SAFETY DATA SHEET

MAGNAFLUX

Version 17.2 replaces Version 17.1
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® SKD-S2**

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

Relevant identified uses: Solvent developer used in penetrant 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:
Flam. Liq. 2 H225

Health Hazard:
Eye Irrit. 2 H319
STOT SE 3 H336

Environmental Hazard:
None

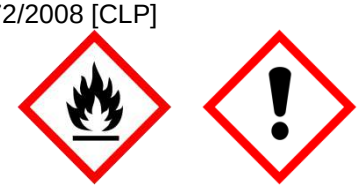
Additional information EUH066

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):	H225: Highly flammable liquid and vapour H319: Causes serious eye irritation H336: May cause drowsiness or dizziness
Precautionary Statement(s):	P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking P261: Avoid breathing dust/fume/gas/mist/vapours/spray 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 P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing P370+P378: IN CASE OF FIRE: Use carbon dioxide, foam, dry chemical, water fog or spray for extinction
Supplementary Precautionary Statement(s):	P243: Take precautionary measures against static discharge. P264: Wash thoroughly after handling P271: Use only outdoors or in a well-ventilated area P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower P337+P313: If eye irritation persists get medical advice/attention P403+P233: Store in a well ventilated place. Keep container tightly closed P501: Dispose of contents/container to hazardous waste or special collection point.
Supplementary Hazard Information (EU)	EUH066
Hazard Determining Component(s)	Acetone, Propan-2-ol

2.3 Other hazards:

Vapours can form explosive mixtures in air.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Ingredient Name	CAS No	EC No	REACH Registration Number	% Weight	Classification according to Regulation (EC) No 1272/2008 [CLP]	Additional information
Propan-2-ol	67-63-0	200-661-7	01-2119457558-25	< 75	Flam. Liq 2 H225 Eye Irrit. 2 H319 STOT SE3 H336	None
Acetone	67-64-1	200-662-2	01-2119471330-49	< 25	Flam. Liq 2 H225 Eye Irrit. 2 H319 STOT SE3 H336	EUH066
Talc	14807-96-6	238-877-9	Exempted in accordance with Annex V.7	< 3	Not classified	Has WEL
Aluminium Hydroxide	21645-51-2	244-492-7	01-2119529246-39	< 3	Not classified	Has WEL
Calcium Carbonate	471-34-1	207-439-9	01-2119486795-18	< 3	Not classified	Has WEL

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. Take off contaminated clothing and wash before re-use. Seek medical attention if irritation persists.

Following eye contact: Flush eyes with large amounts of water for at least 10 minutes. Check for and remove any contact lenses if easy to do. Continue rinsing. Seek medical attention if irritation persists.

Following ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly. Seek medical attention if symptoms occur.

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:
Irritation to eyes. No delayed effects known.

4.3 Indication of any immediate medical attention and special treatment needed:
None known.

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.

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

5.3 Advice for fire-fighter:

Cool containers exposed to flames with water until well after the fire is out.
Self contained breathing apparatus and full protective clothing must be worn.
Fire water run-off must not be allowed to contaminate ground, or enter drains, sewers or water courses.

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 source. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

For emergency responders: Keep unnecessary people at a safe distance. Remove ignition source. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

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 from contaminating soil.

6.3 Methods and material for containment and cleaning up:

Ventilate well. 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: Rinse site with copious amounts of water, which should not be allowed into drains, sewers or watercourses.

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. Avoid contact with skin and eyes. Do not breathe product spray or mist. Ensure adequate exhaust ventilation when in use.

Measures to prevent fire: Keep away from sources of ignition - no smoking. 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. Keep containers tightly closed when not in use.

Packaging materials: Store in original container.

Requirements for storage rooms and vessels: Recommended storage temperature 10 ºC to 30 ºC. 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.

