MATERIAL SAFETY DATA SHEET

This Safety Data Sheet is prepared in accordance with formatting described in the REACH Regulation (EC) No 1907/2006 and (EU) No 453/2010

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

1.1 Product identifiers

Product Name: Orcein Solution (Shikata)
Product Code: HST210
Brand: Solmedia Ltd

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

Identified uses: For professional use only.

1.3 Details of the supplier of the safety data sheet

Name of Supplier: Solmedia Ltd.
Address of Supplier: Unit 2, Vernon Drive
Battlefield Enterprise Park
Shrewsbury
SY1 3TF
UK
Telephone: 0844 80 80 900
Email: labsupplies@solmedialtd.com

1.4 Emergency telephone number

Emergency Phone # +44 (0)844 80 80 900

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification under CLP: Regulation (EC) No. 1272/2008 [CLP]

Hazard Class	Hazard Category	Hazard Statement
Specific target organ toxicity — repeated exposure	Category 2	H371
Flammable liquid	Category 2	H225
Eye damage	Category 1	H314
Skin corrosion	Category 1	H314

2.2 Label elements

Labelling in accordance with Classification Labelling and Packaging Regulation (EC) No 1272/2008

Pictograms:

Signal Word **DANGER**

Hazard Statements

H314 Causes severe skin burns and eye damage.

H225 Highly flammable liquid and vapour.

H371 May cause damage to the optic nerve & central nervous system by the oral route.

Precautionary Statements

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

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

2.3 Other hazards

Dyes and Stains by their physical nature may result in permanent staining if in contact with skin and clothes.

No substance contained in this product meets the criteria for vPvB and PBT according to Regulation (EC) No 1907/2006, Annex XIII; and, no substance within this product is identified as having endocrine disrupting properties according to Regulation (EU) 2017/2100.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients Classification according to Regulation (EC) No. 1272/2008 [CLP]

		Classification (Regulation (EC) No 1272/2008 [CLP]		
Hazardous Components		Amount [%]	Hazard class/ Hazard category	Hazard Statements
Name:	Ethanol	60-70%	FLAM. LIQ. CAT. 2.	H355
CAS NO.	64-17-5			
EC-NO.	200-578-6			
Name:	Orcein synthetic	1%	ACUTE TOX CAT. 4.	H302
CAS NO.	1400-62-0			
EC-NO.	215-750-6			
Name:	Methanol	3-4%	FLAM. LIQ. CAT. 2. ACUTE TOX. CAT. 3. STOT. SE. CAT. 1.	H225 H301, H311 H370
CAS NO.	67-56-1			
EC-NO.	200-659-6			
Name:	Hyrochloric acid	0.5-1%	OX. SOLIDS CAT. 2. SKIN IRRIT. CAT. 2. EYE IRRIT. CAT. 2. STOT SE CAT. 3.	H272 H315, H319. H335
CAS NO.	N/A			
EC-NO.	231-595-7			

Refer to section 16 for additional classification information

SECTION 4: First aid measures

4.1 Description of first aid measures

If exposed keep patient calm and seek immediate medical attention. Show this safety data sheet to doctor/physician in attendance.

If Inhaled

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Get medical advice/attention.

In case of skin contact or hair

Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

In case of eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists get medical advice/attention.

If swallowed

Do NOT induce vomiting. Rinse out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

No data available

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Use alcohol-resistant foam or fine water spray, dry chemical powder or carbon dioxide. For large fires immediately alert fire emergency services. Evacuate personnel to safe area.

5.2 Special hazards arising from the substance or mixture

May emit toxic fumes under fire: Carbon oxides, Nitrogen oxide.

5.3 Advice for firefighters

Avoid contact with skin and eyes. Wear self-contained breathing apparatus /protective clothing. Cool surrounding with water spray. Heating causes a rise in pressure, risk of bursting /explosion. Vapour is slightly heavier than air. Beware of backfire. Stay on upwind side. Use only explosion proved equipment. In case of violent hazardous effect: Wear appropriate tightly sealed suit.

5.4 Further information

Class of fire: B Liquid or melting substances

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Observe all warning labels on container. Ensure adequate ventilation. Avoid breathing vapours, mist or gas. Wear respiratory protection and other personal protective equipment provided. Shut off all naked flames and other sources of ignition. Vapour is slightly heavier than air and may accumulate in low areas to form explosive concentrations. Prevent build-up of electrostatic charge. Wash hands thoroughly after handling.

