



Lillies Fixative (Modified) RRSP661

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758 and SI 2020/1577

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

1.1 Product identifier

Product Name Lillies Fixative (Modified)
Product code RRSP661

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

Identified Use(s) Industrial/professional : PROC15 Use as laboratory reagent
Uses Advised Against Not known.

1.3 Details of the supplier of the safety data sheet

Manufacturer
Company Identification Atom Scientific Ltd
Address of Manufacturer Unit 2A East Tame Business Park
Rexcine Way
Hyde
Cheshire
Postal code SK14 4GX
Telephone: 0161 3665123
Fax 01704 337167
E-mail technical@atomscientific.com
Office hours 08:00 - 17:00
Supplier

Company Identification Atom Scientific Ltd
Address of Supplier Unit 2A East Tame Business Park
Rexcine Way
Hyde
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Telephone: 0161 3665123
Fax 01704 337167
E-mail technical@atomscientific.com
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Distributør: Hounisen Laboratorieudstyr A/S, Niels Bohrs Vej 49, DK-8660 Skanderborg, +45 86210800, salg@hounisen.com

1.4 Emergency telephone number

Emergency Phone No. 07833453806
Contact Peter Keenan
National response centre
Address NHS Direct
Emergency Phone No. +44 111

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GB CLP Regulation, UK SI 2019/720 and UK SI 2020/1567
Fam. Liq. 1 :Extremely flammable liquid and vapour.
Acute Tox. 4 :Harmful if swallowed.
Skin Corr. 1B :Causes severe skin burns and eye damage.
Skin Sens. 1 :May cause an allergic skin reaction.
Eye Dam. 1 :Causes serious eye damage.
Carc. 2 :Suspected of causing cancer.
STOT SE 2 :May cause damage to organs.
STOT SE 3 :May cause respiratory irritation.

2.2 Label elements

According to GB CLP Regulations, UK SI 2019/720 and UK SI 2020/1567
Product Name Lillies Fixative (Modified)

Hazard Pictogram(s)



GHS02



GHS05



GHS08



GHS07

Signal Word(s)

Danger



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Hazard Statement(s)	<p>H224: Extremely flammable liquid and vapour. H302: Harmful if swallowed. H314: Causes severe skin burns and eye damage. H317: May cause an allergic skin reaction. H335: May cause respiratory irritation. H351: Suspected of causing cancer. H371: May cause damage to organs.</p>
Precautionary Statement(s)	<p>None. P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260: Do not breathe dust/fume/gas/mist/vapours/spray. P264: Wash hands and exposed skin thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P305+P351+P338+P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor. P370+P378: In case of fire: Use water spray, dry powder or carbon dioxide to extinguish. P403+P235: Store in a well-ventilated place. Keep cool.</p>

2.3 Other hazards

None known.

2.4 Additional Information

For full text of H/P Statements see section 16.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable.

3.2 Mixtures

HAZARDOUS INGREDIENT(S)	CAS No.	EC No. / Registration number(s)	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
Etanol	64-17-5	200-578-6	<80	Flam. Liq. 2 H225	GHS02
formaldehyde 37%	50-00-0	200-001-8	<15	Acute Tox. 3 H301 Acute Tox. 3 H311 Skin Corr. 1B H314 Skin Sens. 1 H317 Acute Tox. 3 H331 Carc. 2 H351	GHS06 GHS05 GHS08 GHS07
Water	7732-18-5	231-791-2	<10	Not classified	None
Acetic Acid 99.9 %	64-19-7	200-580-7	<10	Flam. Liq. 3 H226 Skin Corr. 1A H314	GHS02 GHS05
Methanol	67-56-1	200-659-6	<5	Flam. Liq. 2 H225 Acute Tox. 3 H301 Acute Tox. 3 H311 Acute Tox. 3 H331 STOT SE 1 H370	GHS02 GHS06 GHS08

For full text of H/P Statements see section 16.



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SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTRE/doctor.
Skin Contact	Take off immediately all contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.. Rinse skin with water. Immediately call a POISON CENTRE/doctor.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor.
Ingestion	Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTRE/doctor.

4.2 Most important symptoms and effects, both acute and delayed

Causes burns. Allergic contact dermatitis.

4.3 Indication of any immediate medical attention and special treatment needed

IF exposed or concerned: Get medical advice/attention. Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media	Use water spray, dry powder or carbon dioxide to extinguish.
Unsuitable extinguishing media	Water jet spray

5.2 Special hazards arising from the substance or mixture

Extremely flammable liquid and vapour. May decompose in a fire, giving off toxic and irritant vapours.

