SKL-WP2

Water-Washable Visible Penetrant

SPOTCHECK® SKL-WP2 is a water-washable visible penetrant designed for large surface areas and rough surfaces where excess penetrant would be difficult to remove with a solvent cleaner or emulsifier. It can be removed with a water spray, either manually or with an automated process.

SKL-WP2 produces a visible red color contrast for discontinuity identification, and it has outstanding penetrating characteristics.

BENEFITS

Dependable and convenient to use

- Easy to carry and use in the field with the convenient aerosol cans which are carefully designed for consistent, even coverage and maximum test area coverage
- Use in all conditions without the need for darkness or UV lights
- Quickly and completely covers the entire test surface due to high surface wetting

Maximum indication detection

- Produces strong, vibrant indications thanks to the bright, vibrant red color, especially when used with SKD-S2 solvent-based developer
- Wide application versatility
- Inspect a wide range of components without fear of corrosion or specification non-conformance
- Meets AMS 2644 and is NDT-approved for professional industrial applications
- Reduced processing cost per part due to excellent washability, which is especially useful for large parts and cast components

FEATURES

- Outstanding penetrating characteristics
- Easy water-wash removal
- Vivid high-contrast color
- Superior flaw resolution
- Excellent reliability
- Wide range of applications
- Excellent controlled washability over a wide temperature range and variable dwell times.

SPECIFICATION COMPLIANCE

- AMS2644
- ASME BPVC-V
- ASTM D129
- ASTM E165/E165M
- ASTM E1417/E1417M
- EN ISO 3452-1
- EN ISO 3452-2 (Sensitivity Level 2)
- MIL-STD-2132D

SKL-WP2

APPLICATIONS

Defect location: open to surface

Ideal for:

- A production environment where many parts are inspected daily.
- Castings
- Forgings
- Welds
- Pressure vessels
- Tubular goods
- General metal work

Ideal for:

- Cracks
- Leaks

NOTE: we do not recommend SKL-WP2 for inspecting plastic materials, as it may stain, soften or even dissolve the base material under test.

COMPOSITION

A blend of petroleum distillates, non-ionic surfactants and an oil-soluble organic red dye.

PRODUCT PROPERTIES

Form and colour	Red liquid
AMS 2644 class	Type 2, Method A/C
Flash point	> 93°C (bulk product)
Density	0.88 g/cm^3
Viscosity	8.0 mm^2/s
Sulphur content	< 300 ppm
Chloride content	< 300 ppm
Corrosion	Meets AMS 2644

Like all Magnaflux materials, our visible penetrants are closely controlled to ensure batch-to-batch consistency, optimum process control and inspection reliability.

USER RECOMMENDATIONS

NDT Method	Penetrant Testing, Visible
Storage temperature	10°C to 30°C
Usage temperature	5°C to 55°C (bulk) -5°C to 50°C (aerosol)
Coverage	20 - 30m^2 per litre 10 - 15m^2 per aerosol
Cleaner/remover	SKC-S
Solvent-based developer	SKD-S2
Water-based developer	ZP-5B
Accessories	Reference test block (part no. 070C001)

SKL-WP2

INSTRUCTIONS FOR USE

Ensure test part is clean and dry, and free from oil, grease and other contaminants.

Apply penetrant by immersion dip, brush, flow on, conventional or electrostatic spray. Cover the test area completely.

Allow penetration time. Minimum penetration time is 2 to 5 minutes, with 10 minutes being adequate for most situations. Lower temperatures thicken the penetrant and require longer penetration times.

Spray the component with clean water at 10°C to 40°C, or wipe with a lint-free cloth dampened with our SKC-S cleaner. Once clean, the component should be dried before a developer is applied.

Apply a thin layer of developer* to the surface and allow a minimum of 10 minutes development time before inspecting the component under white light. Indications will appear dark red against the white developer background.

* A developer is used to maximise sensitivity and provide a white contrasting background. Two types of developer can be used:

Solvent-based: quick-drying materials which are applied by spraying. The component under test must be dry before developer is applied.

Water-based (aqueous): can be applied by dipping or spraying. To maximise penetrant sensitivity, parts should only be exposed to aqueous developers for short periods of time. The component must be dried before inspection.

Developer residue can be removed either by wiping with a cloth or by a water and detergent wash. Penetrant residues can be removed by vapour degreasing or solvent soak.

Pre-clean component with cleaner SKC-S.

↓

Apply penetrant SKL-WP2 to the clean component and allow contact time.

↓

Use SKC-S or spray the component with water to remove excess penetrant.

↓

Dry component, apply developer (SKD-S2 or ZP-5B) and inspect.

PACKAGING AND PART NUMBERS

008A163
(x 10)

055C071
(x 4)

055C072

HEALTH AND SAFETY

Review all relevant health and safety information before using this product. For complete health and safety information, refer to the Safety Data Sheets, which are available at **www.magnaflux.eu**.

SAFETY DATA SHEET

Version 17.3 replaces Version 17.2
Revision date: 22.08.2018
According to (EU) No. 2015/830

1.1 Product identifier: **SPOTCHECK® SKL-WP2 - aerosol**

1.2 Relevant identified uses of the mixture and uses advised against:

Relevant identified uses: Red penetrant used in Non Destructive Testing (NDT) inspection.

Uses advised against: This product is not recommended for any use other than the identified uses above.

1.3 Details of the supplier of the safety data sheet

Manufacturer: Magnaflux® (A Division of ITW Ltd)

Address: Faraday Road, South Dorcan Industrial Estate, Swindon, UK

Postcode: SN3 5HE

Telephone/fax number:
Telephone: +44 (0)1793 524566
Fax: +44 (0)1793 490459
Web: www.eu.magnaflux.com

Email address of competent person responsible for SDS: support.eu@magnaflux.com

National contact: None appointed.

1.4 Emergency telephone number: DURING OFFICE HOURS, CALL
T: +44 (0)1793 524566 (English only)

Opening hours: Office hours (GMT) Monday - Thursday 8am - 5pm, Friday 8am - 4pm
OUT OF OFFICE HOURS, CALL
T: +44(0)203 394 9866

SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

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

Physical and Chemical Hazard:
Aerosol 1 H222, H229

Health Hazard:
Eye Dam. 1 H318

Environmental Hazard:
Aquatic Chronic 3 H412

Additional information EUH066

For full text of hazard statements and EU hazard statements see SECTION 16.

