

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 31.10.2014

Version number 1

Revision: 23.10.2014

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

- **1.1 Product identifier** Ink jet printing ink
- **Range** HIGH PERFORMANCE INK
- **Product Codes** WH021
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
The product should not be used for any purpose other than that specified in Section 1.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer:**
Fujifilm Speciality Ink Systems Limited
Pysons Road, Broadstairs, Kent. CT10 2LE.
Tel. +44 (0)1843 866668
- **Information department:**
Product Safety Department. +44 (0)1843 872030
elaine.campling@fujifilmsis.com
- **1.4 Emergency telephone number:** Elaine Campling BSc.(Hons) +44(0)1843 872030

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

Repr. 2	H361f	Suspected of damaging fertility.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.
Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H335	May cause respiratory irritation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Xn; Harmful		R48/20-62: Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of impaired fertility.
Xi; Irritant		R36/37/38: Irritating to eyes, respiratory system and skin.
Xi; Sensitising		R43: May cause sensitisation by skin contact.
N; Dangerous for the environment		R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Classification system:**
The classification was made according to the latest editions of the EU-lists, and expanded by company and literature data.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS07



GHS08



GHS09

- **Signal word** Warning

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- **Hazard-determining components of labelling:**
Trimethylolpropane formalacrylate
Phosphine Oxide, Diphenyl(2,4,6-tri-Methylbenzoyl)-
Isobornyl Acrylate
2-Phenoxyethyl Acrylate
- **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H361f Suspected of damaging fertility.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.
P261 Avoid breathing mist/vapours/spray.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 66492-51-1 EINECS: 266-380-7	Trimethylolpropane formalacrylate Xi R38 Xi R43 N R51/53 ----- Aquatic Chronic 2, H411 Skin Irrit. 2, H315; Skin Sens. 1, H317	10-30%
CAS: 5888-33-5 EINECS: 227-561-6	Isobornyl Acrylate Xi R36/37/38 N R51/53 ----- Aquatic Chronic 2, H411 Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	10-30%
EINECS: 256-360-6	2-Phenoxyethyl Acrylate Xi R43 N R51/53 ----- Aquatic Chronic 2, H411 Skin Sens. 1, H317	10-30%
CAS: 2235-00-9 EINECS: 218-787-6	2H-Azepin-2-one, 1-ethanyhexahydro T R48/23 Xn R21/22 Xi R36 Xi R43 ----- STOT RE 1, H372 Acute Tox. 4, H302; Acute Tox. 4, H312; Eye Irrit. 2, H319; Skin Sens. 1, H317	5-10%
CAS: 75980-60-8 EINECS: 278-355-8	Phosphine Oxide, Diphenyl(2,4,6-tri-Methylbenzoyl)- Xn R62 N R51/53 ----- Repr. 2, H361f Aquatic Chronic 2, H411	5-10%

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	Proprietary multifunctional acrylate R36 Xi R36 ----- Eye Irrit. 2, H319	1-5%
CAS: 37280-82-3	Phosphated alkoxyated polymer Xi R36 ----- Eye Irrit. 2, H319	1-5%

- **Additional information**

For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information**
Never make an unconscious person vomit or drink fluids.
Immediately remove any clothing soiled by the product.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact**
Immediately wash with soap and water and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact**
Rinse open eye for several minutes under running water. Then consult a doctor.
- **After swallowing**
Give patient copious amounts of water to drink and provide fresh air. Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with full jet.
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide (CO)
Nitrogen oxides (NO_x)
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**
Cool endangered containers with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**



Refer to the protective measures stated in Sections 7 and 8.
Keep unprotected personnel away.

Ensure adequate ventilation

- **6.2 Environmental precautions:**

Do not allow product to reach sewage system or any water course.
Inform respective authorities if seepage into water course or sewage system occurs.
Do not allow to enter sewers/ surface or ground water.