Ingredient name	Country	Limit value - 8 hours		Limit value - short term	
		ppm	mg /m^3	ppm	mg /m^3
Propan-2-ol	UK	400	999	500	1250
	Germany (AGS)	200	500	400 (1)	1000 (1)
	Sweden	150	350	250 (1)	600 (1)
Acetone	UK	500	1210	1500	3620
	Germany (AGS)	500	1200	1000 (1)	2400(1)
	Sweden	250	600	500(1)	1200(1)
	EU	500	1210		
Talc (respirable dust)	UK		1		
	Germany		2		
	Sweden		1		
Aluminium Hydroxide (respirable dust)	Germany (DFG)		1.5		
Calcium Carbonate (respirable dust)	UK		4		
Calcium Carbonate (inhalable dust)	UK		10		

(1) 15 minutes average value
Data obtained from GESTIS International Limit Values, EH40, supplier's SDS

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

Derived No Effect Level (DNEL) – Acetone

End User	Exposure Route	Exposure Time	Effects	DNEL
Worker	Inhalation	Long term	Systemic	1210 mg/m^3
Worker	Inhalation	Short term	Local	2420 mg/m^3
Worker	Dermal	Long term	Systemic	186 mg/kg bw/day

Derived No Effect Level (DNEL) –Propan-2-ol

End User	Exposure Route	Exposure Time	Effects	DNEL
Worker	Inhalation	Long term	Systemic	500 mg/m^3
Worker	Dermal	Long term	Systemic	888 mg/kg/day

Derived No Effect Level (DNEL) – Aluminium Hydroxide

End User	Exposure Route	Exposure Time	Effects	DNEL
Worker	Inhalation	Long term	Systemic	10.76 mg/m^3
Worker	Inhalation	Short term	Local	10.76 mg/m^3

Derived No Effect Level (DNEL) – Calcium Carbonate

End User	Exposure Route	Exposure Time	Effects	DNEL
Worker	Inhalation	Long term	Systemic	10 mg/m^3
Worker	Inhalation	Long term	Local	4.26 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)

	Acetone	Propan-2-ol	Aluminium Hydroxide	Calcium Carbonate
Water - Fresh Water	10.6 mg/l	140.9 mg/l	No hazard identified	No data
Water - Marine Water	1.06 mg/l	140.9 mg/l	No hazard identified	No data
Water - Intermittent release	21 mg/l	140.9 mg/l	No hazard identified	No data
Sediment - Fresh water	30.4 mg/kg dw	552 mg/kg	No data	No data
Sediment - Marine water	3.04 mg/kg dw	552 mg/kg	No data	No data
Soil	33.3 mg/kg dw	28 mg/kg	No data	No data
Sewage Treatment plant	100 mg/l	2251 mg/kg	No hazard identified	100 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.
If ventilation is insufficient suitable respiratory protection must be provided.

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 isopropyl alcohol, if hand exposure is unavoidable. Protective gloves made of Butyl or Nitrile 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:	Use a respirator with approriate canister type filter cartridge if spraying in confined or unventilated areas. Respirator Type AX (EN371). 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:	Mobile white liquid
Odour:	Solvent – alcoholic
Odour threshold:	No data available
pH:	Neutral
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	75 °C
Flash point (PMCC):	-6 °C
Evaporation rate (BuAC = 100):	250
Flammability (solid, gas) (Limits in air):	No data available
Upper/lower flammability or explosive limits:	2 – 15% (Vol %)
Vapour pressure:	138 mm Hg @ 38 °C
Vapour density (Air = 1):	> 1
Relative density:	0.88 g/cm^3
Solubility:	87%
Partition coefficient: n-octanol/water:	+ 0.05 (Propan-2-ol)
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available

Viscosity (ASTM D445):	< 10 mm^2/s @ 20 °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 and direct sunlight.
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 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 dryness and cracking
Serious eye damage/irritation:	Eye Irrit. 2 H319: Causes serious eye irritation
Respiratory sensitisation:	Based on the available data, the classification criteria are not met.
Skin sensitisation:	Based on the available data, the classification criteria are not met.
Germ cell mutagenicity:	Based on the available data, the classification criteria are not met.
Carcinogencity:	Based on the available data, the classification criteria are not met.
Reproductive toxicity:	Based on the available data, the classification criteria are not met.
STOT single exposure:	STOT SE3 H336: May cause drowsiness or dizziness. Route of exposure: Inhalation and oral
STOT repeated exposure:	Based on the available data, the classification criteria are not met.
Aspiration hazard:	Based on the available data, the classification criteria are not met.

Information on likely Routes of Exposure and Potential Health Effects:

Inhalation: Vapour concentrations above the recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects.

Ingestion: Ingestion may cause irritation of the mouth, throat and digestive tract. Absorption of large amounts may cause systemic effects.

Eye contact: This mixture is classified as an eye irritant.