2.2 Label Elements:

Labelling according to regulation (EC) No 1272/2008 [CLP]

Hazard Pictograms:

Signal Word: Danger

Hazard Statement(s):
H222: Extremely flammable aerosol
H229: Pressurised container. May burst if heated.
H318: Causes serious eye damage.
H412: Harmful to aquatic life with long lasting effects

Precautionary Statement(s):	P210: Keep away from heat, sparks, open flames and hot surfaces. 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. 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 or doctor/physician. P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50 °C. P501: Dispose of contents/container to hazardous waste or special collection point.
Supplementary Precautionary Statement(s):	P243: Take precautionary measures against static discharge. P271: Use only outdoors or in a well-ventilated area. P273: Avoid release to the environment. P302+P352: IF ON SKIN: Wash with soap and water.
Supplementary Hazard Information (EU)	EUH066: Repeated exposure may cause skin dryness or cracking.
Hazard Determining Component(s)	Alcohols, C12-C15, branched and linear, ethoxylated, propoxylated ALCOHOLS, C11 – C15 SECONDARY ETHOXYLATED Oleic acid monoisopropanolamide

2.3 Other hazards:

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50 °C.
Vapours can form explosive mixtures in air.
Product may stain skin.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical name	CAS Number	EC number	REACH registration number	% Weight	Classification according to Regulation (EC) number 1272/2008 [CLP]	Additional Information
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	-	920-107-4	01-2119453414-43	50 - 65	Asp Tox 1 H304 [1]	EUH066 Has WEL
Hydrocarbons, C3-4-rich petroleum distillate petroleum gas (1,3 butadiene < 0.1%)	68512-91-4	270-990-9	[2]	≤ 40	Press. Gas H280 Flam. Gas 1 H220	[3]
alcohols C12-C15, branched and linear, ethoxylated, propoxylated.	120313-48-6	-	-	< 20	Eye Dam 1 H318 Aquatic Chronic 2 H411	-
Alcohols C11-C15 Secondary Ethoxylated	68131-40-8	-	-	< 15	Eye Dam 1 H318 Skin Irrit. 2 H315	-
2-Naphthalenamine, N-(2-ethylhexyl)-1-[[4-(phenylazo)phenyl]azo]-ar' and ar""-Me derivs	92257-28-8	296-117-1	-	< 4	Not classified	See Section 11 for information on azo dyes
Oleic acid monoisopropanolamide	111-05-7	-	-	< 3	Eye Dam 1 H318 Skin Irrit. 2 H315	-
Solvent Naphtha	64742-94-5	265-198-5	-	< 2	Asp Tox 1 H304 Aquatic Chronic 2 H411	-
Terpineol	8000-41-7	232-268-1	01-2119553062-49	< 2	Eye Irrit. 2 H319 Skin Irrit. 2 H315	DNEL

[1] Mixtures classified as Asp. Tox. 1 H304 need not be labelled when placed on the market in aerosol containers or in containers fitted with a sealed spray attachment.
[2] Exempted from the obligation to register in accordance with art.2(7)(a) of REACH Regulation No 1907/2006.
[3] Not classified as carcinogen, less than 0.1% w/w 1,3 butadiene (EINECS no 203-450-8)

Note: Hazard statement(s) in this section apply only to raw materials, not necessarily to finished products.
**See Section 16 for hazard statement(s) text in full.*

SECTION 4 FIRST AID MEASURES

4.1 Description of first aid measures:

General notes:	If symptoms persist, seek medical attention. Show this safety data sheet to the doctor in attendance.
Following inhalation:	Remove to fresh air. Keep at rest. If not breathing give artificial respiration. Seek medical attention if symptoms occur.
Following skin contact:	Flush with water, use soap if available. Contaminated clothing should be washed before re-use. Seek medical attention if symptoms occur.
Following eye contact:	Flush eyes with large amounts of water for at least 15 minutes. Check for and remove any contact lenses if easy to do. Continue rinsing. Seek medical attention immediately.
Following ingestion:	Unlikely route of exposure. Rinse mouth with water. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach contents don't enter the lungs. Never give anything by mouth to an unconscious person. Seek medical attention immediately.
Self-protection of the first aider:	No action shall be taken involving any personal risk or without suitable training. If it is suspected that the mixture is still present, wear appropriate personal protective equipment.

4.2 Most important symptoms, both acute and delayed:
Risk of serious damage to eyes, may cause lung damage if swallowed, no delayed effects known.

4.3 Indication of any immediate medical attention and special treatment needed:
Eye wash bottle must be readily available when product is in use.

SECTION 5 FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:	Carbon dioxide, foam, dry chemical, water fog or spray.
Unsuitable extinguishing media:	Do not use water jet.
5.2 Special hazards arising from the substance or mixture:	Evacuate immediate area. Shut off 'fuel' to fire. If possible keep unaffected containers cool with water spray. Aerosols may explode in a fire. Aerosol contents are extremely flammable.
Hazardous combustion products:	Smoke, soot and oxides of carbon. Burning vapour may give off toxic fumes.

5.3 Advice for fire-fighter:
Warn firefighters that aerosols are involved.
Self contained breathing apparatus and full protective clothing must be worn.
Water spray should be used to cool containers.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
Suitable protective equipment (see Section 8) should be worn to prevent any contamination of skin, eyes and personal clothing.

For non-emergency personnel:	Remove ignition sources. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Vapours are likely to accumulate in low areas.
For emergency responders:	Remove ignition sources. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Vapours are likely to accumulate in low areas. Keep unnecessary people at a safe distance.

6.2 Environmental precautions:
Prevent liquid from entering drains, sewers and watercourses. Notify the Environment Agency or water authorities if a major spillage occurs. Prevent product contaminating soil.

6.3 Methods and material for containment and cleaning up:
Eliminate sources of ignition. Take measures to prevent the build-up of electrostatic charge. Ventilate surrounding area.

For containment:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite). Place in a UN approved container for disposal. Large spills should be pumped (using an earthed explosion proof pump) into UN approved containers pending disposal. Dispose of waste according to local/national regulations.
For cleaning up:	Do not flush away residues with water.
Other information:	No other information.

6.4 Reference to other sections:
For Personal Protective Equipment see Section 8. For disposal information see Section 13.

SECTION 7 HANDLING & STORAGE

7.1 Precautions for safer handling:

Protective Measures:	Wear suitable protective clothing such as chemical resistant gloves, apron and goggles/face mask to protect from splashes. Ensure adequate exhaust ventilation when in use. Avoid contact with skin and eyes. Do not breathe product spray or mist.
Measures to prevent fire:	Aerosol contents are highly flammable and volatile. Keep away from sources of ignition – no smoking. Take measures to prevent the build-up of electrostatic charge. Equipment should be earthed. Use explosion proof electrical/ventilating/lighting equipment. Use only non-sparking tools.

Advice on general occupational hygiene: Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities:

Technical measures and storage conditions: Store in a cool dry area away from heat and sources of ignition.

Packaging materials: Store in original container. Keep containers tightly closed when not in use.

Requirements for storage rooms and vessels: Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50 ºC.
Recommended storage temperature 10 ºC to 30 ºC.

Further information on storage conditions: Rotate stock and check regularly for damaged items.

7.3 Specific end use(s):

Recommendations: Use only for Non Destructive Testing (NDT) applications.

Industrial sector specific solutions: See product data sheet for further information.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

Occupational exposure limit values:

Occupational exposure figures have been set for some of the components of this preparation based on GESTIS International Limit Values or manufacturers' recommendation.

Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics					EC No. 920-107-4
Country	Limit value - 8 hours		Limit value - short term		NOTES
	ppm	mg/m³	ppm	mg/m³	
Supplier's Recommendation	150	1200	-	-	-

Note: Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.

Data obtained from GESTIS International Limit Values, EH40, supplier's SDS, Norwegian Labour Inspection Authority Order No. 704-ENG.

Derived No Effect Level

Chemical Name	End User	Exposure Route	Exposure Time	Effects	DNEL
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Worker	Inhalation	Long term	Systemic	No threshold effect and/or no dose response information available
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Worker	Dermal	Long term	Systemic	No threshold effect and/or no dose response information available
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Worker	Inhalation	Short term	Systemic	No threshold effect and/or no dose response information available
Terpineol	Worker	Dermal	Long term	Systemic	1.17 mg/kg bw/day
Terpineol	Worker	Inhalation	Long term	Systemic	5.8 mg/m³

Note: The Derived No Effect Level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accordance with specific guidance within the European REACH regulation. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be

recommended by an individual company, a government regulatory body or an expert organization, such as the Scientific Committee for Occupational Exposure Limits (SCOEL) or the American Conference of Governmental Industrial Hygenists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for an 8-hour work shift, 40 hour work week, as a time weighted average (TWA) or a 15 minute short-term exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH.

