SAFETY DATA SHEET

In accordance with Regulation (EC) No. 1907/2006

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

1.1. Product identifier

Trade name or designation of the mixture	KODAK Fixer
Registration number	-
Synonyms	None.
SDS number	PCD 6010
Product code	1058304
Issue date	07-May-2019
Version number	02
Revision date	18-June-2019
Supersedes date	07-May-2019

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

Identified uses	Photographic processing chemical. (fixer).
Uses advised against	For industrial use only.

1.3. Details of the supplier of the safety data sheet

Supplier	Kodak Alaris Limited
Address	Hemel One, Boundary Way Hemel Hempstead Hertfordshire, HP2 7YU United Kingdom
Telephone number	+44 (0)330 123 0391
e-mail	EHS-Questions@Kodakalaris.com

1.4. Emergency telephone number

UK: Tel 111 or 344 892 0111 (NHS professionals only)

Ireland: Members of Public: 01 809 2166. (8.00 a.m. to 10.00 p.m. 7 days a week)

Ireland: Healthcare Professionals: 01 809 2566 (24 hour service)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 1	H318 - Causes serious eye damage.

Hazard summary Causes serious eye damage. Causes skin irritation. May form combustible dust concentrations in air. Occupational exposure to the substance or mixture may cause adverse health effects.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Ammonium alum, dodecahydrate, Sodium metabisulphite

Hazard pictograms

Signal word Danger

Hazard statements

H315	Causes skin irritation.
H318	Causes serious eye damage.

Precautionary statements

Prevention

P260	Do not breathe dust.
P264	Wash thoroughly after handling.
P280	Wear eye protection/face protection.
P280	Wear protective gloves.

Response

P302 + P352	IF ON SKIN: Wash with plenty of 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.
P310	Immediately call a POISON CENTRE/doctor.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Storage Not available.

Disposal Not available.

Supplemental label information EUH031 - Contact with acids liberates toxic gas.

2.3. Other hazards Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Ammonium alum, dodecahydrate	10 - 15	7784-26-1 232-055-3	-	-	
Classification:	Aquatic Chronic 3;H412				
Sodium metabisulphite	5 - 10	7681-57-4 231-673-0	-	016-063-00-2	
Classification:	Acute Tox. 4;H302, Eye Dam. 1;H318				
Sodium tetraborate	0.1 - 1	1330-43-4 215-540-4	-	005-011-00-4	
Classification:	Acute Tox. 4;H312, Acute Tox. 1;H330, Repr. 1B;H360D, Repr. 1B;H360F				

List of abbreviations and symbols that may be used above

#: This substance has been assigned Union workplace exposure limit(s).
M: M-factor
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Dusts may irritate the respiratory tract, skin and eyes. Skin irritation. May cause redness and pain.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards Dusts may form an explosive mixture with air.

5.1. Extinguishing media

Suitable extinguishing media Water spray. Carbon dioxide (CO2). Dry chemicals. Flush with plenty of water.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

During fire, gases hazardous to health may be formed. Carbon oxides. Nitrogen oxides (NOx). Sulphur oxides.

5.3. Advice for firefighters

Special protective equipment for firefighters

Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.

Special fire fighting procedures

Use water spray to cool unopened containers.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Absorb in vermiculite, dry sand or earth and place into containers. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

6.4. Reference to other sections

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Minimise dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Do not get this material in contact with eyes. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

7.3. Specific end use(s)

Photographic processing chemical.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Ammonium alum, dodecahydrate (CAS 7784-26-1)	TWA	2 mg/m3
Boric anhydride (CAS 1303-86-2)	STEL	20 mg/m3
	TWA	10 mg/m3
Sodium metabisulphite (CAS 7681-57-4)	TWA	5 mg/m3
Sodium tetraborate (CAS 1330-43-4)	TWA	1 mg/m3

Biological limit values

No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures

Follow standard monitoring procedures.

Derived no effect levels (DNELs)

Not available.

Predicted no effect concentrations (PNECs)	Not available.

8.2. Exposure controls

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL (occupational exposure limit), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

General information	Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield.
Skin protection	
- Hand protection	Using the information provided in Section 2, seek the advice of the glove supplier as to the most suitable glove material. Avoid skin contact when mixing or handling the substance/preparation or a mixture by wearing impervious gloves and protective clothing appropriate to the risk of exposure. Use chemical resistant gloves. In case of prolonged immersion or frequently repeated contact: Material: Nitrile rubber, Thickness: >=0.38 mm, Breakthrough time: > 480 min Material: Neoprene, Thickness: > = 0.65 mm, Breakthrough time: > 240 min Material: butyl-rubber, Thickness: >=0.36 mm, Breakthrough time: > 480 min Avoid natural rubber gloves. The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374. This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.
- Other	Wear appropriate chemical resistant clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
Environmental exposure controls	Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	
Physical state	Solid.
Form	Powder.
Colour	White
Odour	odorless
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.