Skin contact: Frequent or prolonged contact with the product may produce irritation and/or skin dryness and cracking. Product will have a de-fatting effect on the skin.

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

Acetone

Acute Toxicity – oral	LD50 (rat)	5800 mg/kg
Acute Toxicity – dermal	LD50 (rabbit)	> 7400 mg/kg
Acute Toxicity – inhalation	LC50 (rat)	76000 mg/l (vapours) 4 hr

Propan-2-ol

Acute Toxicity – oral	LD50 (rat)	4700 – 5800 mg/kg
Acute Toxicity – dermal	LD50 (rabbit)	13000 mg/kg
Acute Toxicity – inhalation	LC50 (rat)	19000 ppm/8hr

Aluminium Hydroxide

Acute Toxicity – oral	LD50 (rat)	> 2000 mg/kg
Acute Toxicity – inhalation	LC50 (rat)	> 2.3 mg/L (4h)

Calcium Carbonate

Acute Toxicity – oral	LD50 (rat)	> 5000 mg.kg

Other Information: No other information

SECTION 12 ECOLOGICAL INFORMATION

Based on data for component materials

12.1 Toxicity:

Acetone

Fish	Onchorhynchus mykiss	LC50	96 hours	5540 mg/l
Aquatic Invertebrates	Daphnia pulex	EC50	48 hours	8800 mg/l
Aquatic Invertebrates	Daphnia magna	EC10	28 days	2212 mg/l
Microorganisms	Activated sludge	EC10	30 mins.	1000 mg/l

Propan-2-ol

Fish	LC50	96h	9640 – 10400 mg/l
Daphnia	EC50	48h	7550 – 13299 mg/l
Algae	IC50	72h	> 1000 mg/l

Calcium Carbonate

Fish	LC50	96h	> 200 mg/l
Daphnia	EC50	46h	> 1000 mg/l
Algae	IC50	72h	> 10000 mg/l

12.2	**Persistence and degradability:**	Propan-2-ol: readily biodegradable Acetone: readily biodegradable
12.3	**Bioaccumulative potential:**	This preparation does not contain any substances expected to be bioaccumulative.
	Partition coefficient: n-octanol/water (log Kow):	+0.05 (propan-2-ol) -0.24 @ 20 °C (acetone)
	Bioconcentration factor (BCF):	3 (acetone)
12.4	**Mobility in soil:**	This product will evaporate into the atmosphere from the surfaces of water and soil.
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. Keep away from sources of ignition. Do NOT remove labels.
Waste codes/waste designations according to LoW:	14 06 03* other solvents and solvent mixtures.

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:	UN1993
		IMDG:	UN1993
		IATA:	UN1993
14.2	**UN proper shipping name:**	ADR/RID:	FLAMMABLE LIQUID, N.O.S (Isopropanol & Acetone mixture)
		IMDG:	FLAMMABLE LIQUID, N.O.S (Isopropanol & Acetone mixture)
		IATA:	FLAMMABLE LIQUID, N.O.S (Isopropanol & Acetone mixture)
14.3	**Transport hazard class(es):**	ADR/RID:	3
		IMDG:	3

		IATA:	3
14.4	**Packing group:**	ADR/RID:	II
		IMDG:	II
		IATA:	II
14.5	**Environmental hazards:**	ADR/RID:	No
		IMDG:	Marine Pollutant: No
		IATA:	No

14.6 Special precautions for user:

EMS	F-E, S-D
Emergency action code	·2YE
Hazard No (ADR)	33

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 EU Regulations 1907/2006 and REACH Annex II Amendment (EU) No. 2015/830.
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 17.2 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) No 1272/2008	Classification procedure
Flam. Liq. 2 H225	Test method
Eye Irrit. 2 H319	Calculation method
STOT SE3 H336	Calculation method
EUH066	Calculation method

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

H225: Highly flammable liquid and vapour
H319: Causes serious eye irritation
H336: May cause drowsiness or dizziness
EUH066: Repeated exposure may cause skin dryness or cracking

Hazard Class Category Code (full text):

Eye Irrit. 2: Serious eye damage/eye irritation
Flam. Liq. 2: Flammable liquid
STOT SE3: Specific target organ toxicity - single exposure

Relevant precautionary statements (number and full text):

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
P261: Avoid breathing dust/fume/gas/mist/vapours/spray
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
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P370+P378: IN CASE OF FIRE: Use carbon dioxide, foam, dry chemical, water fog or spray for extinction
P243: Take precautionary measures against static discharge.
P264: Wash thoroughly after handling

P271: Use only outdoors or in a well-ventilated area
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P337+P313: If eye irritation persists get medical advice/attention
P403+P233: Store in a well ventilated place. Keep container tightly closed
P501: Dispose of contents/container to hazardous waste or special collection point.