Predicted No Effect Concentration

PNEC	Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Terpineol
Water - Fresh Water	No data available, testing technically not feasible.	0.062 g/l
Water - Marine Water	No data available, testing technically not feasible.	0.0062 g/l
Water - Intermittent release	No data available, testing technically not feasible.	No data available
Sediment Fresh Water	No data available, testing technically not feasible.	0.442 mg/kg d.w.
Sediment Marine Water	No data available, testing technically not feasible.	0.044 mg/kg d.w.
Soil	No data available, testing technically not feasible.	0.052 mg/kg d.w.
Sewage Treatment Plant	No data available, testing technically not feasible.	2.57 mg/l

8.2 Exposure controls:

Concentrations of product vapours and mists in the working atmosphere must be kept as low as is reasonably practicable. Exposure should be minimised by the use of appropriate containment, engineering control and ventilation measures. Where this is not possible, personal protective equipment should be worn as indicated below where appropriate.

Appropriate engineering controls:
Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limits are not exceeded.
Provide eye wash station.

Personal protection equipment:

Eye and face protection:
Safety glasses with side-shields conforming to EN166.

Skin protection - hand:
Protective gloves conforming to EN374-3.
Use chemical resistant gloves recommended by glove manufacturer as being suitable for **kerosenes** if hand exposure is unavoidable.
Protective gloves made of nitrile, neoprene or PVC are suitable, although other types may be more suitable in other circumstances.
For prolonged exposure, recommended gloves with protective index 6, > 480 minutes permeation time according to EN374.
As the product is a preparation, consult the glove manufacturer for exact breakthrough time. Glove manufacturer's directions for use should be observed.

Skin protection – other:
Wear impervious, flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of dangerous substance at the specific workplace.

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment. Filter type A2. (EN 136, 140, 405, 149, 143)
For higher level protection use type ABEK-P3 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under CEN standards.

Thermal hazards:	Not applicable.
Environmental exposure controls:	Avoid any release to the environment.

SECTION 9 PHYSICAL & CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:	Aerosol containing dark red liquid.
Odour:	Mild pine.
Odour threshold:	No data available.
pH:	Neutral
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	230 °C.
Flash point (PMCC):	-40 °C (aerosol propellant)
Evaporation rate (BuAC = 100):	< 0.1.
Flammability (solid, gas) (Limits in air):	No data available.
Upper/lower flammability or explosive limits:	1 – 6% (Vol%).
Vapour pressure:	< 0.5 mm Hg @ 38 °C.
Vapour density (Air = 1):	> 1
Relative density:	0.88 g/cm^3
Solubility:	Emulsifies.
Partition coefficient: n-octanol/water:	No data available.
Auto-ignition temperature:	> 200 °C.
Decomposition temperature:	No data available.
Viscosity (ASTM D445):	8.0 mm^2/s @ 38 °C.
Explosive properties:	No data available.
Oxidising properties:	No data available.

Note: properties relate to the bulk product only unless otherwise stated.

9.2 Other information:
No other information.

SECTION 10 STABILITY & REACTIVITY

10.1	**Reactivity:**	No data available.
10.2	**Chemical stability**	Stable under normal conditions of use and applications.
10.3	**Possibility of hazardous reactions:**	No data available.
10.4	**Conditions to avoid:**	Keep away from sources of ignition, hot surfaces, direct sunlight and static discharge.
10.5	**Incompatible materials:**	Strong oxidizing agents. Acids and alkalis.
10.6	**Hazardous decomposition materials:**	None under normal conditions of storage and use. Smoke, soot and oxides of carbon and nitrogen on combustion.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects: based on data for component materials.

Acute toxicity - oral:	Based on the available data the classification criteria are not met.
Acute toxicity – dermal:	Based on the available data the classification criteria are not met.
Acute toxicity – inhalation:	Based on the available data the classification criteria are not met.
Skin corrosion/irritation:	EUH066: Repeated exposure may cause skin cracking or dryness.
Serious eye damage/irritation:	Eye Dam. 1, H318: Causes serious eye damage.
Respiratory sensitisation:	Based on tests of individual components, this preparation is not sensitising.
Skin sensitisation:	Based on tests of individual components, this preparation is not sensitising.
Germ cell mutagenicity:	Based on individual components, this preparation is not expected to show mutagenic effects.
Carcinogencity:	Based on individual components, this preparation is not expected to show carcinogenic effects.
Reproductive toxicity:	Based on individual components, this preparation is not expected to show repoductive toxicity.
STOT single exposure:	Data lacking.
STOT repeated exposure:	Data lacking.
Aspiration hazard:	Mixtures from Aerosol Dispensors - need not be classified as Asp. Tox. 1 - H304 as the aerosol spray is fine and a pool of product may not be formed in the mouth.

Information on likely Routes of Exposure and Potential Health Effects:

Inhalation:	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion:	Not a likely route of entry. However, may be harmful if swallowed. Ingestion may cause irritation of the mouth, throat and digestive tract. Small amounts of product aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary edema.
Eye contact:	Risk of serious damage to eyes.
Skin contact:	May be harmful if absorbed through skin. Causes skin irritation. Repeated exposure may cause skin cracking or dryness.

Toxicity Test Results: based on data for component materials, where available.

CHEMICAL NAME	ACUTE TOXICITY	TEST	RESULT
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Acute Toxicity - oral	LD50 (rat)	> 5000 mg/kg - OECD 401
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Acute Toxicity - dermal	LD50 (rabbit)	> 5000 mg/kg - OECD 402
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Acute Toxicity - inhalation	LC50 (rat)	> 4951 mg/l (vapours, 4h) - OECD 403
alcohols C12-C15, branched and linear, ethoxylated, propoxylated.	Acute Toxicity - oral	LD50 (rat)	2000 - 5000 mg/kg
alcohols C12-C15, branched and linear, ethoxylated, propoxylated.	Acute Toxicity - dermal	–	Not determined
alcohols C12-C15, branched and linear, ethoxylated, propoxylated.	Acute Toxicity - inhalation	–	Not determined
Alcohols C11-C15 Secondary Ethoxylated	Acute Toxicity - oral	LD50 (rat)	3000 mg/kg
Alcohols C11-C15 Secondary Ethoxylated	Acute Toxicity - dermal	LD50 (rabbit)	2000 mg/kg
Alcohols C11-C15 Secondary Ethoxylated	Acute Toxicity - inhalation	–	–
Terpineol	Acute Toxicity - oral	LD50 (rat)	> 2000 mg/kg - OECD 401
Terpineol	Acute Toxicity - dermal	LD50 (rabbit)	> 2000 mg/kg - OECD 402
Terpineol	Acute Toxicity - inhalation	Rat, 4h	No mortality observed - OECD 403
Solvent Naphtha	Acute Toxicity - oral	LD50 (rat)	5ml/kg
Solvent Naphtha	Acute Toxicity - dermal	LD50 (rabbit)	> 2 ml/kg
Solvent Naphtha	Acute Toxicity - inhalation	LC50 (rat)	> 590 mg/m^3 (4h)

Other Information:

Metabolic studies on some Azo-dyes, following prolonged skin or oral cavity contact, have detected reduction of azo bonds to aromatic amines. This product, therefore, could potentially metabolize to o-toluidine and o-aminoazotoluene, which have been identified as animal carcinogens, upon prolonged skin or oral cavity contact.