5.3 Advice for firefighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire area because they are likely to rupture under fire conditions.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Ensure full personal protection (including respiratory protection) during removal of spillages.

6.2 Environmental precautions

Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

6.3 Methods and material for containment and cleaning up

Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Containers must not be punctured or destroyed by burning, even when empty.

6.4 Reference to other sections

See Also Section 8, 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid breathing dust/fume/gas/mist/vapours/spray. Wash hands and exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed.

Storage temperature	Ambient.
Storage life	Stable under normal conditions.
Incompatible materials	None known.

7.3 Specific end use(s)

Industrial/professional : PROC15 Use as laboratory reagent



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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

Occupational Exposure Limits						
SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
Formaldehyde	50-00-0	2	2.5	2	2.5	Carc
Acetic acid	64-19-7	10	25	20	50	
Ethanol	64-17-5	1000	1920			
Methanol	67-56-1	200	266	250	333	Sk

Region
United Kingdom

Source
UK Workplace Exposure Limits EH40/2005 (Fourth edition, published 2020)

Remark
Carc
Sk

Notes
Capable of causing cancer and/or heritable genetic damage.
Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.

8.2 Exposure controls

8.2.1. Appropriate engineering controls Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Use with ventilation, local exhaust ventilation or breathing protection. A washing facility/water for eye and skin cleaning purposes should be present.

8.2.2. Personal protection equipment



Eye Protection Wear eye protection with side protection (EN166).



Skin protection Wear protective clothing and gloves: Impervious gloves (EN 374).



Respiratory protection A suitable mask with filter type A (EN14387 or EN405) may be appropriate.



Thermal hazards None known.

8.2.3. Environmental Exposure Controls Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Liquid.
	Colour : Colourless.
Odour	Characteristic.
Odour threshold	Not known.
pH	Not known.
Melting point/freezing point	Not known.
Initial boiling point and boiling range	85 °C Not known.
Flash Point	12 °C (Flash point 11 - 22°C).
Evaporation rate	Not known.
Flammability (solid, gas)	Not known.
Upper/lower flammability or explosive limits	Not known.
Vapour pressure	Not known.



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Vapour density	Not known.
Density (g/ml)	Not known.
Relative density	Not known.
Solubility(ies)	Solubility (Water) : Miscible. Solubility (Other) : Not known.
Partition coefficient: n-octanol/water	Not known.
Auto-ignition temperature	Not known.
Decomposition Temperature (°C)	Not known.
Viscosity	Not known.
Explosive properties	Not known.
Oxidising properties	Not known.
9.2 Other information	None.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	None anticipated.
10.2 Chemical Stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	No hazardous reactions known if used for its intended purpose.
10.4 Conditions to avoid	Avoid friction, sparks, or other means of ignition.
10.5 Incompatible materials	Not known.
10.6 Hazardous decomposition products	No hazardous decomposition products known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects	
Acute toxicity - Ingestion	Calculation method : Harmful if swallowed. Calculation method : Calculated acute toxicity estimate (ATE) Calc ATE - 769.23
Acute toxicity - Skin Contact	Calculation method : Not classified. Calculation method : Calculated acute toxicity estimate (ATE) Calc ATE - 2307.69
Acute toxicity - Inhalation	Calculation method : Not classified. Calculation method : Calculated acute toxicity estimate (ATE) Calc ATE - 23.08
Skin corrosion/irritation	Calculation method : Causes severe skin burns and eye damage.
Serious eye damage/irritation	Calculation method : Causes serious eye damage.
Skin sensitization data	Calculation method : May cause an allergic skin reaction.
Respiratory sensitization data	Calculation method : Not classified.
Germ cell mutagenicity	Calculation method : Not classified.
Carcinogenicity	Calculation method : Suspected of causing cancer.
Reproductive toxicity	Calculation method : Not classified.
Lactation	Calculation method : Not classified.
STOT - single exposure	Calculation method : May cause damage to organs. May cause respiratory irritation.
STOT - repeated exposure	Calculation method : Not classified.
Aspiration hazard	Calculation method : Not classified.
11.2 Other information	Not known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	
Toxicity - Aquatic invertebrates	Low toxicity to invertebrates.
Toxicity - Fish	Low toxicity to fish.
Toxicity - Algae	Low toxicity to algae.
Toxicity - Sediment Compartment	Not classified.
Toxicity - Terrestrial Compartment	Not classified.