(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	17.1

SKD-S2

Solvent-based Developer

SPOTCHECK® SKD-S2 is a bright white, non-aqueous developer that creates an opaque white background for high-contrast penetrant testing and quickly draws penetrant out to create stronger, clearer indications for better inspection reliability and sensitivity.

Noted for its compatibility with special alloys, such as stainless steel, aluminum, magnesium and titanium, SKD-S2 is non-halogenated, can be used with Type 1 & Type 2 penetrants. This solvent-based developer complies with all major NDT specifications, including EN ISO 3452.

SKD-S2 helps speed up the inspection process by going on easily, drying quickly, promoting faster indication formation and minimising post-inspection cleaning. It is ideal for machine shops, weld testing and field applications.

BENEFITS

Increases indication visibility

- Improves indication detection by creating an optimal surface for penetrant indication formation
- Bright white, opaque coverage blocks all underlying surface color and quickly draws penetrant to the surface for stronger, clearer indications

Application versatility

- Can be used with a variety of Type 2 and Type 1 penetrants in many different situations without measuring or diluting
- EN ISO 3452 conformance allows SKD-S2 to be used to inspect a wide range of parts
- The solvent blend in SKD-S2 makes it suitable for use at low temperatures, especially around 0°C and lower, where using water would be impractical.

Faster cleaning

- Reduces inspection process time by minimising post-inspection cleaning

FEATURES

- Bright white color
- Provides good background contrast
- Wicks penetrant out of indications
- Fast drying
- Easy to apply
- Convenient, ready-to-use formula
- Very low toxicity
- Matte, opaque coating
- Easy to clean
- Maximum sensitivity
- Low in sulphur and halogens
- Contains no chlorinated hydrocarbons
- Suitable for use at low temperatures

APPLICATIONS

Defect location: open to surface

Ideal for:

- Welds
- Machine shops
- Field applications

SKD-S2

COMPOSITION

A blend of inert inorganic particles suspended in an isopropanol and acetone mix.

SPECIFICATION COMPLIANCE

- AMS2644
- ASME BPVC-V
- ASTM D129
- ASTM E165/E165M
- ASTM E1417/E1417M
- EN ISO 3452-1
- EN ISO 3452-2
- MIL-STD-2132D
- SAFRAN Pr 5000/In 5000

PRODUCT PROPERTIES

Form and colour	White liquid
Density	0.88 g/cm^3
AMS 2644 class	Form d - Type 1 Form e - Type 2
Flash point	-6°C (bulk product) -40°C (aerosol)
Sulphur content	< 300 ppm
Chloride content	< 300 ppm
Corrosion	Meets AMS 2644

Like all Magnaflux materials, SKD-S2 is closely controlled to ensure batch-to-batch consistency, optimum process control and inspection reliability.

USER RECOMMENDATIONS

NDT Method	Penetrant Testing
Storage temperature	10°C to 30°C
Usage temperature	-5°C to 50°C
Coverage	20 - 30m^2 per litre 10 - 15m^2 per aerosol
Cleaner	SKC-S
Water-washable penetrants	AL-4B, SKL-WP2, ZL-15B, ZL-19, ZL-60C, ZL-60D, ZL-67B, ZL-56
Post-emulsifiable penetrants	SKL-SP2, ZL-2C, ZL-27A, ZL-37
UV lamps	EV6000, ST700

INSTRUCTIONS FOR USE

Before using any developer, ensure the test surface is clean, free from excess penetrant, and dry. Residue from water-based penetrants can be removed with a water spray; solvent-based penetrants by wiping with a solvent cleaner.

With **visible penetrants**, cracks will appear as red lines and porosity as spots. If you see a general reddish colour or pink film, that means the penetrant was not completely removed.

With **fluorescent penetrants**, indications will fluoresce bright yellow/green under UV light. If you see a general greenish film, that means the penetrant was not completely removed.

