PL10 PHOTOPOLYMER DEVELOPER

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

1.1 Identification of the substance or mixture:

Product name	:	PL10 PHOTOPOLYMER DEVELOPER
Additional identification	:	SD HV430 POL DEV, Saphira V Developer, N-100 Dev
REACH Registration No	:	Registration numbers of the individual components: see section 3.2, if applicable.

1.2 Use of the substance/mixture:

Identified relevant uses	:	Offset plate developer solution
Uses advised against	:	Do not use for products which come into direct contact with food stuffs. Do not use for products which come into direct contact with the skin. Only for professional use.

1.3 Company/undertaking identification

Agfa-Gevaert Ltd.
Vantage West
Great West Road
Brentford, Middlesex TW8 9AX
United Kingdom
Tel. : +44 (0)20 8 231 4616
Fax : +44 (0)20 8 231 4951
E-mail: electronic.sds@agfa.com

1.4 Emergency telephone

Emergency telephone number (Belgium) : +32 3 4443333 (24h/24h)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

Regulation(EC) No 1272/2008 (CLP)
Based on available data, the classification criteria are not met.

67/548/EEC or 1999/45/EC
This product is not to be labelled as a dangerous substance or preparation as defined by Regulation (EC) No 1272/2008 on the classification , labelling and packaging of substances and mixtures (CLP Regulation).

Full text of each relevant R and H phrase is listed in section 16.

2.2 Label elements:

This product is not to be labelled as a dangerous substance or preparation as defined by Regulation (EC) No 1272/2008 on the classification , labelling and packaging of substances and mixtures (CLP Regulation).

2.3 Other hazards:

This product does not meet the criteria concerning PBT or vPvB substances as described in Annex XIII of the REACH regulation (1907/2006 EC)

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixture related information:

Aqueous offset plate developer solution, mainly consisting of:

3.2 Hazard ingredients:

The hazard and labelling information in this section is that of the individual ingredients. The corresponding information relative to this product as supplied is given in section 2.1.

Hazardous components in the meaning of regulation(EC) No 1272/2008 (CLP)

- Potassium silicate — Concentration [%] : 1.0 - 3.0

CAS-No.	:	1312-76-1
EINECS-No.	:	215-199-1
REACH Registration No	:	01-2119456888-17-0001
Hazard classes	:	Skin corrosion, Serious eye damage
Hazard categories	:	Category 1B, Category 1
Hazard statements	:	H314, H318

Hazardous components in the meaning of 67/548/EEC or 1999/45/EC

- Potassium silicate — Concentration [%] : 1.0 - 3.0

CAS-No.	:	1312-76-1
EINECS-No.	:	215-199-1
Symbol(s)	:	C
R-phrase(s)	:	R34

Components with a community workplace exposure limit

- Potassium hydroxide

3.3 Remark:

Full text of each relevant R and H phrase is listed in section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures:

Eye contact	:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin contact	:	Wash immediately with plenty of water and soap. If symptoms persist, seek medical advice.
Ingestion	:	Rinse mouth with plenty of water. Consult a physician if necessary. Do not induce vomiting.
Inhalation	:	Take patient to fresh air if necessary. Consult a physician if necessary.

4.2 Most important symptoms and effects:

Symptoms	:	In case of eye contact: redness and pain.

4.3 Indication of immediate medical attention and special treatment needed:

General advice	:	Call a physician immediately.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	:	Dry extinguishing powder., Alcohol-resistant foam., Carbon dioxide (CO2)., Water spray.
Extinguishing media which must not be used for safety reasons	:	Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture:

Specific hazards during fire fighting	:	Do not use a solid water stream as it may scatter and spread fire.
Further information	:	Product is not combustible.Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

5.3 Advice for fire-fighters:

Special protective equipment for fire-fighters	:	Regular fire intervention clothes.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Personal precautions	:	Cleanup personnel must use appropriate personal protective equipment.
Additional advice	:	Observe normal precautions when handling chemicals.

6.2 Environmental precautions:

Environmental precautions	:	The product should not be allowed to enter drains, water courses or the soil.

6.3 Methods and material for containment and cleaning up:

Methods for cleaning up	:	Dike the spill if necessary. If spill occurs, apply a suitable absorbent material and collect into an impervious waste container. Collect the product in a plastic vessel. Carefully collect leftovers.

6.4 Reference to other sections:

For waste disposal see section 13.
For personal protection see section 8.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Advice on safe handling	:	Prevent product from diffusing.
Hygiene measures	:	Observe normal precautions when handling

		chemicals.Employees should wash their hands and face before eating, drinking, or using tobacco products.Keep away from foodstuffs, drinks and tobacco.
Advice on protection against fire and explosion	:	No special protective measures against fire and explosion required.