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- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomaceous earth, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste according to section 13.
- **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Store in cool, dry place in tightly sealed containers.
Keep away from heat and direct sunlight.
Ensure good ventilation and extraction at the workplace.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:** Store in accordance with current national regulations.
- **Requirements to be met by storerooms and containers:** Store between 5 - 30 °C.
- **Information about storage in one common storage facility:**
Do not store together with oxidizing and acidic materials.
Do not store together with alkalis (caustic solutions).
- **Further information about storage conditions:**
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**
- **DNELs**
worker:

2235-00-9 2H-Azepin-2-one, 1-ethanyhexahydro		
Dermal	DNEL	0.7 mg/kg (-) (Long-term exposure-systemic effects)
Inhalation	DNEL	4.9 mg/m ³ (-) (Long-term exposure-systemic effects)
		0.17 mg/m ³ (-) (Long Term exposure-local effects)
75980-60-8 Phosphine Oxide, Diphenyl(2,4,6-tri-Methylbenzoyl)-		
Dermal	DNEL	1 mg/kg (-) (Long Term)
Inhalation	DNEL	3.5 mg/m ³ (-) (Long Term)

- **PNECs**

2235-00-9 2H-Azepin-2-one, 1-ethanyhexahydro	
PNEC	0.1 mg/l (-) (Fresh Water)
	0.01 mg/l (-) (Marine Water)
	0.829 mg/kg (-) (Sediment (freshwater))
	0.0829 mg/kg (-) (Sediment (marine water))
	0.107 mg/kg (-) (Soil)

- **Additional information:**
The instructions and information provided by the manufacturer of the personal protective equipment on use, storage, maintenance and replacement must always be followed.
- **8.2 Exposure controls**
- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Store protective clothing separately.
- **Breathing equipment:**
In cases of insufficient ventilation use the following respiratory protective device:
Filter A/P2.

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- **Protection of hands:**

Use of the following recommended:

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The selection of single or multi-use gloves is dependent upon the level of exposure.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance. Always ensure that gloves are free from defects and that they are stored and used correctly.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Hands should be inspected on a regular basis for any signs of skin damage or inflammation

Single use disposable nitrile gloves (short duration exposure of few minutes, or where only splashes likely). Not to be reused when removed.

Minimum 0.4mm thick neoprene or nitrile gloves (longer duration exposure or mechanical handling activities). To be replaced immediately when punctured or degraded.

Heavy duty unlined neoprene gloves (when using solvents). To be replaced immediately when punctured or degraded.

- **Penetration time of glove material**

The exact break through time has to be obtained from the manufacturer of the protective gloves and must be observed.

- **Eye protection:** Safety glasses

- **Body protection:**

Protective work clothing; disposable overalls are preferable.

Acrylates, like any other organic solvent, are skin and/or eye irritants.

Since acrylates do not evaporate, they will remain on the skin or clothes for extended periods. This long term exposure, caused by the non volatility, can give rise to dermatitis. It is essential that the measures given above are always followed.

- **COSHH Essentials for Printers Control Guidance Sheet:**

Guidance is provided by the Health and Safety executive (HSE) concerning COSHH (Control of Substances Hazardous to Health) for printers.

See COSHH Essentials for Printers on the HSE website:

www.hse.gov.uk and enter 'COSHH Essentials for printers' in the search bar.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Liquid

Colour: White

- **Odour:** Characteristic

- **Odour threshold:** Not determined.

- **pH-value:** Not applicable.

- **Change in condition**

Melting point/Melting range: undetermined

Boiling point/Boiling range: 111 °C

- **Flash point:** Not applicable

- **Flammability (solid, gaseous)** Not determined.

- **Ignition temperature:** Not applicable

- **Decomposition temperature:** Not determined.

- **Self igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower: Not determined.

