TWA | 15 min. STEL | 8 hour TWA | 15 min. STEL | | |
| UK | UK 1210 mg/m3 3620 mg/m3 | | - | - | | |
| HYDROCARBON AEROSOL PROPELLANT (<0.1% 1,3-BUTADIENE) | | | | | | |
| UK | 1000ppm 1750mg/m3 | 1250ppm 2180mg/m3 | - | - | | |

TITANIUM DIOXIDE

| UK | 4mg/m3 | - |
|----|--------|---|
|----|--------|---|

DNEL/PNEC Values

Hazardous ingredients:

ACETONE

| Туре | Exposure | Value | Population | Effect |
|------|---------------------|-------|------------|----------|
| DNEL | Dermal | 186 | Workers | Local |
| DNEL | Inhalation | 2420 | Workers | Local |
| DNEL | Oral | 62 | Consumers | Systemic |
| PNEC | Fresh water | 10.6 | - | - |
| PNEC | Marine water | 1.06 | - | - |
| PNEC | Soil (agricultural) | 33.3 | - | - |
| PNEC | - | - | - | - |

TITANIUM DIOXIDE

| Туре | Exposure | Value | Population | Effect |
|------|-------------|-------|------------|----------|
| DNEL | Inhalation | 10 | Workers | Systemic |
| PNEC | Fresh water | 0.127 | - | - |

LAYOUT INK SPRAY WHITE

| PNEC | Marine water | 1 | - | - |
|------|--------------------------|------|---|---|
| PNEC | Fresh water sediments | 1000 | - | - |
| PNEC | Soil (agricultural) | 100 | - | - |
| PNEC | Microorganisms in sewage | 100 | - | - |
| | treatment | | | |

| 8.2. Exposure controls | 8.2. Exposure controls | | | | | |
|-------------------------|---|--|--|--|--|--|
| Engineering measures: | Ensure there is sufficient ventilation of the area. Ensure lighting and electrical | | | | | |
| | equipment are not a source of ignition. | | | | | |
| Respiratory protection: | Respiratory protection not normally required for normal use in well ventilated areas. | | | | | |
| | Respiratory protection should be used in enclosed spaces, with poor ventilation, for | | | | | |
| | extended repeated use, or if workplace exposure limits may be exceeded. A dust mask | | | | | |
| | with P2 particle filter is recommended | | | | | |
| Hand protection: | Nitrile gloves. | | | | | |
| Eye protection: | Safety glasses with side-shields. | | | | | |
| Skin protection: | Protective clothing. | | | | | |
| Environmental: | No special requirement. | | | | | |

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| State: | Aerosol | | |
|------------------------|--------------------------------|-------------------------------|------|
| Colour: | White | | |
| Odour: | Characteristic odour | | |
| Evaporation rate: | Fast | | |
| Oxidising: | Non-oxidising (by EC criteria) | | |
| Solubility in water: | Insoluble | | |
| Viscosity: | Non-viscous | | |
| Boiling point/range°C: | <0 | Flammability limits %: lower: | 1.8 |
| upper: | 9.4 | Flash point°C: | -100 |

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

LAYOUT INK SPRAY WHITE

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

10.4. Conditions to avoid

Conditions to avoid: Direct sunlight. Heat. Sources of ignition.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong reducing agents.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

ACETONE

| IVN | RAT | LD50 | 5500 | mg/kg |
|-----|-----|------|------|-------|
| ORL | MUS | LD50 | 3 | gm/kg |
| ORL | RAT | LD50 | 5800 | mg/kg |

TITANIUM DIOXIDE

| DUST/MIST | RAT | 4H LC50 | >6.8 | mg/l |
|-----------|-----|---------|-------|-------|
| ORAL | RAT | LD50 | >5000 | mg/kg |

Relevant hazards for product:

| Hazard | Route | Basis |
|-------------------------------|-------|-----------------------|
| Serious eye damage/irritation | OPT | Hazardous: calculated |
| STOT-single exposure | - | Hazardous: calculated |

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

- Ingestion: There may be soreness and redness of the mouth and throat. May cause dizziness.
- **Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest. Drowsiness or mental confusion may occur.

Delayed / immediate effects: No data available.

Section 12: Ecological information

12.1. Toxicity

LAYOUT INK SPRAY WHITE

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Hazardous ingredients:

ACETONE

BLUEGILL (Lepomis macrochirus)

LC50

8300 | mg/l

12.2. Persistence and degradability

Persistence and degradability: Only slightly biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Highly volatile. Absorbed only slowly into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: No data available.