7.2 Conditions for safe storage:

Requirements for storage areas and containers	:	Keep container tightly closed.Keep in a dry place.
Further information on storage conditions	:	Keep container in a well-ventilated place.
Advice on common storage	:	Store away from strong acids.

7.3 Specific end use:

This substance is used only by trained professionals under restricted conditions.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

8.1.1 Components with occupational exposure limits rsp. biological occupational exposure limits requiring monitoring:

8.1.1.1 Occupational exposure limits:

Air limit values

- Potassium hydroxide CAS-No.: 1310-58-3

Basis	Revision Date	Value	Type
EH40 WEL	2005	2 mg/m3	STEL

Biological limit values

We are not aware of any national exposure limit.

8.1.1.2 Additional exposure limits under the conditions of use:

No other exposure limits applicable.

8.1.1.3 DNEL/DMEL and PNEC-values:

DNEL

No Chemical Safety Report performed. No DNEL/DMEL value determined.

PNEC

No Chemical Safety Report performed. No PNEC value determined.

8.2 Exposure controls:

Occupational exposure controls:

- **Instruction measures to prevent exposure:**

Employees should wash their hands and face before eating, drinking, or using tobacco products. Keep away from foodstuffs, drinks and tobacco.

➢ **Technical measures to prevent exposure:**

Ensure adequate ventilation.

➢ **Personal measures to prevent exposure:**

Hand protection	:	Use chemical resistant gloves. In case of prolonged immersion or frequently repeated contact use gloves made of the materials: butylrubber (thickness >= 0.70 mm, breakthrough time > 480 min).(EN 374). The use of protective gloves should conform to the specifications of EC directive 89/686/EC and the resultant standard EN374. Additional advice: The data are based on own tests, literature data and information of glove manufacturers or derived from similar substances. Because several factors may influence these properties (eg temperature), one should take into account the fact that the life of a chemical gloves in practice may be considerably shorter than indicated by the permeation test. The high diversity of types of use are prescribed by the manufacturer.
Eye protection	:	Safety glasses.
Body Protection	:	Safety clothes.

Environmental exposure controls:

Do not release into drain. Collect for removal by a licensed waste contractor. Effluent regulations/discharge/treatment/contents may vary from one area to another. Please consult the local regulations regarding the disposal of this material.

EU Directive	Status
European Directive 2000/60/EC (water)	not on list
European Directive 1996/62/EC (air)	not on list

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Basic physical and chemical properties:

9.1.1 Appearance:

State of matter	:	Liquid
Form	:	Liquid.
Color	:	Colourless.
Odor	:	Odourless.
Odor threshold	:	No data available

9.1.2 Important health, safety and environmental information:

pH (25 °C)	:	12.8	Method: Literature.
Melting point/range	:	< 0 °C	Method: Literature.
Boiling point/range	:	> 100 °C	Method: Literature.
Flash point	:	> 93.33 °C Not combustible.	Method: Literature.
Autoignition temperature	:	does not ignite	
Vapour pressure (20 °C)	:	23.00 hPa	Method: Literature.
Relative vapour density	:	No data available	
Relative density (20 °C)	:	1.031	Method: Literature.

Density	:	No data available	
Solubility/qualitative	:	Miscible with water at all ratios.	
Water solubility	:	soluble	
Partition coefficient (n-octanol/water)	:	Not applicable	
Viscosity, dynamic	:	No data available	
Lower explosion limit	:	No data available	
Upper explosion limit	:	No data available	
Evaporation rate	:	No data available	
Flammability (solid, gas)	:	Not flammable.	Method: Literature.

9.2 Other information:

10. STABILITY AND REACTIVITY

10.1 Reactivity:

Reactivity : Reactivity is not to be expected under normal conditions of temperature and pressure.

10.2 Chemical stability:

Stability : The product is stable under normal conditions of storage and use.

10.3 Possibility of hazardous reactions:

Hazardous reactions : The product is stable under normal conditions of storage and use.

10.4 Conditions to avoid:

Conditions to avoid : Avoid contact with strong acids. Remove all chemicals and rinse the processing tanks thoroughly with water before using any cleansing products.

10.5 Materials to avoid:

Materials to avoid : No data available

10.6 Hazardous decomposition products:

Hazardous decomposition products : No specified dangerous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxicity data specific for individual ingredients in their pure state:

Toxicokinetics, metabolism and distribution:

- Potassium silicate

No data available

Acute effects (toxicity tests):

➢ **Acute Toxicity**

- Potassium silicate

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	> 2,000 mg/kg	Literature.
	Based on available data, the classification criteria are not met.			
Acute dermal toxicity			> 5,000 mg/kg	Literature.
	Based on available data, the classification criteria are not met.			
Acute inhalation toxicity	LC50	rat	> 2.06 mg/l/ 4 h	Literature.