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12.2 Persistence and degradability	Not known.
12.3 Bioaccumulative potential	Not known.
12.4 Mobility in soil	Not known.
12.5 Results of PBT and vPvB assessment	Not known.
12.6 Other adverse effects	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods	Dispose of contents in accordance with local, state or national legislation. Recycle only completely emptied packaging. Containers must not be punctured or destroyed by burning, even when empty. Do not allow to enter drains, sewers or watercourses. Do NOT landfill. Normal disposal is via incineration operated by an accredited disposal contractor. Send to a licensed recycler, reclaimer or incinerator. Dispose of this material and its container to hazardous or special waste collection point. Dispose at suitable refuse site.
13.2 Additional Information	Disposal should be in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number	
UN No.	2924
14.2 UN proper shipping name	
UN proper shipping name	FLAMMABLE LIQUID, CORROSIVE, N.O.S.
14.3 Transport hazard class(es)	
ADR/RID	
ADR/RID Class	3
ADR Classification Code	FC
Special Provisions	274
Limited Quantities	1L
Excepted Quantities	E2
Emergency Action Code	•3WE
Mixed Packing Instructions for Packages	P001 IBC02
Special Packing Provisions for Packages	
Mixed Packing Instructions for Packages	MP19
Packing Instructions for Portable Tanks	T11
Special Provisions for Portable Tanks	TP2 TP27
Tank Code for Tanks	L4BH
Special Provisions for Tanks	
Vehicle for Tank Carriage	FL
ADR Transport Category	2
Tunnel Restriction Code	D/E
Special Provisions for Carriage - Packages	
Special Provisions for Carriage - Bulk	
Special Provisions for Carriage - Loading, Unloading and Handling	
Special Provisions for Carriage - Operation	S2 S20
ADR HIN	338
IMDG	
IMDG Class	3
Special Provisions	274
Limited Quantities	1L
Excepted Quantities	E2
Mixed Packing Instructions for Packages	P001 IBC02
Special Packing Provisions for Packages	
Packing Instructions for Portable Tanks	T11
Special Provisions for Portable Tanks	TP2 TP27



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IMDG EMS	F-E, S-C
Stowage and Handling	Category B SW2
Segregation	
Marine Pollutant	
ICAO/IATA	
IATA Proper Shipping Name	FLAMMABLE LIQUID, CORROSIVE, N.O.S.
Excepted Quantities	E2
Passenger and Cargo Aircraft Limited Quantities Packing Instructions	Y340
Passenger and Cargo Aircraft Limited Quantities Max net Qty	0.5L
Passenger and Cargo Aircraft Packing Instructions	352
Passenger and Cargo Aircraft Max net Qty	1L
Cargo Aircraft Packing Instructions	363
Cargo Aircraft Max net Qty	5L
Special Provisions	A3, A803
Emergency Response Guidebook (ERG) Code	3CH
Labels	
Labels	3 +8



14.4 Packing group

Packing group II

14.5 Environmental hazards

Environmental hazards Not classified as a Marine Pollutant.

14.6 Special precautions for user

Special precautions for user Not known.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No information available

SECTION 15: REGULATORY INFORMATION

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

United Kingdom Regulations - Authorisations and/or Restrictions On Use

UK REACH Candidate List of Substances Not listed

of Very High Concern for Authorisation

UK REACH Authorisation List (Annex XIV) list of substances subject to

authorisation

UK REACH Restrictions List (Annex XVII) Carcinogens: category 1B (50-00-0), Methanol (67-56-1), Acetic Acid 99.9 % (64-19-7), Etanol (64-17-5)

Restrictions on the manufacture, placing

on the market and use of certain dangerous substances, mixtures and

articles

UK REACH Rolling Action Plan (RAP) Not listed

The Persistent Organic Pollutants

Regulations 2007 (SI 2007/3106) as amended

The Ozone-Depleting Substances and

Fluorinated Greenhouse Gases

(Amendment etc.) (EU Exit) Regulations

2019 (SI 2019/583)

The Prior Informed Consent (PIC) Not listed

Regulations concerning the export and

import of hazardous chemicals

SI2008/2108 as amended

European Regulations - Authorisations and/or Restrictions On Use

Community Rolling Action Plan (CoRAP) Formaldehyde (50-00-0), Methanol (67-56-1)

15.2 Chemical Safety Assessment

United Kingdom

A REACH chemical safety assessment has not been carried out.