Section 13: Disposal considerations

13.1. Waste treatment methods

| Disposal operations: | Transfer to a suitable container and arrange for collection by specialised disposal | | |
|------------------------|--|--|--|
| | company. | | |
| Recovery operations: | No data available | | |
| Waste code number: | 16 05 05 | | |
| Disposal of packaging: | Dispose of in a regulated landfill site or other method for hazardous or toxic wastes. | | |
| NB: | The user's attention is drawn to the possible existence of regional or national | | |
| | regulations regarding disposal. | | |

Section 14: Transport information

14.1. UN number

UN number: UN1950

14.2. UN proper shipping name

Shipping name: AEROSOLS, FLAMMABLE

14.3. Transport hazard class(es)

Transport class: 2.1

14.4. Packing group

Packing group: n/a

LAYOUT INK SPRAY WHITE

14.5. Environmental hazards

Environmentally hazardous: No

Marine pollutant: No

14.6. Special precautions for user

Special precautions: No data available

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

Transport in bulk: No data available.

Section 15: Regulatory information

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

Specific regulations: No data available

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture

by the supplier.

Section 16: Other information

Other information Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830. Safety data sheet prepared in accordance with Commission Directive 2008/47/EC of 8 April 2008 amending, for the purposes of adapting to technical progress, Council Directive 75/324/EEC relating to aerosol dispensers Phrases used in s.2 and s.3: EUH066: Repeated exposure may cause skin dryness or cracking. H220: Extremely flammable gas. H222: Extremely flammable aerosol. H225: Highly flammable liquid and vapour. H229: Pressurised container: May burst if heated H280: Contains gas under pressure; may explode if heated. H319: Causes serious eye irritation. H336: May cause drowsiness or dizziness. Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.



LAYOUT INK WHITE FLUID

Page: 1

Compilation date: 12/12/2014 Revision date: 03/02/2016

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: LAYOUT INK WHITE FLUID

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

Use of substance / mixture: Metal Marking Ink

1.3. Details of the supplier of the safety data sheet

Company name: ROCOL

ROCOL House Swillington Leeds West Yorkshire LS26 8BS ENGLAND Tel: +44 (0) 113 232 2700 Fax: +44 (0) 113 232 2740

Email: <u>customer-service@rocol.com</u>

1.4. Emergency telephone number

Emergency tel: +44 (0) 113 232 2600

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Flam. Liq. 2: H225

Most important adverse effects: Highly flammable liquid and vapour.

2.2. Label elements

Label elements:

Hazard statements: H225: Highly flammable liquid and vapour.

Hazard pictograms: GHS02: Flame



 Signal words:
 Danger

 Precautionary statements:
 P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

 P240:
 container and receiving equipment.

LAYOUT INK WHITE FLUID

Page: 2

P241: Use explosion-proof electrical/ventilating/lighting/.. equipment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P303+361+353: IF ON SKIN (or hair): Take off immediately all contaminated clothing.
Rinse skin with water/shower.

P370+378: In case of fire: Use to extinguish.

2.3. Other hazards

Other hazards: In use, may form flammable / explosive vapour-air mixture.

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

ETHANOL

| EINECS | CAS | PBT / WEL | CLP Classification | Percent |
|-----------|---------|--|--------------------|---------|
| 200-578-6 | 64-17-5 | Substance with a Community workplace exposure limit. | Flam. Liq. 2: H225 | 50-70% |

TITANIUM DIOXIDE

| - | 13463-67-7 | Substance with a Community | - | 10-30% |
|---|------------|----------------------------|---|--------|
| | | workplace exposure limit. | | |

CHINA CLAY - REACH registered number(s): EXEMPTED IN ACCORDANCE WITH ANNEX 7

| 310-194-11332-58-7Substance with a Community workplace exposure limit. | - | 1-10% |
|---|---|-------|
|---|---|-------|

PL020 POLISH

| - | - | - | Flam. Liq. 2: H225; Acute Tox. 4: H302; | 1-10% |
|---|---|---|---|-------|
| | | | STOT SE 2: H371; Acute Tox. 4: H312; | |
| | | | Acute Tox. 4: H332 | |

METHANOL

| 200-659-6 | 67-56-1 | - Flam. Liq. 2: H225; Acute Tox. 3: H331; | | 1-10% |
|-----------|---------|---|-----------------|-------|
| | | Acute Tox. 3: H311; Acute Tox. 3: H301; | | |
| | | | STOT SE 1: H370 | |

Section 4: First aid measures

| 4.1. Description of first aid measures | | | | |
|--|--|--|--|--|
| Skin contact: | Remove all contaminated clothes and footwear immediately unless stuck to skin. | | | |
| | Drench the affected skin with running water for 10 minutes or longer if substance is still | | | |
| | on skin. | | | |
| Eye contact: | Bathe the eye with running water for 15 minutes. Consult a doctor. | | | |
| Ingestion: | Do not induce vomiting. If conscious, give half a litre of water to drink immediately. | | | |
| | Consult a doctor. | | | |

LAYOUT INK WHITE FLUID

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a

doctor.