SECTION 12 ECOLOGICAL INFORMATION

Based on data for component materials

12.1 Toxicity:

Chemical Name	Ecotoxicity	Species	Test	Time	Result
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Fish	Onchorhynchus mykiss	LC0	96h	1000 mg/l
alcohols C12-C15, branched and linear, ethoxylated, propoxylated.	Fish	Leuciscus idus	LC50	96h	1 - 10 mg/l
alcohols C12-C15, branched and linear, ethoxylated, propoxylated.	Microorganisms	Activated Sludge	EC10	–	> 1000 mg/l (DEV-L2)
Alcohols C11-C15 Secondary Ethoxylated	Fish	Pimephales promelas	LC50	96h	3.5 - 4.9 mg/l
Alcohols C11-C15 Secondary Ethoxylated	Aquatic Invertebrates	Daphnia magna	EC50	48h	3.1 mg/l
Terpineol	Fish	Danio rerio	LC50	96h	62 - 80 mg/l - OECD 203
Terpineol	Fish	Danio rerio	NOEC	96h	62 mg/l - OECD 203
Terpineol	Aquatic Invertebrates	Daphnia magna	NOEC	48h	40 mg/l - OECD 202
Terpineol	Aquatic Invertebrates	Daphnia magna	EC50	48h	73 mg/l - OECD 202
Terpineol	Aquatic Invertebrates	Daphnia magna	LC50	48h	73 mg/l - OECD 202
Terpineol	Aquatic Plants	Pseudokirchneriella subcapitata	EC50	72h	17 mg/l - OECD 201
Terpineol	Aquatic Plants	Pseudokirchneriella subcapitata	NOEC	72h	3.9 mg/l - OECD 201
Solvent Naphtha	Fish	Onchorhynchus mykiss	LL50	96h	2 - 5 mg/l
Solvent Naphtha	Aquatic Invertebrates	Daphnia Magna	EL50	48h	3 - 10 mg/l
Solvent Naphtha	Aquatic Plants	Raphidocelis subcapitata	EL50	72h	1 - 3 mg/l
Solvent Naphtha	Microorganisms	Tetrahymena pyiformis	LL50	72h	677.9 mg/l

12.2 Persistence and degradability: Alcohols C12- C15, branched & linear, ethoxylated, propoxylated: partially biodegradable.
The remaining substances in this mixture are readily biodegradable.

12.3	**Bioaccumulative potential:**	Hydrocarbons C12 - C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics: no data available. The remaining substances in this mixture are not expected to be bioaccumulative.
	Partition coefficient: n-octanol/water (log Kow):	Alcohols C11 - C15 secondary ethoxylated log Pow = 3.3 - 4.4 Terpineol: log Kow = 2.78 (20°C)
	Bioconcentration factor (BCF):	Alcohols C11 - C15 secondary ethoxylated: BCF = 15 – 64 Terpineol: BCF = 36.5
12.4	**Mobility in soil:**	Adsorption to the solid phase is possible.
12.5	**Results of PBT and vPvB assessment:**	This mixture does not contain any substances that are assessed to be a PBT or vPvB.
12.6	**Other adverse effects:**	No data available.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Dispose of waste and residues in accordance with local authority requirements. Seek the advice of an approved waste disposal contractor for disposal at a licensed facility in accordance with national legislation.

Product/packing disposal:	Empty containers may contain residual product and flammable vapours. Do not pierce or burn container even after use. Do NOT remove labels. Keep away from sources of ignition.
Waste codes/waste designations according to LoW:	16 05 04* gases in pressure containers containing dangerous substances.

NOTE: Waste codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste producers need to assess the actual process used when generating the waste and its contaminants in order to assign the proper waste code(s).

Waste treatment – relevant information:	Dispose of waste and residues in accordance with local authority requirements. Seek the advice of an approved waste disposal contractor for disposal at a licensed facility in accordance with national legislation
Sewage disposal – relevant information:	Do not empty down the drain.
Other disposal recommendations:	Use a licensed waste contractor.

SECTION 14 TRANSPORT INFORMATION

14.1	**UN number:**	ADR/RID:	1950
		IMDG:	1950
		IATA:	1950
14.2	**UN proper shipping name:**	ADR/RID:	AEROSOLS, flammable
		IMDG:	AEROSOLS, flammable.
		IATA:	AEROSOLS, flammable.
14.3	**Transport hazard class(es):**	ADR/RID:	2.1
		IMDG:	2.1
		IATA:	2.1
14.4	**Packing group:**	ADR/RID:	N/A
		IMDG:	N/A
		IATA:	N/A
14.5	**Environmental hazards:**	ADR/RID:	No
		IMDG:	Marine Pollutant: No
		IATA:	No

14.6 **Special precautions for user:**

ADR/RID – Tunnel code:	(D)
IMDG – Ems:	F-D, S-U
IATA/ICAO – PAX:	203
IATA/ICAO – CAO:	203

14.7 **Transport in bulk according to Annex II of Marpol 73/78 and the IBC code:**
Not applicable.

SECTION 15 REGULATORY INFORMATION

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

EU Regulations:
This data sheet complies with the requirements of Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures.
Safety data sheet as required by EC-Regulations 1907/2006 and REACH Annex II Amendment (EU) No. 2015/830.
Regulation (EC) No 648/2004 on detergents.

Information according to 2013/10/EU and 2008/47/EC amendment of the aerosol directive 75/324/EEC.
This data sheet is complied according Dir 2013/10/EU, 2008/47/EEC amendment of the aerosol directive 75/324/EEC.
Extra label elements: Pressured container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material**.**
Mixtures classified as Asp. Tox. 1 H304 need not be labelled when placed on the market in aerosol containers or in containers fitted with a sealed spray attachment.

National regulations (Germany):

Wassergefahrdungklasse (water hazard class):	WGK2 – Hazard to waters.
TechnischeAnleitungLuft (TA-Luft):	Class 5.2.5 Organic substances, except dusts.

15.2 **Chemical safety assessment:**
No chemical safety assessment has been carried out for this mixture by the supplier.

SECTION 16 OTHER INFORMATION

(i) Indication of changes:
Version 17.3 updated in Section 1.3.

Vertical lines on the left hand side indicate an amendment from the previous version.

(ii) Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road (Accord européen relatif au transport international des marchandises Dangereuses par Route)
CAS No.	Chemical Abstracts Service number
CEN	European Committee for Standardisation
CLP	Classification, Labelling Packaging Regulation; Regulation (EC) No 1272/2008
ECHA	European Chemicals Agency
EC50	Half Maximal Effective Concentration
EC number	EINECS and ELINCS number
EINECS	European Inventory of Existing Commercial Substances
ELINCS	European List of notified Chemical Substances
GHS	Globally Harmonized System
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population
MPI	Magnetic Particle Inspection
NDT	Non-Destructive Testing
OEL	Occupational Exposure Limit
PBT	Persistent, Bioaccumulative and Toxic Substance
PMCC	Pensky-Martens closed cup method
PPE	Personal Protection Equipment
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation EC (No) 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail (Reglement International concernant le transport des marchandises Dangereuses par chemin de fer)
SDS	Safety Data Sheet
STOT RE	Specific Target Organ Toxicity, Repeat Exposure
STOT SE	Specific Target Organ Toxicity, Single Exposure
TA-Luft	Technical Instructions on Air Quality Control (Technische Anleitung zur Reinhaltung der Luft)
vPvB	Very Persistent and Very Bioaccumulative
WEL	Workplace Exposure Limit
WGK	German Water Hazard Class (Wassergefährdungsklasse)

(iii) Key literature and sources of data:

- Supplier's safety data sheets for components listed in Section 3.
- European Chemicals Agency, http://echa.europa.eu/
- GESTIS International Limit Values Database, http://limitvalue.ifa.dguv.de/Webform_gw.aspx
- Occupational Exposure Limits EH40/2005.
- Commission regulation (EU) 2015/830.
- Control of Substances Hazardous to Health Regulations 2002.
- Hazardous waste regulations 2005.
- Health & Safety at Work Act 1974.
- Regulation (EC) No. 1907/2006 (REACH).
- Regulation (EC) No. 1272/2008 (CLP).

