



EC – Safty Data Sheet according to 91/155 EWG

ORALITE[®] Screen Printing Ink 5010-050 blue
Article-No. 359000050

Version : 01/05
Status : 24.08.05

1.) Identification of the substance/preparation and company

Product details

Trade name

ORALITE[®] Screen Printing Ink 5010-050 blue

Identification of the supplier

Address

Orafol Europe GmbH
Am Biotop 2
D-16515 Oranienburg

Telefon-Nr. +49 (3301) 864-0

Fax-Nr. +49 (3301) 864-100

Information provided by / telephone

Product development +49 (3301) 864-318

Use

Screen printing ink

2.) Composition / information on ingredients

Chemical characterization

Screen printing ink based on acrylic resins and on solvents

Hazardous ingredients

BUTYLGLYCOLATE

| | | | | |
|----------------|-----------|---|----|--------|
| CAS no. | 7397-62-8 | | | |
| EINECS no. | 230-991-7 | | | |
| Concentration | >= 20 | < | 35 | %-b.w. |
| Classification | Xi;R41 | | | |

XYLENE

| | | | | |
|----------------|----------------------------|---|----|--------|
| CAS no. | 1330-20-7 | | | |
| EINECS no. | 215-535-7 | | | |
| Concentration | >= 5 | < | 10 | %-b.w. |
| Classification | R10 Xn;R20/21 Xi;R38 | | | |

N-BUTYL ACETATE

| | | | | |
|----------------|-------------------|---|----|--------|
| CAS no. | 123-86-4 | | | |
| EINECS no. | 204-658-1 | | | |
| Concentration | >= 5 | < | 10 | %-b.w. |
| Classification | R10 R66 R67 | | | |

SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM.

| | | | | |
|----------------|------------|---|----|--------|
| CAS no. | 64742-95-6 | | | |
| EINECS no. | 265-199-0 | | | |
| Concentration | >= 5 | < | 10 | %-b.w. |
| Classification | Xn;R65 | | | |



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Xi;R37
N;R51/53
R10
R66
R67

ETHYLBENZENE

CAS no. 100-41-4
EINECS no. 202-849-4
Concentration >= 1 < 5 %-b.w.
Classification F;R11
Xn;R20

NAPHTHA (PETROLEUM), HYDRODESULFURIZED HEAVY

CAS no. 64742-82-1
EINECS no. 265-185-4
Concentration < 0,5 %-b.w.
Classification Xn;R65
N;R51/53
R10

3.) Hazards possibilities

Hazard symbols

Xi Irritant

R phrases

10 Flammable.
41 Risk of serious damage to eyes.
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Particular information pertaining specific risk for human / environment

The product is water polluting.

4.) First aid measures

General information

Immediately remove all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical attention. Unconsciousness: lateral position - call a physician.

After inhalation

Take the casualty into the fresh air and keep warm. Irregular breathing/no breathing: artificial respiration. Call a physician.

After skin contact

Wash away with soap and water and rinse. Do NOT use solvents or thinners!

After eye contact

Flush with plenty of water (10 - 15 min.). Call a physician.

After ingestion

Call a doctor. Keep at rest. Do not induce vomiting.

5.) Firefighting measures

Suitable extinguishing media

Carbon dioxide, foam, sand, dry extinguishing agent.



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Extinguishing media that must not be used for safety reasons

Waterjet should not be used because water is not mixable with a lot of organic solvents and such solvents will spread on the water surface.

Special exposure hazards arising from the substance or preparation itself, its combustion products or from resulting gases

In case of fire, dangerous smoke gases such as carbon dioxide, carbon monoxide, soot, nitrogen oxides, metal oxides and halogenated hydrogens can be produced. Therefore, take suitable precautionary measures for fire fighting. Residues remaining after a fire have to be disposed of appropriately.

Special protective equipment for firefighting

Breathing apparatus with an independent source of air may be required.

Other information

Cool endangered containers with water in case of fire.

6.) *Accidental release measures*

Personal precautions

Keep away from sources of ignition. Provide for good ventilation. Do not breathe vapours. Refer to protective measures listed in sections 7 and 8.

Environmental precautions

Do not empty into drains. If the product contaminates lakes, rivers or sewages, inform appropriate authorities in accordance with local regulations.

Methods for cleaning up/taking up

Remove by liquid absorbing material (e.g. kieselguhr) and process according to waste regulations. Clean preferably with a detergent; avoid use of solvents.

7.) *Handling and storage*

Handling

Advice on safe handling

Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limit. Do not leave containers open. The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Avoid contact with skin and eyes. Avoid inhalation of vapour and spray mist. When using do not eat, drink or smoke. Comply with the health and safety at work laws.