If left to stand, the developer particles will settle out of suspension. SKD-S2 must be continually agitated/shaken during use to ensure uniformity of mix.

continued >

SKD-S2

INSTRUCTIONS FOR USE continued

Apply by spraying only (dipping or brushing will cause excessive solvent action) by aerosol or conventional spray gun.

Spray in thin even layers which just wet the surface. Too wet a spray will cause excessive bleeding and running of indications; too dry a spray will result in slowindication development, as well as possible loss in overall sensitivity.

After inspection, remove developer residue by wiping with a cloth, or use a water and detergent wash.

PACKAGING AND PART NUMBERS

008A007 (x 10)

055C014 (x 4)

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 17.2 replaces Version 17.1
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® SKD-S2 - aerosol**

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

Relevant identified uses: Solvent developer used in penetrant 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 Irrit. 2 H319
STOT SE 3 H336

Environmental Hazard:
None

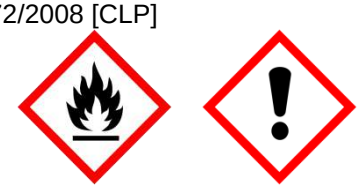
Additional information EUH066

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. H319: Causes serious eye irritation H336: May cause drowsiness or dizziness
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. P261: Avoid breathing dust/fume/gas/mist/vapours/spray. P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50 °C. P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
Supplementary Precautionary Statement(s):	P243: Take precautionary measures against static discharge. P264: Wash thoroughly after handling. P271: Use only outdoors or in a well-ventilated area. P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P303+P361+P353: IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. P337+P313: If eye irritation persists get medical advice/attention. P501: Dispose of contents/container to hazardous waste or special collection point.
Supplementary Hazard Information (EU)	EUH066
Hazard Determining Component(s)	Acetone Propan-2-ol

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.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Ingredient Name	CAS No	EC No	REACH Registration Number	% Weight	Classification according to Regulation (EC) No 1272/2008 [CLP]	Additional information
Propan-2-ol	67-63-0	200-661-7	01-2119457558-25	< 40	Flam. Liq 2 H225 Eye Irrit. 2 H319 STOT SE3 H336	None
Acetone	67-64-1	200-662-2	01-2119471330-49	< 15	Flam. Liq 2 H225 Eye Irrit. 2 H319 STOT SE3 H336	EUH066
Hydrocarbons, C3-4-rich petroleum distillate petroleum gas (1.3 butadiene < 0.1%)	68512-91-4	270-990-9	(1)	< 50	Press. Gas H280 Flam. Gas 1 H220	(2)
Talc	14807-96-6	238-877-9	Exempted in accordance with Annex V.7	< 2	Not classified	Has WEL
Aluminium Hydroxide	21645-51-2	244-492-7	01-2119529246-39	< 2	Not classified	Has WEL
Calcium Carbonate	471-34-1	207-439-9	01-2119486795-18	< 2	Not classified	Has WEL

1. Exempted from the obligation to register in accordance with art.2(7)(a) of REACH Regulation No 1907/2006
2. 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. Take off contaminated clothing and wash before re-use. Seek medical attention if irritation persists.

Following eye contact: Flush eyes with large amounts of water for at least 10 minutes. Check for and remove any contact lenses if easy to do. Continue rinsing. Seek medical attention if irritation persists.

Following ingestion: Unlikely route of exposure. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly. Seek medical attention if symptoms occur.

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:

Irritation to eyes. No delayed effects known.

4.3 Indication of any immediate medical attention and special treatment needed:
None known.

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.
Cool containers exposed to flames with water until well after the fire is out.
Self contained breathing apparatus and full protective clothing must be worn.
Fire water run-off must not be allowed to contaminate ground, or enter drains, sewers or water courses.

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 source. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

For emergency responders: Keep unnecessary people at a safe distance. Remove ignition source. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

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 from contaminating soil.

6.3 Methods and material for containment and cleaning up:
Ventilate well. 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: Rinse site with copious amounts of water, which should not be allowed into drains, sewers or watercourses.

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. Avoid contact with skin and eyes. Do not breathe product spray or mist. Ensure adequate exhaust ventilation when in use.

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. Keep containers tightly closed when not in use.

Packaging materials: Store in original container.

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.