➢ **Specific target organ toxicity (STOT):**

- Potassium silicate

Specific effects	Affected organs
Based on available data, the classification criteria are not met.	

➢ **Irritant and corrosive effects:**

- Potassium silicate

	Exposure time	Species	Evaluation	Method
Primary irritation to the skin			Irritating to skin.	Literature.
Irritation to eyes			Irritating to eyes.	Literature.
	Risk of serious damage to eyes.			

➢ **Irritation to the respiratory tract:**

- Potassium silicate

Based on available data, the classification criteria are not met.

➢ **Sensitisation:**

- Potassium silicate

Species	Evaluation	Method
guinea pig	Did not cause sensitization on laboratory animals.	Buehler Test

➢ **Aspiration hazard:**

- Potassium silicate

Based on available data, the classification criteria are not met.

Sub-acute, sub-chronic and chronic toxicity

➢ **Repeated dose toxicity:**

- Potassium silicate

➢ **Specific target organ toxicity (STOT):**

- Potassium silicate

Based on available data, the classification criteria are not met.

➢ **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**

- **Carcinogenicity**

- Potassium silicate

Based on available data, the classification criteria are not met.

- **Mutagenicity**

- Potassium silicate

There is no evidence for mutagenicity from studies in animals.

- **Genetic toxicity in vitro**

- Potassium silicate

Type	Test system	Concentration	Result
	Method: Literature.		negative

- **Genetic toxicity in vivo**

- Potassium silicate

Route of exposure	Species	Exposure time	Result
	Method: Literature.		negative

- **Teratogenicity**

- Potassium silicate

Route of exposure	Species	Exposure time
	Method: Literature. Based on available data, the classification criteria are not met.	

- **Toxicity to reproduction**

- Potassium silicate

Route of exposure	Species	Exposure time
	Method: Literature. Based on available data, the classification criteria are not met.	

➢ **Summarised evaluation of the CMR properties:**

- Potassium silicate

Carcinogenicity	:	Based on available data, the classification criteria are not met.
Mutagenicity	:	Based on available data, the classification criteria are not met.
Teratogenicity	:	Based on available data, the classification criteria are not met.
Toxicity to reproduction	:	Based on available data, the classification criteria are not met.

Experiences made in practice:

- Potassium silicate

Inhalation of mist causes irritation of respiratory system.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity:

- Potassium silicate

	Effect dose	Exposure time	Species	Value
Toxicity to fish	LC50	96 h	Leuciscus idus (golden orfe)	> 100 mg/l
	Method: Literature.			
	Based on available data, the classification criteria are not met.			
Toxicity to daphnia	EC50	48 h	Daphnia magna (water flea)	> 100 mg/l
	Method: Literature.			
	Based on available data, the classification criteria are not met.			
Toxicity to algae	EC50	72 h	Scenedesmus subspicatus (algae)	207 mg/l
	Method: OECD Test Guideline 201			
Toxicity to algae	EC0	72 h	Scenedesmus subspicatus (algae)	35 mg/l
	Method: OECD Test Guideline 201			
Toxicity to bacteria	EC50	17 h	Pseudomonas putida (bacteria)	> 100 mg/l
	Method: Literature.			
	Based on available data, the classification criteria are not met.			

12.2 Persistence and degradability:

Physico-chemical removability

Neutralization is normally necessary before waste water is discharged into water treatment plants.

Chemical Oxygen Demand (COD)

Value	Method
125,000 mg/l	Literature.

Adsorbed organic bound halogens (AOX)

Product does not contain any organic halogens.

Biodegradation

- Potassium silicate

The methods for determining biodegradability are not applicable to inorganic substances.

Biochemical Oxygen Demand (BOD)

Concentration	Incubation time	Value Method
		3,020 mg/l

12.3 Bioaccumulative potential:

Partition coefficient (n-octanol/water)

Not applicable

Bioconcentration factor (BCF)

- Potassium silicate

Bioaccumulation is unlikely.

12.4 Mobility in soil:

- Potassium silicate

not applicable

Henry's constant

Value	Temperature	Method
		No information available.

Transport between environmental compartments

- Potassium silicate

No data available

12.5 Results of PBT and vPvB assessment:

This product does not meet the criteria concerning PBT or vPvB substances as described in Annex XIII of the REACH regulation (1907/2006 EC)

12.6 Other adverse effects:

This preparation does not contain any ingredient that is classified as hazardous to the environment according to European Directives and corresponding national legislation.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Waste disposal methods

Do not release into drain. Collect for removal by a licensed waste contractor. Effluent regulations/discharge/treatment/contents may vary from one area to another. Please consult the local regulations regarding the disposal of this material.