Advice on protection against fire and explosion

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Preparation may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing. No sparking tools should be used.

Classification of fires

B (Combustible liquid substances)

Temperature class

T2

Storage

Requirements for storage rooms and vessels

Recommended storage temperature: 15-20°C. Keep container tightly closed. Never use pressure to empty: container is not a pressure vessel. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Hints on storage assembly

Keep away from oxidizing agents, from strongly alkaline and strongly acid materials.



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Further information on storage conditions

Always keep in containers of same material as the original one. See also instructions on the label. Avoid heating and direct sunlight. Keep away from sources of ignition. Keep containers dry and cool.

8.) Exposure controls / personal protection

Additional hints on technical system design.

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

Ingredients with occupational exposure limits to be monitored

XYLENE

| | | | | |
|--------------------------------------|-----|-------------------|-----|-------------------|
| OES/EH40 | | | | |
| Value | 100 | ml/m ³ | 441 | mg/m ³ |
| STEL | 150 | ml/m ³ | 662 | mg/m ³ |
| Skin resorption / sensibilisation | Sk | | | |

2000/39/EC

| | | | | |
|--------------------------------------|------|-------------------|-----|-------------------|
| Value | 50 | ml/m ³ | 221 | mg/m ³ |
| STEL | 100 | ml/m ³ | 442 | mg/m ³ |
| Skin resorption / sensibilisation | skin | | | |

ETHYLBENZENE

| | | | | |
|----------|-----|-------------------|-----|-------------------|
| OES/EH40 | | | | |
| Value | 100 | ml/m ³ | 441 | mg/m ³ |
| STEL | 125 | ml/m ³ | 552 | mg/m ³ |

2000/39/EC

| | | | | |
|--------------------------------------|------|-------------------|-----|-------------------|
| Value | 100 | ml/m ³ | 442 | mg/m ³ |
| STEL | 200 | ml/m ³ | 884 | mg/m ³ |
| Skin resorption / sensibilisation | skin | | | |

N-BUTYL ACETATE

| | | | | |
|----------|-----|-------------------|-----|-------------------|
| OES/EH40 | | | | |
| Value | 150 | ml/m ³ | 724 | mg/m ³ |
| STEL | 200 | ml/m ³ | 966 | mg/m ³ |

1,2,4-TRIMETHYLBENZENE

| | | | | |
|------------|----|-------------------|-----|-------------------|
| 2000/39/EC | | | | |
| Value | 20 | ml/m ³ | 100 | mg/m ³ |

| | | | | |
|----------|----|-------------------|-----|-------------------|
| OES/EH40 | | | | |
| Value | 25 | ml/m ³ | 125 | mg/m ³ |

AROMATICS

| | | | | |
|----------|-----|-------------------|--|--|
| OES/EH40 | | | | |
| Value | 500 | mg/m ³ | | |

Personal protective equipment

Respiratory protection

Breathing protection equipment required in inadequately ventilated places and during spraying.

Respiratory filter (gas) : A
Respiratory filter (part): P2

Hand protection

Chemical protection gloves are suitable, which are tested according to EN 374. For short term contact (e.g. splash protection) as well as long term contact (e.g. cleaning activities) with the constituents of inks



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and usual cleaning agents an LLDPE glove of 0.06 mm thickness is recommended. According to information by the manufacturer the average breakthrough times for usual constituents exceed 480 min. We recommend to set up a hand protection plan, which is adapted to the needs of the local business. Further information is provided in the publications of Bundesverband Handschutz (nos. 6 and 9) and BG Druck und Papierverarbeitung (528.1, 528.2, 531.X).

Eye protection

Use safety glasses.

Skin protection

Personal should wear antistatic clothing made of natural fiber or of high temperature resistant synthetic fiber. All parts of the body should be washed after contact. Use re-greasing skin cream.

General protective and hygiene measures

The usual precautionary measures for the handling of chemicals have to be observed.

9.) *Physical and chemical properties*

Appearance

| | |
|--------|----------------|
| Form | pasty |
| Colour | see trade name |
| Odour | characteristic |

Safety data

Changes in physical state

| | | |
|-------|-------------------------|----|
| Type | Boiling point (initial) | |
| Value | 124 | °C |

Flash point

| | | |
|--------|---------------------|----|
| Value | 41 | °C |
| Method | ASTM D 6450 (CCCFP) | |

Ignition temperature

| | | |
|-------|-----|----|
| Value | 290 | °C |
|-------|-----|----|

Explosion limits

| | | |
|-----------------------|-----|-------|
| Upper explosion limit | 7,5 | % vol |
| Lower explosion limit | 0,7 | % vol |

Vapour pressure

| | | |
|-----------------------|----|-----|
| Value | 5 | hPa |
| Reference temperature | 20 | °C |

Density

| | | | |
|-------|-----|-----|-------------------|
| Value | 1,0 | 1,1 | g/cm ³ |
|-------|-----|-----|-------------------|

| | | |
|-----------------------|----|----|
| Reference temperature | 20 | °C |
|-----------------------|----|----|

Viscosity

| | | |
|-----------------------|--------------|-----|
| Type | Flow time | |
| Value | > 150 | sec |
| Method | DIN-cup 4 mm | |
| Reference temperature | 20 | °C |

Solubility in water

Remarks parts of solvents

Other information

The physical specifications are approximate values and refer to the used safety relevant component(s).