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SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements:

LEGEND

Hazard Pictogram(s)



GHS02



GHS05



GHS08



GHS07

GHS06: GHS: Skull and crossbones

Hazard classification

Flam. Liq. 1 : Flammable liquid, Category 1
 Flam. Liq. 2 : Flammable liquid, Category 2
 Flam. Liq. 3 : Flammable liquid, Category 3
 Acute Tox. 3 : Acute toxicity, Category 3
 Acute Tox. 4 : Acute toxicity, Category 4
 Acute Tox. 3 : Acute toxicity, Category 3
 Skin Corr. 1A : Skin corrosion/irritation, Category 1A
 Skin Corr. 1B : Skin corrosion/irritation, Category 1B
 Skin Sens. 1 : Skin sensitization, Category 1
 Eye Dam. 1 : Serious eye damage/irritation, Category 1
 Acute Tox. 3 : Acute toxicity, Category 3
 Carc. 2 : Carcinogenicity, Category 2
 STOT SE 1 : Specific target organ toxicity — single exposure, Category 1
 STOT SE 2 : Specific target organ toxicity — single exposure, Category 2

Hazard Statement(s)

H224: Extremely flammable liquid and vapour.
 H225: Highly flammable liquid and vapour.
 H226: Flammable liquid and vapour.
 H301: Toxic if swallowed.
 H302: Harmful if swallowed.
 H311: Toxic in contact with skin.
 H314: Causes severe skin burns and eye damage.
 H317: May cause an allergic skin reaction.
 H318: Causes serious eye damage.
 H331: Toxic if inhaled.
 H335: May cause respiratory irritation.
 H351: Suspected of causing cancer.
 H370: Causes damage to organs.
 H371: May cause damage to organs.

Precautionary Statement(s)

P201: Obtain special instructions before use.
 P202: Do not handle until all safety precautions have been read and understood.
 P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233: Keep container tightly closed.
 P240: Ground and bond container and receiving equipment.
 P241: Use explosion-proof electrical/ventilating/lighting/equipment.
 P242: Use non-sparking tools.
 P243: Take action to prevent static discharges.
 P260: Do not breathe dust/fume/gas/mist/vapours/spray.
 P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264: Wash hands and exposed skin thoroughly after handling.



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P270: Do not eat, drink or smoke when using this product.
 P271: Use only outdoors or in a well-ventilated area.
 P272: Contaminated work clothing should not be allowed out of the workplace.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P312: IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.
 P301+P330+P331+P310: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTRE/doctor.
 P302+P352: IF ON SKIN: Wash with plenty of water.
 P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
 P303+P361+P353+P310: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTRE/doctor.
 P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338+P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor.
 P308+P311: IF exposed or concerned: Call a POISON CENTRE/doctor.
 P308+P313: IF exposed or concerned: Get medical advice/attention.
 P321: Specific treatment (see Medical Advice on this label).
 P330: Rinse mouth.
 P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
 P362+P364: Take off contaminated clothing and wash it before reuse.
 P363: Wash contaminated clothing before reuse.
 P370+P378: In case of fire: Use water spray, dry powder or carbon dioxide to extinguish.
 P403+P233: Store in a well-ventilated place. Keep container tightly closed.
 P403+P235: Store in a well-ventilated place. Keep cool.
 P405: Store locked up.
 P501: Dispose of contents in accordance with local, state or national legislation.

ADN : European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road
 ATE : Acute Toxicity Estimate
 CAS : Chemical Abstracts Service
 DNEL : Derived No Effect Level
 EC : European Community
 EINECS : European Inventory of Existing Commercial Chemical Substances
 IATA : International Air Transport Association
 IBC : Intermediate Bulk Container
 ICAO : International Civil Aviation Organization
 IMDG : International Maritime Dangerous Goods
 LTEL : Long term exposure limit
 PBT : Persistent, Bioaccumulative and Toxic
 PNEC : Predicted No Effect Concentration
 REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals
 RID : Regulations concerning the International Carriage of Dangerous Goods by Rail
 STEL : Short term exposure limit
 STOT : Specific Target Organ Toxicity
 UN : United Nations
 vPvB : very Persistent and very Bioaccumulative

Acronyms

Key literature references and sources for data used to compile the SDS

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