(iv) Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 (CLP):

Classification according to Regulation (EC) number 1272/2008 [CLP]	Classification Procedure
Aerosol 1	Test Method
Aquatic Chronic 3	Calculation
Eye Dam. 1	Calculation
EUH066	Expert Judgement

(v) Hazard statements (number and full text):

H220: Extremely flammable gas
H222: Extremely flammable aerosol
H229: Pressurised container. May burst if heated.
H280: Contains gas under pressure; may explode if heated.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H318: Causes serious eye damage.
H319: Causes serious eye irritation.
H411: Toxic to aquatic life with long lasting effects.
H412: Harmful to aquatic life with long lasting effects.

Hazard class and categorty code (full text):

Aerosol 1: Aerosol
Aquatic Chronic 2: Hazardous to the aquatic environment
Aquatic Chronic 3: Hazardous to the aquatic environment
Asp. Tox. 1: Aspiration Hazard
Eye Dam. 1: Serious eye damage/eye irritation
Eye Irrit. 2: Serious eye damage/eye irritation
Flam. Gas: Flammable Gas
Press. Gas 1: Gases under pressure
Skin Irrit. 2: Skin corrosion/irritation

Relevant precautionary statements (number and full text):

P210: Keep away from heat, sparks, open flames and hot surfaces. 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.
P305+351+338: 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 or doctor/physician.
P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50 °C.
P501: Dispose of contents/container to hazardous waste or special collection point.
P243: Take precautionary measures against static discharge.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P302+P352: IF ON SKIN: Wash with soap and water.

(vi) Training advice:

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene. Chemical hazard risk assessment. Provide adequate information, instruction and training to operators.

SAFETY DATA SHEET

DISCLAIMER

The information and recommendations contained herein are based upon data believed to be up-to-date and correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information and recommendations contained herein. We accept no responsibility and disclaim all liability for any harmful effects that may be caused by (incorrect) use, handling, purchase, resale, or exposure to our product. Customers and users of our product must comply with all applicable health and safety laws, regulations, and orders. In particular, they are under an obligation to carry out a risk assessment for the particular work places and to take adequate risk management measures in accordance with the national implementation legislation of EU Directives 89/391/EEC and 98/24/EC amended by Directive 2014/27/EU.

Revision summary:	**Revision Comments**	This SDS is valid from the Revision Date. If you require a SDS for the product manufactured before the revision date please contact us at support.eu@magnaflux.com.
	Revision Date	22.08.2018
	Version	17.3

SAFETY DATA SHEET

Version 17.2 replaces Version 17.2
Revision date: 22.08.2018
According to (EU) No. 2015/830

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier: **SPOTCHECK® SKL-WP2**

1.2 Relevant identified uses of the mixture and uses advised against:

Relevant identified uses: Red penetrant used in Non Destructive Testing (NDT) inspection.

Uses advised against: This product is not recommended for any use other than the identified uses above.

1.3 Details of the supplier of the safety data sheet

Manufacturer: Magnaflux® (A Division of ITW Ltd)

Address: Faraday Road, South Dorcan Industrial Estate, Swindon, UK

Postcode: SN3 5HE

Telephone/fax number:
Telephone: +44 (0)1793 524566
Fax: +44 (0)1793 490459
Web: www.eu.magnaflux.com

Email address of competent person responsible for SDS: support.eu@magnaflux.com

National contact: None appointed.

1.4 Emergency telephone number: DURING OFFICE HOURS, CALL
T: +44 (0)1793 524566 (English only)

Opening hours: Office hours (GMT) Monday - Thursday 8am - 5pm, Friday 8am - 4pm
OUT OF OFFICE HOURS, CALL
T: +44(0)203 394 9866

SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

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

Physical and Chemical Hazard:
None

Health Hazard:
Asp. Tox. 1 H304
Eye Dam. 1 H318
Skin Irrit. 2 H315

Environmental Hazard:
Aquatic Chronic 3 H412

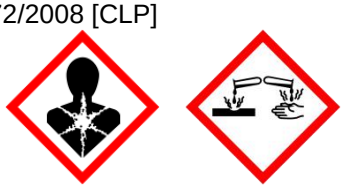
Additional information EUH066

For full text of hazard statements and EU hazard statements see SECTION 16.

2.2 Label Elements:

Labelling according to regulation (EC) No 1272/2008 [CLP]

Hazard Pictograms:



Signal Word:	Danger
Hazard Statement(s):	H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation. H318: Causes serious eye damage. H412: Harmful to aquatic life with long lasting effects
Precautionary Statement(s):	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. P310: Immediately call a POISON CENTER or doctor/physician. P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P331: Do NOT induce vomiting. P273: Avoid release to the environment.
Supplementary Precautionary Statement(s):	P302+P352: IF ON SKIN: Wash with soap and water. P332+P313: If skin irritation occurs: Get medical advice/attention. P362+P364: Take off contaminated clothing and wash it before reuse. P405: Store locked up.
Supplementary Hazard Information (EU)	EUH066: Repeated exposure may cause skin dryness or cracking.
Hazard Determining Component(s)	Hydrocarbons C12-C15 n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS Alcohols, C12-C15, branched and linear, ethoxylated, propoxylated ALCOHOLS, C11 – C15 SECONDARY ETHOXYLATED

2.3 Other hazards:

Spilled liquid could present a slip hazard. Product may stain skin.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical name	CAS Number	EC number	REACH registration number	% Weight	Classification according to Regulation (EC) number 1272/2008 [CLP]	Additional Information
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	-	920-107-4	01-2119453414-43	50 - 65	Asp Tox 1 H304	EUH066 Has WEL
alcohols C12-C15, branched and linear, ethoxylated, propoxylated.	120313-48-6	-	-	< 20	Eye Dam 1 H318 Aquatic Chronic 2 H411	-
Alcohols C11-C15 Secondary Ethoxylated	68131-40-8	-	-	< 15	Eye Dam 1 H318 Skin Irrit. 2 H315	-
2-Naphthalenamine, N-(2-ethylhexyl)-1-[[4-(phenylazo)phenyl]azo]-ar' and ar''-Me derivs	92257-28-8	296-117-1	-	< 4	Not classified	See Section 11 for information on azo dyes
Oleic acid monoisopropanolamide	111-05-7	-	-	< 3	Eye Dam 1 H318 Skin Irrit. 2 H315	-
Solvent Naphtha	64742-94-5	265-198-5	-	< 2	Asp Tox 1 H304 Aquatic Chronic 2 H411	-
Terpineol	8000-41-7	232-268-1	01-2119553062-49	< 2	Eye Irrit. 2 H319 Skin Irrit. 2 H315	DNEL

Note: Hazard statement(s) in this section apply only to raw materials, not necessarily to finished products.
**See Section 16 for hazard statement(s) text in full.*

SECTION 4 FIRST AID MEASURES

4.1 Description of first aid measures:

General notes: If symptoms persist, seek medical attention. Show this safety data sheet to the doctor in attendance.