Ingredient name	Country	Limit value - 8 hours		Limit value - short term	
		ppm	mg /m^3	ppm	mg /m^3
Propan-2-ol	UK	400	999	500	1250
	Germany (AGS)	200	500	400 (1)	1000 (1)
	Sweden	150	350	250 (1)	600 (1)
Acetone	UK	500	1210	1500	3620
	Germany (AGS)	500	1200	1000 (1)	2400(1)
	Sweden	250	600	500(1)	1200(1)
	EU	500	1210		
Talc (respirable dust)	UK		1		
	Germany		2		
	Sweden		1		

Aluminium Hydroxide (respirable dust)	Germany (DFG)		1.5		
Calcium Carbonate (respirable aerosol)	UK		4		
Calcium Carbonate (inhalable dust)	UK		10		
(1) 15 minutes average value					
Data obtained from GESTIS International Limit Values, EH40, supplier's SDS					

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

Derived No Effect Level (DNEL) – Acetone

End User	Exposure Route	Exposure Time	Effects	DNEL
Worker	Inhalation	Long term	Systemic	1210 mg/m^3
Worker	Inhalation	Short term	Local	2420 mg/m^3
Worker	Dermal	Long term	Systemic	186 mg/kg bw/day

Derived No Effect Level (DNEL) –Propan-2-ol

End User	Exposure Route	Exposure Time	Effects	DNEL
Worker	Inhalation	Long term	Systemic	500 mg/m^3
Worker	Dermal	Long term	Systemic	888 mg/kg/day

Derived No Effect Level (DNEL) – Aluminium Hydroxide

End User	Exposure Route	Exposure Time	Effects	DNEL
Worker	Inhalation	Long term	Systemic	10.76 mg/m^3
Worker	Inhalation	Short term	Local	10.76 mg/m^3

Derived No Effect Level (DNEL) – Calcium Carbonate

End User	Exposure Route	Exposure Time	Effects	DNEL
Worker	Inhalation	Long term	Systemic	10 mg/m^3
Worker	Inhalation	Long term	Local	4.26 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)

	Acetone	Propan-2-ol	Aluminium Hydroxide	Calcium Carbonate
Water - Fresh Water	10.6 mg/l	140.9 mg/l	No hazard identified	No data
Water - Marine Water	1.06 mg/l	140.9 mg/l	No hazard identified	No data
Water - Intermittent release	21 mg/l	140.9 mg/l	No hazard identified	No data
Sediment - Fresh water	30.4 mg/kg dw	552 mg/kg	No data	No data
Sediment - Marine water	3.04 mg/kg dw	552 mg/kg	No data	No data
Soil	33.3 mg/kg dw	28 mg/kg	No data	No data
Sewage Treatment plant	100 mg/l	2251 mg/kg	No hazard identified	100 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. If ventilation is insufficient suitable respiratory protection must be provided.
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 isopropyl alcohol, if hand exposure is unavoidable. Protective gloves made of Butyl or Nitrile 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:	Use a respirator with approriate canister type filter cartridge if spraying in confined or unventilated areas. Respirator Type AX (EN371). 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 mobile white liquid
Odour:	Solvent – alcoholic
Odour threshold:	No data available
pH:	Neutral
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	75 °C
Flash point (PMCC):	-40 °C (aerosol propellant)
Evaporation rate (BuAC = 100):	250
Flammability (solid, gas) (Limits in air):	No data available
Upper/lower flammability or explosive limits:	2 – 15% (Vol %)
Vapour pressure:	138 mm Hg @ 38 °C
Vapour density (Air = 1):	> 1
Relative density:	0.88 g/cm^3
Solubility:	87%
Partition coefficient: n-octanol/water:	+ 0.05 (Propan-2-ol)
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity (ASTM D445):	< 10 mm^2/s @ 20 °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 and direct sunlight.
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 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 dryness and cracking
Serious eye damage/irritation:	Eye Irrit. 2 H319: Causes serious eye irritation
Respiratory sensitisation:	Based on the available data, the classification criteria are not met.
Skin sensitisation:	Based on the available data, the classification criteria are not met.
Germ cell mutagenicity:	Based on the available data, the classification criteria are not met.
Carcinogencity:	Based on the available data, the classification criteria are not met.
Reproductive toxicity:	Based on the available data, the classification criteria are not met.
STOT single exposure:	STOT SE3 H336: May cause drowsiness or dizziness. Route of exposure: Inhalation and oral
STOT repeated exposure:	Based on the available data, the classification criteria are not met.
Aspiration hazard:	Based on the available data, the classification criteria are not met.