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Upper:	Not determined.
• Oxidizing properties	Not determined
• Vapour pressure:	Not determined.
• Density at 20 °C:	1.2 g/cm ³
• Relative density	Not determined.
• Vapour density	Not determined.
• Water:	Not miscible or difficult to mix
• Partition coefficient (n-octanol/ water):	Not determined.
• Viscosity:	Not determined
• dynamic:	Not determined.
• kinematic:	Not determined.
• Solvent content:	
Organic solvents:	0.0 %
• 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity
- 10.2 Chemical stability
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Stable until:** 50 °C
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- **Acute toxicity:**

• LD/LC50 values that are relevant for classification:		
5888-33-5 Isobornyl Acrylate		
Oral	LD50	5000 mg/kg (Rabbit)
2-Phenoxyethyl Acrylate		
	LC50 (24h)	10 mg/l (Fish)
	LC50 (48h)	1.21 mg/l (Daphnia)
2235-00-9 2H-Azepin-2-one, 1-ethanyhexahydro		
Oral	LD50	1860 mg/kg (rat) ((OECD Guideline 401))
Dermal	LD50	>2000 mg/kg (rat)
		1700 mg/kg (Rabbit) (OECD Guideline 402)
Inhalation	LC50 8h	>1.6 mg/l (rat)
75980-60-8 Phosphine Oxide, Diphenyl(2,4,6-tri-Methylbenzoyl)-		
Oral	LD50	> 5000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.

SECTION 12: Ecological information

- 12.1 Toxicity

• Aquatic toxicity:	
75980-60-8 Phosphine Oxide, Diphenyl(2,4,6-tri-Methylbenzoyl)-	
EC50	> 500 mg/dm ³ (Bacteria)
EC50/48 h	1 - 10 mg/l (Daphnia)

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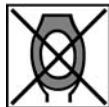
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EC50/72 h	10 - 100 mg/l (Algae)
LC50/96 h	10 - 100 mg/l (Fish)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
There are no data on the preparation itself.
The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is classified as dangerous for the environment. Also refer to Sections 2 and 15.



Do not allow product to reach ground water, water course or sewage system.

- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**



Must not be disposed together with household rubbish. Do not allow product to reach sewage system.

- **European waste catalogue**

08 03 12*	waste ink containing dangerous substances
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- **Waste Hazard Classification:**
H4 - Irritant
H14 - Eco Toxic
H5 - Harmful
- **Recommendation:**
Dispose of product according to official regulations.
Also see Section 16 'Other Information'

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN3082

- **14.2 UN proper shipping name**
- **ADR** 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acrylate Monomer)
- **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acrylate Monomer), MARINE POLLUTANT
- **IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acrylate Monomer)

- **14.3 Transport hazard class(es)**

- **ADR, IMDG, IATA**



- **Class** 9 Miscellaneous dangerous substances and articles.

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· Label	9
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant:	Yes Symbol (fish and tree)
· Special marking (ADR): · Special marking (IATA):	Symbol (fish and tree) Symbol (fish and tree)
· 14.6 Special precautions for user · Danger code (Kemler): · EMS Number:	Warning: Miscellaneous dangerous substances and articles. 90 F-A,S-F
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category · Tunnel restriction code	3 E
· IMDG · Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acrylate Monomer), 9, III

SECTION 15: Regulatory information

- **Chemical Safety Assessment** Chemical Safety Assessment not applicable
- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57**
Does not contain a SVHC according to REACH, Article 57

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
 - H302 Harmful if swallowed.
 - H312 Harmful in contact with skin.
 - H315 Causes skin irritation.
 - H317 May cause an allergic skin reaction.
 - H319 Causes serious eye irritation.
 - H335 May cause respiratory irritation.
 - H361f Suspected of damaging fertility.
 - H372 Causes damage to organs through prolonged or repeated exposure.

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H411 Toxic to aquatic life with long lasting effects.
 R21/22 Harmful in contact with skin and if swallowed.
 R36 Irritating to eyes
 R36/37/38 Irritating to eyes, respiratory system and skin.
 R38 Irritating to skin.
 R43 May cause sensitisation by skin contact.
 R48/23 Toxic; danger of serious damage to health by prolonged exposure through inhalation.
 R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 R62 Possible risk of impaired fertility.

• **Recommended restriction of use**

The product should not be used for any purpose other than that specified in Section 1.

• **Department issuing MSDS:**

Product Safety Department - Fujifilm Speciality Ink Systems Limited

• **Contact:** Elaine Campling BSc.(Hons) - Product Safety Manager

• **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association (IATA Dangerous Goods Regulation (DGR) 55th Edition 2014)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Repr. 2: Reproductive toxicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2