Following inhalation: Remove to fresh air. Keep at rest. If not breathing give artificial respiration. Seek medical attention if symptoms occur.

Following skin contact: Flush with water, use soap if available. Contaminated clothing should be washed before re-use. Seek medical attention if symptoms occur.

Following eye contact: Flush eyes with large amounts of water for at least 15 minutes. Check for and remove any contact lenses if easy to do. Continue rinsing. Seek medical attention immediately.

Following ingestion: Rinse mouth with water. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach contents doesn't enter the lungs. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

Self-protection of the first aider: No action shall be taken involving any personal risk or without suitable training. If it is suspected that the mixture is still present, wear appropriate personal protective equipment.

4.2 Most important symptoms, both acute and delayed:
Risk of serious damage to eyes, may cause lung damage if swallowed, no delayed effects known.

4.3 Indication of any immediate medical attention and special treatment needed:
Eye wash bottle must be readily available when product is in use.

SECTION 5 FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media: Carbon dioxide, foam, dry chemical, water fog or spray.

Unsuitable extinguishing media: Do not use water jet.

5.2 Special hazards arising from the substance or mixture: Evacuate immediate area. If possible keep unaffected containers cool with water spray.

Hazardous combustion products: Smoke, soot and oxides of carbon and nitrogen. Burning vapour may give off toxic fumes.

5.3 Advice for fire-fighter:
Self contained breathing apparatus and full protective clothing must be worn.
Water spray should be used to cool containers.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
Suitable protective equipment (see Section 8) should be worn to prevent any contamination of skin, eyes and personal clothing.

For non-emergency personnel: Remove ignition sources. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Vapours are likely to accumulate in low areas.

For emergency responders: Remove ignition sources. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Vapours are likely to accumulate in low areas. Keep unnecessary people at a safe distance.

6.2 Environmental precautions:
Prevent liquid from entering drains, sewers and watercourses. Notify the Environment Agency or water authorities if a major spillage occurs. Prevent product contaminating soil.

6.3 Methods and material for containment and cleaning up:

Eliminate sources of ignition. Take measures to prevent the build-up of electrostatic charge.

For containment:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite). Place in a UN approved container for disposal. Large spills should be pumped (using an earthed explosion proof pump) into UN approved containers pending disposal. Dispose of waste according to local/national regulations.
For cleaning up:	Do not flush away residues with water.
Other information:	No other information.

6.4 Reference to other sections:

For Personal Protective Equipment see Section 8. For disposal information see Section 13.

SECTION 7 HANDLING & STORAGE

7.1 Precautions for safer handling:

Protective Measures:	Wear suitable protective clothing such as chemical resistant gloves, apron and goggles/face mask to protect from splashes. Ensure adequate exhaust ventilation when in use. Avoid contact with skin and eyes. Do not breathe product spray or mist.
Measures to prevent fire:	Keep away from sources of ignition. Take measures to prevent the build-up of electrostatic charge.
Advice on general occupational hygiene:	Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities:

Technical measures and storage conditions:	Store in a cool dry area away from heat and sources of ignition.
Packaging materials:	Store in original container. Keep containers tightly closed when not in use.
Requirements for storage rooms and vessels:	Recommended storage temperature 10 ºC to 30 ºC. Store locked up. Keep containers out of direct sunlight.
Further information on storage conditions:	Rotate stock and check regularly for damaged items.

7.3 Specific end use(s):

Recommendations:	Use only for Non Destructive Testing (NDT) applications.
Industrial sector specific solutions:	See product data sheet for further information.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

Occupational exposure limit values:

Occupational exposure figures have been set for some of the components of this preparation based on GESTIS International Limit Values or manufacturers' recommendation.

Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics					EC No. 920-107-4
Country	Limit value - 8 hours		Limit value - short term		NOTES
	ppm	mg/m^3	ppm	mg/m^3	
Supplier's Recommendation	150	1200	-	-	-

Note: Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.

Data obtained from GESTIS International Limit Values, EH40, supplier's SDS, Norwegian Labour Inspection Authority Order No. 704-ENG.

Derived No Effect Level

Chemical Name	End User	Exposure Route	Exposure Time	Effects	DNEL
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Worker	Inhalation	Long term	Systemic	No threshold effect and/or no dose response information available
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Worker	Dermal	Long term	Systemic	No threshold effect and/or no dose response information available
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Worker	Inhalation	Short term	Systemic	No threshold effect and/or no dose response information available
Terpineol	Worker	Dermal	Long term	Systemic	1.17 mg/kg bw/day
Terpineol	Worker	Inhalation	Long term	Systemic	5.8 mg/m^3

Note: The Derived No Effect Level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accordance with specific guidance within the European REACH regulation. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be recommended by an individual company, a government regulatory body or an expert organization, such as the Scientific Committee for Occupational Exposure Limits (SCOEL) or the American Conference of Governmental Industrial Hygenists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for an 8-hour work shift, 40 hour work week, as a time weighted average (TWA) or a 15 minute short-term exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH.

Predicted No Effect Concentration

PNEC	Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Terpineol
Water - Fresh Water	No data available, testing technically not feasible.	0.062 g/l
Water - Marine Water	No data available, testing technically not feasible.	0.0062 g/l
Water - Intermittent release	No data available, testing technically not feasible.	No data available
Sediment Fresh Water	No data available, testing technically not feasible.	0.442 mg/kg d.w.
Sediment Marine Water	No data available, testing technically not feasible.	0.044 mg/kg d.w.
Soil	No data available, testing technically not feasible.	0.052 mg/kg d.w.
Sewage Treatment Plant	No data available, testing technically not feasible.	2.57 mg/l

8.2 Exposure controls:

Concentrations of product vapours and mists in the working atmosphere must be kept as low as is reasonably practicable. Exposure should be minimised by the use of appropriate containment, engineering control and ventilation measures. Where this is not possible, personal protective equipment should be worn as indicated below where appropriate.

Appropriate engineering controls:	Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limits are not exceeded. Provide eye wash station.
Personal protection equipment:	
Eye and face protection:	Safety glasses with side-shields conforming to EN166.
Skin protection - hand:	Protective gloves conforming to EN374-3. Use chemical resistant gloves recommended by glove manufacturer as being suitable for **kerosenes** if hand exposure is unavoidable. Protective gloves made of nitrile, neoprene or PVC are suitable, although other types may be more suitable in other circumstances. For prolonged exposure, recommended gloves with protective index 6, > 480 minutes permeation time according to EN374. As the product is a preparation, consult the glove manufacturer for exact breakthrough time. Glove manufacturer's directions for use should be observed.
Skin protection – other:	Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of dangerous substance at the specific workplace.
Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment. Filter type A2. (EN 136, 140, 405, 149, 143) For higher level protection use type ABEK-P3 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under CEN standards.
Thermal hazards:	Not applicable.
Environmental exposure controls:	Avoid any release to the environment.