6.2 Environmental precautions

Avoid discharge into the environment. May create a hazard to drinking water sources when very large quantities get into groundwater. Do not let undiluted product or large quantities enter drains or water course. Prevent further leakage or spillage where safe to do so. Inform responsible authorities as appropriate.

6.3 Methods and materials for containment and cleaning up

Absorb spillage with appropriate absorbent material e.g. vermiculite or sand; and dispose into suitably labelled closed containers for disposal according to local regulations. If using a vacuum cleaner ensure unit is spark-proof /electrically protected. Avoid ignition of vapour. Wash spillage site with water and appropriate detergent.

6.4 Reference to other sections

For disposal refer to section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Observe all warning labels on container. Use only closed apparatus. Ensure adequate ventilation. Avoid breathing vapours, mist or gas. Wear appropriate personal protective equipment provided. Shut off all naked flames and other sources of ignition. Take precaution to avoid exposure. Avoid splashing. Use solvent resistant utensils. Prevent build-up of electrostatic charge. Beware of vapours (slightly heavier than air) accumulating in low areas to form explosive concentrations. Wash hands thoroughly after handling. Do not eat, drink, smoke when handling this product.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry, well-ventilated cool place. Opened containers must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

Recommend restriction to professional users only.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

TWA Time Weighted Average Concentration (Long Term Exposure Limit)
STEL Short Term Exposure Limit
LTEL Long Term Exposure Limit

Methanol can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.

Component	CAS-No	Value	Control Parameters	Workplace Exposure Limit
Methanol	65-56-1	TWA LTEL – 8h STEL – 15 mins	200 ppm - 266mg/m³	UK.EH40
Hydrochloric acid (as hydrogen chloride)	231-595-7	TWA LTEL – 8h STEL – 15 mins	1 ppm – 2mg/m³ 5ppm – 8mg/m³	UK.EH40
Ethanol	64-17-5	TWA LTEL – 8h	100ppm -1920mg/m³	UK.EH40

8.1.3 DNEL's Workers

Component	Route of Exposure	Acute Effects local	Acute Effects systemic	Chronic Effects Local	Chronic Effects systemic
Methanol CAS-No 67-56-1	Oral	na	8 mg/kg bw/day	na	8 mg/kg bw/day
	Inhalation	50 mg/m³			
	Dermal	na	8 mg/kg bw/day	na	8 mg/kg bw/day
Ethanol CAS-No 64-17-5	Oral	na			
	Inhalation	na	na	na	950 mg/m³
	Dermal	na	na	na	343mg/kg bw/day**

** Repeated dose toxicity – NOAEL Oral Value: 8238 mg/kg bw/day

8.2 Exposure controls

Appropriate engineering controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Personal protective equipment

Eye/face protection

Avoid exposure to sprays/mist/aerosols. Use face shield and/or safety goggles for eye protection complying with appropriate government standards such as EN166 (EU).

Skin Protection

Handle with chemical-resistant, impervious gloves or gauntlets complying with appropriate government standards: EU Directive 89/686/EEC; standard EN 374. Inspect gloves prior to use to ensure adequate protection. Use proper glove removal technique to avoid skin contact with substance / mixture. Dispose of contaminated gloves after use in accordance with local and national applicable laws and good laboratory practises. Wash and dry hands thoroughly after handling. Promptly remove any contaminated clothing and clean appropriately before reuse.

Body Protection

Use chemically resistant protective clothing with closed cuffs and closed neck, appropriate to the concentration /amount of the substance at the specific workplace.

Respiratory protection

It is recommended that full-face respirator or air hood be used where local exhaust ventilation is inadequate to reduce the atmospheric level to below the national exposure limits for the component substances. Use respirator and components tested and approved to appropriate government standards such as NIOSH (US) or EN 143 / EN 14387 (EU).

Thermal Hazards

No specific thermal hazard. Product is stored at room temperature.

8.2.3 Environmental Exposure Controls

None

SECTION 9: Physical and chemical properties

The physical/chemical properties of this product have not been fully investigated. Judgements have been made based upon consideration of its major component(s).