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10.) *Stability and reactivity*

Conditions to avoid

Stable under recommended storage and handling conditions (See section 7).

Materials to avoid

Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Hazardous decomposition products

When exposed to high temperatures, dangerous decomposition products such as carbon dioxide, carbon monoxide, soot, nitrogen oxides, metal oxides and halogenated hydrocarbons can be produced.

11.) *Toxicological information*

Experience in practice

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Solvents may cause symptoms like described above by absorption through the skin. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

Vapours and the liquid itself will irritate the eyes. Risk of serious damage to eyes.
If swallowed, stomach complaints and irritation of the digestive organs may result.

Other information

There are no data available on the preparation itself.

The product was classified in toxicological terms on the basis of the results of the calculation procedure outlined within General Directive on Preparations (88/379/EEC).

12.) *Ecological information*

General information / ecology

There are no data available on the preparation itself. Do not empty into waters or drains

13.) *Disposal considerations*

Product

Dispose of or incinerate in accordance with corresponding regulations.

Code of waste pursuant to European Council Directive on waste: 080312 (Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks - wastes from MFSU of printing inks - waste ink containing dangerous substances).

Uncleaned packaging

Dispose of only completely emptied containers!

Code of waste pursuant on European Council Directive on waste: 150104 (Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified - packaging (including separately collected municipal packaging waste) - metallic packaging).



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14.) *Transport information*

Land transport ADR/RID

| | |
|-----------------|--|
| Class | 3 |
| Packaging group | III |
| Hazard id. no. | 30 |
| Label | 3 |
| UN number | 1263 |
| Technical name | Paint |
| Remarks | The product is viscous; non-dangerous good in containers with a capacity <= 30 ltrs. |

Marine transport IMDG/GGVSee

| | |
|----------------------|---|
| Class | 3 |
| Packaging group | III |
| UN number | 1263 |
| Proper shipping name | Paint |
| EmS | 3-05 |
| MARPOL | --- |
| Label | 3 |
| Remarks | The product is viscous; non-dangerous good in containers with a capacity <= 450 ltrs. |

Air transport ICAO/IATA

| | |
|----------------------|-------|
| Class | 3 |
| Packaging group | III |
| UN number | 1263 |
| Proper shipping name | Paint |
| Label | 3 |

15.) *Regulatory information*

Labelling in accordance with EC directives

The product is classified and labelled in accordance with EC directives/GefStoff V

Hazard symbols

Xi Irritant

R phrases

| | |
|-------|---|
| 10 | Flammable. |
| 41 | Risk of serious damage to eyes. |
| 52/53 | Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

S phrases

| | |
|-------|---|
| 20/21 | When using do not eat, drink or smoke. |
| 25 | Avoid contact with eyes. |
| 26 | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |
| 29 | Do not empty into drains. |
| 51 | Use only in well-ventilated areas. |

16.) *Other information*

Other information

According to their chemical structure, the applied raw materials do not contain any antimony, arsenic, soluble barium, lead, cadmium, chromium, mercury and selenium.



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NAPHTHA (PETROLEUM), HYDRODESULFURIZED HEAVY

10 Flammable.
65 Harmful: may cause lung damage if swallowed.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

XYLENE

10 Flammable.
20/21 Harmful by inhalation and in contact with skin.
38 Irritating to skin.

ETHYLBENZENE

11 Highly flammable.
20 Harmful by inhalation.

N-BUTYL ACETATE

10 Flammable.
66 Repeated exposure may cause skin dryness or cracking.
67 Vapours may cause drowsiness and dizziness.

BUTYLGLYCOLATE

41 Risk of serious damage to eyes.

SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM.

65 Harmful: may cause lung damage if swallowed.
10 Flammable.
37 Irritating to respiratory system.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
66 Repeated exposure may cause skin dryness or cracking.
67 Vapours may cause drowsiness and dizziness.

Department issuing safety data sheet

Development / quality control, department reflective materials

Contact person

Dr. S. Lucht

The instructions are based on today's information and knowledge. The safety data sheet describes products in relation to safety requirements. These instructions do not assure application technological properties of the product.