Flammability limit - upper (%)	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Appreciable.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
9.2. Other information	No relevant additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	Hazardous polymerisation does not occur.
10.4. Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents. Acids. Halogenated materials. Strong bases. Sodium hypochlorite (bleach). Contact with base liberates flammable material. Contact with base liberates ammonia. Contact with strong acids may liberate sulphur dioxide. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas).
10.6. Hazardous decomposition products	Carbon oxides. Sulphur oxides. Nitrogen oxides (NOx). Ammonia. Chloramine.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.
Information on likely routes of exposure	
Inhalation	Expected to be a low hazard for recommended handling. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Sulphur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficulty breathing.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye damage.
Ingestion	Expected to be a low ingestion hazard. May cause irritation of the gastrointestinal tract. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.
Symptoms	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Dusts may irritate the respiratory tract, skin and eyes. Skin irritation. May cause redness and pain.

11.1. Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Sodium tetraborate (CAS 1330-43-4)		
Acute		
Dermal		
LD50	Rabbit	> 1055 mg/kg
Inhalation		
LC50	Rat	> 0.002 mg/l, 4 Hours
Oral		
LD50	Rat	2660 mg/kg

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye damage.

Respiratory sensitisation	Based on available data, the classification criteria are not met.
Skin sensitisation	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.

IARC Monographs. Overall Evaluation of Carcinogenicity

Sodium metabisulphite (CAS 7681-57-4) 3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity	Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.
Mixture versus substance information	No information available.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity Based on available data, the classification criteria are not met for hazardous to the aquatic environment, long term.

Components		Species	Test Results
Ammonium alum, dodecahydrate (CAS 7784-26-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	45.8 - 73.31 mg/l, 48 hours
Sodium tetraborate (CAS 1330-43-4)			
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	104 mg/l, 96 hours

12.2. Persistence and degradability	Not readily biodegradable.
12.3. Bioaccumulative potential	No data available.
Partition coefficient n-octanol/water (log Kow)	Not available.
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.
12.6. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	This information is provided to assist users in the correct treatment and disposal of product, product packaging and working solutions prepared and used to Kodak Alaris specifications. Waste product and waste working solution should both be consigned for disposal as hazardous waste with the European Waste Catalogue Code 20 01 17* Photochemicals. Dispose of product and working solution in accordance with local/regional/national/international regulations.
Contaminated packaging	If thoroughly cleaned, preferably by rinsing at least three times with water, waste product packaging may be consigned for recovery as non-hazardous waste with the European Waste Catalog 15 01 06 Mixed Packaging. Whenever possible, minimize waste by using rinsing water to make up the working solution. All other waste product packaging contaminated by product should be consigned for disposal as hazardous waste with the European Waste Catalogue Code 15 01 10 Packaging containing residues of or contaminated by hazardous substances.
EU waste code	Product and working solution: 20 01 17* Photochemicals. Contaminated product packaging: 15 01 10 Packaging containing residues of or contaminated by hazardous substances. Thoroughly cleaned product packaging: 15 01 02 Plastic Packaging.
Disposal methods/information	Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. - 14.6.: Not regulated as dangerous goods.

IATA

14.1. - 14.6.: Not regulated as dangerous goods.

IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

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

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Sodium tetraborate (CAS 1330-43-4)

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Ammonium alum, dodecahydrate (CAS 7784-26-1)
Sodium tetraborate (CAS 1330-43-4)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

Follow national regulation on the protection of workers from the risks of exposure to carcinogens and mutagens at work, in accordance with Directive 2004/37/EC.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

IARC Monographs. Overall Evaluation of Carcinogenicity
CAS: Chemical Abstract Service.
PBT: Persistent, bioaccumulative, toxic.
vPvB: very Persistent, very Bioaccumulative.
DNEL: Derived No Effect Level.
PNEC: Predicted No Effect Concentration.
TWA: Time Weighted Average.

	STEL: Short-term Exposure Limit. LD50: Lethal Dose 50%. LC50: Lethal Concentration 50%. EC50: Effective Concentration 50%.
References	Not available.
Information on evaluation method leading to the classification of mixture	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Full text of any H-statements not written out in full under Sections 2 to 15	H302 Harmful if swallowed. H312 Harmful in contact with skin. H318 Causes serious eye damage. H330 Fatal if inhaled. H360D May damage the unborn child. H360F May damage fertility. H412 Harmful to aquatic life with long lasting effects.
Revision information	None.
Training information	Follow training instructions when handling this material.
Disclaimer	Kodak Alaris cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.