9.1 Information on basic physical and chemical properties

a) Appearance Form: Liquid

b) Colour: Red

c) Odour: Alcoholic odour

d) Melting point: No data available

e) Boiling point: No data available

f) Flammability: No data available

g) Upper/lower explosion limits
No data available

h) Flashpoint: No data available

i) Autoignition temperature:
No data available

j) Decomposition temperature:
No data available

k) pH: 1.2

l) Kinematic viscosity: Not applicable

m) Solubility at 20˚C: **Water** Miscible

Fat
No data available

n) Partition coefficient n-octanol/water (Log value)
Not applicable

o) Vapour pressure: No data available

p) Density and/or relative density:
No data available

q) Relative vapour density:

No data available

r) Particle characteristics:
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under specified conditions of use and storage

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Heat, naked flames, other sources of ignition.
Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Strong Oxidising agents.

10.6 Hazardous decomposition products

Products of Carbon Oxides and Nitrogen Oxides may be produced on burning or heating. The nature of released decomposition products has not been determined.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

The toxicological properties of this product have not been fully investigated. Judgements have been made based upon consideration of its major component(s).

Toxicokinetic

(a) Acute toxicity

Methanol

Oral, human: LDLo=300mg/kg ATE = 100
Inh, monkey: LCLo=1000ppm ATE = 700
Derm, monkey: LDLo= 393mg/kg ATE= 300

Orcein (Synthetic) converted ATE= 500

(b) Skin corrosion/irritation

HS612 – Causes severe skin burns and eye damage

(c) Serious eye damage/ eye irritation

Hydrochloric Acid - Causes severe skin burns and eye damage

(d) Respiratory or skin sensitization

No data available

(e) Germ cell mutagenicity

No data available

(f) Carcinogenicity

Tumorigenic IARC:

No component of this product present at greater
Than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC or EC levels

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(f) Reproductive toxicity

No data available

(g) STOT Specific target organ toxicity - single exposure

HS612 – May cause damage to the optic nerve and central nervous system by the oral route.

(h) STOT Specific target organ toxicity - repeated exposure

No data available

(j) Aspiration hazard

No data available

Potential health effects

Inhalation Maybe harmful if inhaled. Contains components which may cause irritation to mucous membranes and upper respiratory tract.

Ingestion Maybe harmful if ingested. Contains components which may cause vomiting or other adverse effect such as diarrhoea.

Skin Causes severe skin burns. Readily absorbed.

Eyes Causes serious eye damage.

Signs and Symptoms of Exposure

Short term exposure may result in drowsiness, headache, confusion, sickness, abdominal pain, possibly within 30 minutes of exposure.

11.2 Information on other hazards

No component of this mixture is classified as endocrine disrupting according to Regulation (EU) No 2017/2100.

SECTION 12: Ecological information

This product has not been tested. Judgements on the expected toxicity of this product have been made based upon consideration of its major components.

12.1 Toxicity

Not classified as acutely toxic to aquatic organisms.
Adverse ecological effects cannot be excluded in the event of improper handling or disposal.

Toxicity to Daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) = 9000mg/litre – 24hrs IMS

Toxicity threshold

Concentration: cell multiplication inhibition test -

Algae: 5000mg/litre - IMS
Bacterial inhibition tests show that the product is not inhibitory to biomass**.**

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.
Do not let undiluted product or large quantities enter drains or water course. Inform responsible authorities as appropriate.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvBs.

12.6 Endocrine disrupting properties

No component of this mixture is classified as endocrine disrupting according to Regulation (EU) No 2017/2100.

12.7 Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Dispose of as flammable hazardous waste and offer non –recyclable solutions to a licensed waste material processor. Comply with local regulations.

Contaminated Packaging

Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADR/RID	1170
IMDG	1170
IATA	1170

14.2 UN proper shipping name

ADR/RID	ETHANOL SOLUTION
IMDG	ETHANOL SOLUTION
IATA	ETHANOL SOLUTION

14.3 Transport hazard class(es)

ADR/RID	3
IMDG	3
IATA	3

14.4 Packaging group

ADR/RID	II
IMDG	II
IATA	II

14.5 Environmental hazards

No

Marine Pollutant

No

14.6 Special precautions for user

No data available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006 and (EC) No 1272/2008.

All components are listed as existing substances in Europe

15.2 Chemical safety assessment

A chemical safety assessment has not carried out for this product

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SECTION 16: Other information

Additional information from Section 3

Hazard Statements

H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H370 Causes damage to organs

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Solmedia Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.