Information on likely Routes of Exposure and Potential Health Effects:

Inhalation:	Vapour concentrations above the recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects.
Ingestion:	Not a likely route of exposure. Ingestion may cause irritation of the mouth, throat and digestive tract. Absorption of large amounts may cause systemic effects.
Eye contact:	This mixture is classified as an eye irritant.
Skin contact:	Frequent or prolonged contact with the product may produce irritation and/or skin dryness and cracking. Product will have a de-fatting effect on the skin.

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

Acetone

Acute Toxicity – oral	LD50 (rat)	5800 mg/kg
Acute Toxicity – dermal	LD50 (rabbit)	> 7400 mg/kg
Acute Toxicity – inhalation	LC50 (rat)	76000 mg/l (vapours) 4 hr

Propan-2-ol

Acute Toxicity – oral	LD50 (rat)	4700 – 5800 mg/kg
Acute Toxicity – dermal	LD50 (rabbit)	13000 mg/kg
Acute Toxicity – inhalation	LC50 (rat)	19000 ppm/8hr

Aluminium Hydroxide

Acute Toxicity – oral	LD50 (rat)	> 2000 mg/kg
Acute Toxicity – inhalation	LC50 (rat)	> 2.3 mg/L (4h)

Calcium Carbonate

Acute Toxicity – oral	LD50 (rat)	> 5000 mg.kg

Other Information: No other information

SECTION 12 ECOLOGICAL INFORMATION

Based on data for component materials

12.1 Toxicity:

Acetone

Fish	Onchorhynchus mykiss	LC50	96 hours	5540 mg/l
Aquatic Invertebrates	Daphnia pulex	EC50	48 hours	8800 mg/l
Aquatic Invertebrates	Daphnia magna	EC10	28 days	2212 mg/l
Microorganisms	Activated sludge	EC10	30 mins.	1000 mg/l

Propan-2-ol

Fish	LC50	96h	9640 – 10400 mg/l
Daphnia	EC50	48h	7550 – 13299 mg/l
Algae	IC50	72h	> 1000 mg/l

Calcium Carbonate

Fish	LC50	96h	> 200 mg/l
Daphnia	EC50	46h	> 1000 mg/l
Algae	IC50	72h	> 10000 mg/l

12.2 Persistence and degradability: Propan-2-ol: readily biodegradable
Acetone: readily biodegradable

12.3 Bioaccumulative potential: This preparation does not contain any substances expected to be bioaccumulative.

Partition coefficient: n-octanol/water (log Kow): +0.05 (propan-2-ol)
-0.24 @ 20 °C (acetone)

Bioconcentration factor (BCF): 3 (acetone)

12.4 Mobility in soil: This product will evaporate into the atmosphere from the surfaces of water and soil.

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:	UN1950
		IMDG:	UN1950
		IATA:	UN1950
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 EU Regulations 1907/2006 and REACH Annex II Amendment (EU) No. 2015/830.

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**.**

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 17.2 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) No 1272/2008	Classification procedure
Aerosol 1 H225, H229	Test method
Eye Irrit. 2 H319	Calculation method
STOT SE3 H336	Calculation method
EUH066	Calculation method

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

H220: Extremely flammable gas
H222: Extremely flammable aerosol
H225: Highly flammable liquid and vapour
H229: Pressurised container. May burst if heated.
H280: Contains gas under pressure; may explode if heated.
H319: Causes serious eye irritation
H336: May cause drowsiness or dizziness
EUH066: Repeated exposure may cause skin dryness or cracking

Hazard Class Category Code (full text):

Aerosol 1: Aerosol
Eye Irrit. 2: Serious eye damage/eye irritation
Flam. Gas 1: Flammable gas
Flam. Liq. 2: Flammable liquid
Press. Gas: Gases under pressure
STOT SE3: Specific target organ toxicity - single exposure

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.
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P271: Use only outdoors or in a well-ventilated area.
P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50 °C
P243: Take precautionary measures against static discharge.
P264: Wash thoroughly after handling
P280: Wear protective gloves and eye protection.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P303+P361+P353: IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P337+P313: If eye irritation persists get medical advice/attention
P501: Dispose of contents/container to hazardous waste or special collection point.

(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	17.2