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

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: There may be a feeling of tightness in the chest with shortness of breath.

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

Immediate / special treatment: Not applicable.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Alcohol resistant foam. Water spray. Carbon dioxide. Dry chemical powder.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Highly flammable. In combustion emits toxic fumes. Forms explosive air-vapour mixture.

Vapour may travel considerable distance to source of ignition and flash back.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. Notify the police and fire brigade immediately. Eliminate all sources of ignition. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Do not use equipment in clean-up procedure which may produce sparks. Absorb into dry earth or sand. Clean-up should be dealt with only by qualified personnel familiar with the specific substance.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

LAYOUT INK WHITE FLUID

| .1. Precautions for safe ha | undling | | | Page: |
|---|------------------|------------------------------|--------------------------------|---------------------------------------|
| | | | | |
| Handling requirements | • | orbidden. Use non-sparkin | - | |
| | | not handle in a confined s | pace. Avoid the formatior | n or spread of mists in |
| | the air. | | | |
| 7.2. Conditions for safe stor | rage, including | g any incompatibilities | | |
| Storage conditions | Store in a co | ol, well ventilated area. Ke | ep container tightly close | d. Keep away from |
| | sources of ig | nition. Prevent the build up | o of electrostatic charge in | n the immediate area. |
| | Ensure lighti | ng and electrical equipmer | nt are not a source of igni | tion. |
| Suitable packaging | : Must only be | e kept in original packaging | | |
| 7.3. Specific end use(s) | | | | |
| Specific end use(s) | : No data avai | ilable. | | |
| ction 8: Exposure contro | ols/personal p | protection | | |
| | • • | | | |
| 3.1. Control parameters | | | | |
| Hazardous ingredients: | | | | |
| nazaraoao mgreatento. | | | | |
| FTUANO | | | | |
| ETHANOL | | | | |
| ETHANOL Workplace exposure limit | ts: | Re | espirable dust | |
| - | | Re 15 min. STEL | espirable dust 8 hour TWA | 15 min. STEL |
| Workplace exposure limit State 8 hour | | | - | 15 min. STEL - |
| Workplace exposure limit State 8 hour | TWA | | - | 15 min. STEL |
| Workplace exposure limitState8 hourUK1 | TWA | | - | 15 min. STEL - |
| Workplace exposure limitState8 hourUK1TITANIUM DIOXIDE | TWA 920 mg/m3 | | 8 hour TWA | 15 min. STEL - - |
| Workplace exposure limit State 8 hour UK 1 TITANIUM DIOXIDE UK | TWA 920 mg/m3 | | 8 hour TWA | 15 min. STEL - - |
| Workplace exposure limit State 8 hour UK 1 TITANIUM DIOXIDE UK CHINA CLAY | TWA 920 mg/m3 - | 15 min. STEL - | 8 hour TWA - 4mg/m3 | 15 min. STEL - - |
| Workplace exposure limit State 8 hour UK 1 TITANIUM DIOXIDE 0 UK 1 CHINA CLAY EU PL020 POLISH 1 | TWA 920 mg/m3 - | 15 min. STEL - | 8 hour TWA - 4mg/m3 | 15 min. STEL - - - |
| Workplace exposure limit State 8 hour UK 1 TITANIUM DIOXIDE 0 UK 1 CHINA CLAY 0 EU 0 PL020 POLISH 0 | TWA 920 mg/m3 - | 15 min. STEL - | 8 hour TWA - 4mg/m3 | 15 min. STEL - - - |
| Workplace exposure limit State 8 hour UK 1 TITANIUM DIOXIDE UK 1 CHINA CLAY EU PL020 POLISH EU 1000ppm, 1 METHANOL | TWA 920 mg/m3 - | 15 min. STEL - | 8 hour TWA - 4mg/m3 | 15 min. STEL - - - - |
| Workplace exposure limit State 8 hour UK 1 TITANIUM DIOXIDE 1 UK 1 CHINA CLAY 1 EU 1 PL020 POLISH 1000ppm, 1 UK 1 | TWA 920 mg/m3 - | 15 min. STEL - | 8 hour TWA - 4mg/m3 4 | 15 min. STEL - - - - - |
| Workplace exposure limit State 8 hour UK 1 TITANIUM DIOXIDE UK 1 CHINA CLAY EU PL020 POLISH EU 1000ppm, 1 METHANOL | TWA 920 mg/m3 - | 15 min. STEL - | 8 hour TWA - 4mg/m3 4 | 15 min. STEL - - - - - |

TITANIUM DIOXIDE

| Туре | Exposure | Value | Population | Effect |
|------|------------|-------|------------|----------|
| DNEL | Inhalation | 10 | Workers | Systemic |