SECTION 9 PHYSICAL & CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:	Dark red liquid.
Odour:	Mild pine.
Odour threshold:	No data available.
pH:	Neutral
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	230 °C.
Flash point (PMCC):	93 °C (minimum)
Evaporation rate (BuAC = 100):	< 0.1.
Flammability (solid, gas) (Limits in air):	No data available.
Upper/lower flammability or explosive limits:	1 – 6% (Vol%).
Vapour pressure:	< 0.5 mm Hg @ 38 °C.
Vapour density (Air = 1):	> 1

Relative density:	0.88 g/cm^3
Solubility:	Emulsifies.
Partition coefficient: n-octanol/water:	No data available.
Auto-ignition temperature:	> 200 °C.
Decomposition temperature:	No data available.
Viscosity (ASTM D445):	8.0 mm^2/s @ 38 °C.
Explosive properties:	No data available.
Oxidising properties:	No data available.

Note: properties relate to the bulk product only unless otherwise stated.

9.2 Other information:
No other information.

SECTION 10 STABILITY & REACTIVITY

10.1	**Reactivity:**	No data available.
10.2	**Chemical stability**	Stable under normal conditions of use and applications.
10.3	**Possibility of hazardous reactions:**	No data available.
10.4	**Conditions to avoid:**	Keep away from sources of ignition, hot surfaces, direct sunlight and static discharge.
10.5	**Incompatible materials:**	Strong oxidizing agents. Acids and alkalis.
10.6	**Hazardous decomposition materials:**	None under normal conditions of storage and use. Smoke, soot and oxides of carbon and nitrogen on combustion.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects: based on data for component materials.

Acute toxicity - oral:	Based on the available data the classification criteria are not met.
Acute toxicity – dermal:	Based on the available data the classification criteria are not met.
Acute toxicity – inhalation:	Based on the available data the classification criteria are not met.
Skin corrosion/irritation:	Skin Irrit. 2, H315: Causes skin irritation. EUH066: Repeated exposure may cause skin cracking or dryness.
Serious eye damage/irritation:	Eye Dam. 1, H318: Causes serious eye damage.
Respiratory sensitisation:	Based on tests of individual components, this preparation is not sensitising.
Skin sensitisation:	Based on tests of individual components, this preparation is not sensitising.
Germ cell mutagenicity:	Based on individual components, this preparation is not expected to show mutagenic effects.
Carcinogencity:	Based on individual components, this preparation is not expected to show carcinogenic effects.

Reproductive toxicity: Based on individual components, this preparation is not expected to show repoductive toxicity.
STOT single exposure: Data lacking.
STOT repeated exposure: Data lacking.
Aspiration hazard: Asp. Tox. 1, H304: May be fatal if swallowed and enters airways.

Information on likely Routes of Exposure and Potential Health Effects:
Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion: May be harmful if swallowed. Ingestion may cause irritation of the mouth, throat and digestive tract. Small amounts of product aspirated into the respiratory system during ingestion or from vomiting may cause bronochopneumonia or pulmonary edema.
Eye contact: Risk of serious damage to eyes.
Skin contact: May be harmful if absorbed through skin. Causes skin irritation. Repeated exposure may cause skin cracking or dryness.

Toxicity Test Results: based on data for component materials, where available.

CHEMICAL NAME	ACUTE TOXICITY	TEST	RESULT
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Acute Toxicity - oral	LD50 (rat)	> 5000 mg/kg - OECD 401
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Acute Toxicity - dermal	LD50 (rabbit)	> 5000 mg/kg - OECD 402
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Acute Toxicity - inhalation	LC50 (rat)	> 4951 mg/l (vapours, 4h) - OECD 403
alcohols C12-C15, branched and linear, ethoxylated, propoxylated.	Acute Toxicity - oral	LD50 (rat)	2000 - 5000 mg/kg
alcohols C12-C15, branched and linear, ethoxylated, propoxylated.	Acute Toxicity - dermal	–	Not determined
alcohols C12-C15, branched and linear, ethoxylated, propoxylated.	Acute Toxicity - inhalation	–	Not determined
Alcohols C11-C15 Secondary Ethoxylated	Acute Toxicity - oral	LD50 (rat)	3000 mg/kg
Alcohols C11-C15 Secondary Ethoxylated	Acute Toxicity - dermal	LD50 (rabbit)	2000 mg/kg
Alcohols C11-C15 Secondary Ethoxylated	Acute Toxicity - inhalation	–	–
Terpineol	Acute Toxicity - oral	LD50 (rat)	> 2000 mg/kg - OECD 401
Terpineol	Acute Toxicity - dermal	LD50 (rabbit)	> 2000 mg/kg - OECD 402
Terpineol	Acute Toxicity - inhalation	Rat, 4h	No mortality observed - OECD 403
Solvent Naphtha	Acute Toxicity - oral	LD50 (rat)	5ml/kg
Solvent Naphtha	Acute Toxicity - dermal	LD50 (rabbit)	> 2 ml/kg
Solvent Naphtha	Acute Toxicity - inhalation	LC50 (rat)	> 590 mg/m^3 (4h)

Other Information:

Metabolic studies on some azo-dyes, following prolonged skin or oral cavity contact, have detected reduction of azo bonds to aromatic amines. This product, therefore, could potentially metabolize to o-toluidine and o-aminoazotoluene, which have been identified as animal carcinogens, upon prolonged skin or oral cavity contact.

SECTION 12 ECOLOGICAL INFORMATION

Based on data for component materials

12.1 Toxicity:

Chemical Name	Ecotoxicity	Species	Test	Time	Result
Hydrocarbons C12- C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics	Fish	Onchorhynchus mykiss	LC0	96h	1000 mg/l
alcohols C12-C15, branched and linear, ethoxylated, propoxylated.	Fish	Leuciscus idus	LC50	96h	1 - 10 mg/l
alcohols C12-C15, branched and linear, ethoxylated, propoxylated.	Microorganisms	Activated Sludge	EC10	–	> 1000 mg/l (DEV-L2)
Alcohols C11-C15 Secondary Ethoxylated	Fish	Pimephales promelas	LC50	96h	3.5 - 4.9 mg/l
Alcohols C11-C15 Secondary Ethoxylated	Aquatic Invertebrates	Daphnia magna	EC50	48h	3.1 mg/l
Terpineol	Fish	Danio rerio	LC50	96h	62 - 80 mg/l - OECD 203
Terpineol	Fish	Danio rerio	NOEC	96h	62 mg/l - OECD 203
Terpineol	Aquatic Invertebrates	Daphnia magna	NOEC	48h	40 mg/l - OECD 202
Terpineol	Aquatic Invertebrates	Daphnia magna	EC50	48h	73 mg/l - OECD 202
Terpineol	Aquatic Invertebrates	Daphnia magna	LC50	48h	73 mg/l - OECD 202
Terpineol	Aquatic Plants	Pseudokirchneriella subcapitata	EC50	72h	17 mg/l - OECD 201
Terpineol	Aquatic Plants	Pseudokirchneriella subcapitata	NOEC	72h	3.9 mg/l - OECD 201
Solvent Naphtha	Fish	Onchorhynchus mykiss	LL50	96h	2 - 5 mg/l
Solvent Naphtha	Aquatic Invertebrates	Daphnia Magna	EL50	48h	3 - 10 mg/l
Solvent Naphtha	Aquatic Plants	Raphidocelis subcapitata	EL50	72h	1 - 3 mg/l
Solvent Naphtha	Microorganisms	Tetrahymena pyiformis	LL50	72h	677.9 mg/l

12.2 Persistence and degradability:

Alcohols C12- C15, branched & linear, ethoxylated, propoxylated: partially biodegradable.
The remaining substances in this mixture are readily biodegradable.