May be discharged to drain if local regulations permit.

Empty containers.

As the packaging can be contaminated with product residus, please observe the warnings of the label even when the container is empty.Do not reuse empty container without proper cleaning.Label precautions also apply to this container when empty.

For waste resulting from the expired product, it is recommended to use European Waste Code : 09 01 02 (water-based offset plate developer solutions).

14. TRANSPORT INFORMATION

Not regulated according to ADR.
Not regulated according to ADNR.
Not regulated according to RID.
Not regulated according to IMO/IMDG.
Not regulated according to ICAO/IATA aircraft only.
Not regulated according to ICAO/IATA passenger and cargo aircraft.

15. REGULATORY INFORMATION

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

Authorisation and/or restriction on use

Authorisation	:	No
Restriction on use	:	Not listed on EU. REACH, Annex XVII, Restrictions on manufacture, placing on the market and use of certain dangerous substances, mixtures & articles (Reg 1907/2006/EC, as amended

Other EU regulations

Does not fall under specific EU-Regulations.

15.2 Chemical Safety Assessment

No Chemical Safety Report needed according REACH.

16. OTHER INFORMATION

Text of H-phrases referred to under headings 2 and 3:

H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

Text of R-phrases referred to under headings 2 and 3:

R34	Causes burns.

Further information

This Safety Data Sheet is compiled in accordance with European Directives and corresponding national legislation.

The information disclosed in this Safety Data Sheet is believed to be correct to the best of our current knowledge and experience. It only relates to the specific product designated herein and it may not be valid when said product is used in combination with any other material or in any process, unless specified in the text. This document aims to provide the necessary health and safety information of the product and is not to be considered a warranty or quality specification. It is the responsibility of the user to comply with local legislation relating to safety, health, environment and waste management.

Sources of key data used to compile the datasheet

Handbuch der gefährlichen Güter, Hommel.
The Dictionary of Substances and their Effects, Royal Society of Chemistry.
Gefährliche Chemische Reaktionen, L.Roth und U.Weller.
Handbuch der Umweltgifte, Dauderer.
Chemiekaarten, latest version.
Safety Data Sheet from the supplier.
IUCLID Test data.This safety data sheet contains an ES (if applicable) in an integrated form. Contents of the exposure scenario have been included (if applicable) into sections 1.2, 8, 9, 12, 15 and 16 of this safety data sheet. The downstream user has to check whether his uses are covered by the integrated ES information in this safety data sheet.

Abbreviations

ADR:	Accord européen relatif au transport international des marchandises Dangereuses par Route
ADNR:	Accord européen relatif au transport international des marchandises Dangereuses par la Rhin
AGW:	Arbeitsplatzgrenswerte (GE)
ATEmix:	Acute toxicity estimate of the mixture
CLP:	Classification, Labelling and Packaging of substances and mixtures
CMR:	Carcinoge
DNEL:	Derived No Effect Level
EC0:	Effective Concentration 0%
EC5:	Effective Concentration 5%
EC10:	Effective Concentration 10%
EC50:	Median Effective Concentration
EC100:	Effective Concentration 100%
EH40 WEL:	Workplace Exposure Limit (UK)
IATA:	International Air Transport Association
ICAO:	International Civil Aviation Organization
IC50:	inhibitory concentration 50%
IMDG:	International Maritime Dangerous Goods
IMO:	International Maritime Organization
IUCLID:	International Uniform ChemicaL Information Database
LC50:	Lethal Concentration 50%
LC100:	Lethal Concentration 100%
LOAEL:	Lowest Observed Adverse Effect Level
LDL0	Lethal Dose (minimum found to be lethal)
LD50:	Lethal Dose 50%
MAC:	Maximaal Aanvaardbare Concentratie (NL)
MAK:	Maximale Arbeitsplatz-Konzentration
NOAEL:	No Observed Adverse Effect Level
NOEL:	No Observed Effect Level
NOEC:	No Observed Effect Concentration
OEL:	Occupatianal Exposure Limit
PBT:	Persistent, Bioaccumulative and Toxic substance
PNEC:	Predicted No Effect Concentration
REACH:	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID:	Regulations concerning the International Transport of Dangerous Goods by Rail
STEL:	Short Term Exposure Limit
TLV:	Treshold Limit Value
TRGS900:	Arbeitsplatzgrenswerte (GE)
TWA:	Time Weighted Average
VOC:	Volatile Organic Compound

vPvB:	very Persistent and very Bioaccumulative substance