LAYOUT INK WHITE FLUID

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| PNEC | Fresh water | 0.127 | - | - |
|------|--------------------------|-------|---|---|
| PNEC | Marine water | 1 | - | - |
| PNEC | Fresh water sediments | 1000 | - | - |
| PNEC | Soil (agricultural) | 100 | - | - |
| PNEC | Microorganisms in sewage | 100 | - | - |
| | treatment | | | |

8.2. Exposure controls

| Engineering measures: | Ensure there is sufficient ventilation of the area. Ensure lighting and electrical |
|-------------------------|--|
| | equipment are not a source of ignition. |
| Respiratory protection: | Respiratory protection not required. |
| Hand protection: | Protective gloves. |
| Eye protection: | Safety glasses. Ensure eye bath is to hand. |
| Skin protection: | Protective clothing. |
| Environmental: | No special requirement. |

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| State: | Liquid | | |
|-------------------------------|--------------------------------|---------------------|------|
| Colour: | White | | |
| Odour: | Characteristic odour | | |
| Evaporation rate: | Fast | | |
| Oxidising: | Non-oxidising (by EC criteria) | | |
| Solubility in water: | Soluble | | |
| Viscosity: | Non-viscous | | |
| Flammability limits %: lower: | 3.3 | upper: | 19 |
| Flash point°C: | 13 | Autoflammability°C: | >100 |

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions. Stable at room temperature.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

Decomposition may occur on exposure to conditions or materials listed below.

LAYOUT INK WHITE FLUID

10.4. Conditions to avoid

Conditions to avoid: Heat. Hot surfaces. Sources of ignition. Flames.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

ETHANOL

| IVN | ROTTE | LD50 | 1440 | mg/kg |
|-----|-------|------|------|-------|
| ORL | MUS | LD50 | 3450 | mg/kg |
| ORL | ROTTE | LD50 | 7060 | mg/kg |

TITANIUM DIOXIDE

| DUST/MIST | RAT | 4H LC50 | >6.8 | mg/l |
|-----------|-----|---------|-------|-------|
| ORAL | RAT | LD50 | >5000 | mg/kg |

PL020 POLISH

| ORAL RAT LD50 7060 mg/kg |
|--|
|--|

METHANOL

| IVN | RAT | LD50 | 2131 | mg/kg |
|-----|-----|------|------|-------|
| ORL | MUS | LD50 | 7300 | mg/kg |
| ORL | RAT | LD50 | 5628 | mg/kg |

Toxicity values: No data available.

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: There may be a feeling of tightness in the chest with shortness of breath.

Other information: Not applicable.

Section 12: Ecological information

12.1. Toxicity

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Hazardous ingredients:

CHINA CLAY

| ALGAE | 72H IC50 | > 1000 | mg/l |
|---------|----------|--------|------|
| DAPHNIA | 48H EC50 | > 1000 | mg/l |
| FISH | 96H LC50 | > 1000 | mg/l |

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Negligible ecotoxicity.

company.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal

Waste code number: 08 01 11

Disposal of packaging: Dispose of in a regulated landfill site or other method for hazardous or toxic wastes.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN1170

14.2. UN proper shipping name

Shipping name: ETHANOL SOLUTION

14.3. Transport hazard class(es)

Transport class: 3

14.4. Packing group

Packing group: ||

LAYOUT INK WHITE FLUID

14.5. Environmental hazards

Environmentally hazardous: No

Marine pollutant: No

14.6. Special precautions for user

Special precautions: No special precautions.

Section 15: Regulatory information

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

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

| Other information: | This safety data sheet is prepared in accordance with Commission Regulation (EU) No | |
|------------------------------|---|--|
| | 2015/830. | |
| Phrases used in s.2 and s.3: | H225: Highly flammable liquid and vapour. | |
| | H301: Toxic if swallowed. | |
| | H302: Harmful if swallowed. | |
| | H311: Toxic in contact with skin. | |
| | H312: Harmful in contact with skin. | |
| | H331: Toxic if inhaled. | |
| | H332: Harmful if inhaled. | |
| | H370: Causes damage to organs <or affected,="" all="" if="" known="" organs="" state=""> <state of<="" route="" th=""></state></or> | |
| | exposure if it is conclusively proven that no other routes of exposure cause the hazard>. | |
| | H371: May cause damage to organs <or affected,="" all="" if="" known="" organs="" state=""> <state route<="" th=""></state></or> | |
| | of exposure if it is conclusively proven that no other routes of exposure cause the | |
| | hazard>. | |
| Legal disclaimer: | The above information is believed to be correct but does not purport to be all inclusive | |
| | and shall be used only as a guide. This company shall not be held liable for any | |
| | damage resulting from handling or from contact with the above product. | |
| | | |