12.3	**Bioaccumulative potential:**	Hydrocarbons C12 - C15 n-alkanes, isoalkanes, cyclics, < 2% aromatics: no data available. The remaining substances in this mixture are not expected to be bioaccumulative.
	Partition coefficient: n-octanol/water (log Kow):	Alcohols C11 - C15 secondary ethoxylated: log Pow = 3.3 - 4.4 Terpineol: log Kow = 2.78 (20°C)
	Bioconcentration factor (BCF):	Alcohols C11 - C15 secondary ethoxylated BCF = 15 – 64 Terpineol: BCF = 36.5
12.4	**Mobility in soil:**	Adsorption to the solid phase is possible.
12.5	**Results of PBT and vPvB assessment:**	This mixture does not contain any substances that are assessed to be a PBT or vPvB.
12.6	**Other adverse effects:**	No data available.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 **Waste treatment methods:**
Dispose of waste and residues in accordance with local authority requirements. Seek the advice of an approved waste disposal contractor for disposal at a licensed facility in accordance with national legislation.

Product/packing disposal:	Empty containers may contain residue and can be dangerous. Do NOT remove labels.
Waste codes/waste designations according to LoW:	Hazardous waste. Waste code not assigned.

NOTE: Waste codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste producers need to assess the actual process used when generating the waste and its contaminants in order to assign the proper waste code(s).

Waste treatment – relevant information:	Dispose of waste and residues in accordance with local authority requirements. Seek the advice of an approved waste disposal contractor for disposal at a licensed facility in accordance with national legislation.
Sewage disposal – relevant information:	Do not empty down the drain.
Other disposal recommendations:	Use a licensed waste contractor.

SECTION 14 TRANSPORT INFORMATION

14.1 UN number:

ADR/RID: -
IMDG: -
IATA: -

14.2 UN proper shipping name:

ADR/RID: Not dangerous goods.
IMDG: Not dangerous goods.
IATA: Not dangerous goods.

14.3 Transport hazard class(es):

ADR/RID: -
IMDG: -
IATA: -

14.4 Packing group:

ADR/RID: -
IMDG: -
IATA: -

14.5 Environmental hazards:

ADR/RID: -
IMDG: -
IATA: -

14.6 Special precautions for user:
Not applicable.

14.7 Transport in bulk according to Annex II of Marpol 73/78 and the IBC code:
Not applicable.

SECTION 15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
EU Regulations:
This data sheet complies with the requirements of Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures.
Safety data sheet as required by EC-Regulations 1907/2006 and REACH Annex II Amendment (EU) No. 2015/830.
Regulation (EC) No 648/2004 on detergents.
Information according to 2013/10/EU and 2008/47/EC amendment of the aerosol directive 75/324/EEC.
Not applicable - this product is not an aerosol.

National regulations (Germany):

Wassergefahrdungklasse (water hazard class):	WGK1 - Low hazard to waters.
TechnischeAnleitungLuft (TA-Luft):	Class 5.2.5 Organic Substances, except dusts.

15.2 Chemical safety assessment:
No chemical safety assessment has been carried out for this mixture by the supplier.

SECTION 16 OTHER INFORMATION

(i) Indication of changes:
Version 17.3 updated in Section 1.3.

Vertical lines on the left hand side indicate an amendment from the previous version.

(ii) Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road (Accord européen relatif au transport international des marchandises Dangereuses par Route)
CAS No.	Chemical Abstracts Service number
CEN	European Committee for Standardisation
CLP	Classification, Labelling Packaging Regulation; Regulation (EC) No 1272/2008
ECHA	European Chemicals Agency
EC50	Half Maximal Effective Concentration
EC number	EINECS and ELINCS number
EINECS	European Inventory of Existing Commercial Substances
ELINCS	European List of notified Chemical Substances
GHS	Globally Harmonized System
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population
MPI	Magnetic Particle Inspection
NDT	Non-Destructive Testing
OEL	Occupational Exposure Limit
PBT	Persistent, Bioaccumulative and Toxic Substance
PMCC	Pensky-Martens closed cup method
PPE	Personal Protection Equipment
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation EC (No) 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail (Reglement International concernant le transport des marchandises Dangereuses par chemin de fer)
SDS	Safety Data Sheet
STOT RE	Specific Target Organ Toxicity, Repeat Exposure
STOT SE	Specific Target Organ Toxicity, Single Exposure
TA-Luft	Technical Instructions on Air Quality Control (Technische Anleitung zur Reinhaltung der Luft)
vPvB	Very Persistent and Very Bioaccumulative
WEL	Workplace Exposure Limit
WGK	German Water Hazard Class (Wassergefährdungsklasse)

(iii) Key literature and sources of data:

- Supplier's safety data sheets for components listed in Section 3.
- European Chemicals Agency, http://echa.europa.eu/
- GESTIS International Limit Values Database, http://limitvalue.ifa.dguv.de/Webform_gw.aspx
- Occupational Exposure Limits EH40/2005.
- Commission regulation (EU) 2015/830.
- Control of Substances Hazardous to Health Regulations 2002.
- Hazardous waste regulations 2005.
- Health & Safety at Work Act 1974.
- Regulation (EC) No. 1907/2006 (REACH).
- Regulation (EC) No. 1272/2008 (CLP).

(iv) Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 (CLP):

Classification according to Regulation (EC) number 1272/2008 [CLP]	Classification Procedure
Aquatic Chronic 3	Calculation
Asp. Tox. 1	Calculation
Eye Dam. 1	Calculation
Skin Irrit. 2	Calculation
EUH066	Expert Judgement

(v) Hazard statements (number and full text):
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H318: Causes serious eye damage.
H319: Causes serious eye irritation.
H411: Toxic to aquatic life with long lasting effects.
H412: Harmful to aquatic life with long lasting effects.
Hazard class and categorty code (full text):
Aquatic Chronic 2: Hazardous to the aquatic environment
Aquatic Chronic 3: Hazardous to the aquatic environment
Asp. Tox. 1: Aspiration Hazard
Eye Dam. 1: Serious eye damage/eye irritation
Eye Irrit. 2: Serious eye damage/eye irritation
Skin Irrit. 2: Skin corrosion/irritation
Relevant precautionary statements (number and full text):
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.
P310: Immediately call a POISON CENTER or doctor/physician.
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331: Do NOT induce vomiting.
P273: Avoid release to the environment.
P302+P352: IF ON SKIN: Wash with soap and water.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P405: Store locked up.

(vi) Training advice:
Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene. Chemical hazard risk assessment. Provide adequate information, instruction and training to operators.

DISCLAIMER

The information and recommendations contained herein are based upon data believed to be up-to-date and correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information and recommendations contained herein. We accept no responsibility and disclaim all liability for any harmful effects that may be caused by (incorrect) use, handling, purchase, resale, or exposure to our product. Customers and users of our product must comply with all applicable health and safety laws, regulations, and orders. In particular, they are under an obligation to carry out a risk assessment for the particular work places and to take adequate risk management measures in accordance with the national implementation legislation of EU Directives 89/391/EEC and 98/24/EC amended by Directive 2014/27/EU.

Revision summary:	**Revision Comments**	This SDS is valid from the Revision Date. If you require a SDS for the product manufactured before the revision date please contact us at support.eu@magnaflux.com.
	Revision Date	22.08.2018
	Version	17.3