Material Safety Data Sheet

According to Regulation No 1907/2006/EC – REACH, No. 2015/830 and No 1272/2008/EC - CLP

Date of revision : 04/08/2019 Version No: 3.2

Replaced version 3.1

SECTION 1	Identification of the substance/mixture and of the company/undertaking	
1.1	Product identifier	**FOMADON R09**
	Other name or labelling of product:	-
1.2	Relevant identified uses of the substance or mixture and uses advised against	
	Concentrate developer for processing of black and white films	
1.3	Details of the supplier of the safety data sheet	
	Supplier : Downstream User (Producer Mixture)	FOMA BOHEMIA spol. s r.o.(Ltd.) J. Krušinky 1737/6, 500 02 Hradec Králové tel: 495 733 111
	E-mail address and phone number	ilona.spackova@foma.cz +420495733368
1.4	Emergency telephone number	EU Poison Information Centres – see section 16

SECTION 2	Hazards identification
2.1	**Classification (according to Regulation No 1272/2008 – CLP)**
	Muta.2;H341 SkinCorr.1B;H314 Eye Dam.1;H318 Aquatic Chronic 2;H411
	<u>The most important adverse physicochemical, human health and environmental effects:</u>
	May cause severe skin burns and eye damage. Suspected of causing genetic defects. Toxic to aquatic life with long lasting effects.

2.2	Label elements (according to Regulation No 1272/2008/EC– CLP)	
hazard pictogram		
signal word		Danger
hazard statement(s) (H-, phrases)	H341 H314 H411	Suspected of causing genetic defects Causes severe skin burns and eye damage. Toxic to aquatic life with long lasting effects.

precautionary statement (P- phrases)	P102 P280 P301+P310 P305+P351+P338 P273 P501	Keep out of reach of children Wear protective gloves/protective clothing/eye protection/face protection. IF SWALLOWED: Immediately call a POISON CENTER/doctor. IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing Avoid release to the environment Dispose of contents/container to collecting place for dangerous waste in accordance with national regulations.
		Contain: Potassium hydroxide, p-aminophenol

2.3	Other hazards
	The substance does not belong to the category of PBT, vPvB

SECTION 3	Composition/information on ingredients					
3.2	Mixtures					
Folder name	Registration number	Index number	CAS number	ES number	Content % in the solution	Classification
p-aminophenol	01-2119535388-31-xxxx	612-128-00-x	123-30-8	204-616-2	2-5	Muta.2;H341 AcuteTox.4;H302 AcuteTox.4;H332 Aquatic Acute 1;H400 Aquatic Chronic 1; H410
Potassium hydroxide	01-2119487136-33-xxxx	019-002-00-8	1310-58-3	215-181-3	<5	SkinCorr.1A;H314 AcuteTox.4;H302 Mett Corr1;H290

Solution
(Full text H-phrases… section 16)

SECTION 4	First aid measures
4.1	Description of first aid measures
	Lead the disabled person from the contaminated area, bring him/her into a state of peace and facilitate breathing by loosening clothing, watch, and if necessary maintain its vital functions. If you are experiencing symptoms of acute injury (shortness of breath, persistent cough, chest pain, nausea, impaired sensory perception, fainting, etc.), call a physician or transport the injured person to a doctor.
	After contact with skin: Wash affected area thoroughly with water.
	Eye Contact: Remove any contact lenses and wash eyes with plenty of water as soon as possible. If necessary, use force to open tightly closed eyelids. Take care not to rinse contaminated water into the non-affected eye. Do not neutralize. Seek medical help.
	Exposure by inhalation: Remove patient to fresh air, rinse eyes, mouth and nasal cavity with lukewarm water.
	Ingestion: Calm affected person, rinse his mouth with clean water. Force the affected person to drink a glass of cold water (about 0,4 dl). Do not induce vomiting. If affected person vomit spontaneously, control to prevent inhalation of vomit. Do not administer either activated charcoal or neutralizing agent. Call a physician or transport the affected person to a doctor.
4.2	Most important symptoms and effects, both acute and delayed

	Not known
4.3	Indication of any immediate medical attention and special treatment needed
	In the workplace, running water and soap.

SECTION 5	Firefighting measures
5.1	Extinguishing media
	The product (liquid) is not flammable. Extinguishing agents must be adapted to burning substances in surrounding.
	Inappropriate extinguishing media: N.a.
5.2	Special hazards arising from the substance or mixture
	At elevated temperatures or by contact with acid can release sulphur dioxide and carbon monoxide.
5.3	Advice for firefighters: Breathing apparatus, workwear

SECTION 6	Accidental release measures
6.1	Personal precautions, protective equipment and emergency procedures
	Take persons not participating in removing the consequences of the accident out of reach. Ventilate enclosed spaces. Use the prescribed personal protective equipment when removing the consequences of the accident. Use breathing apparatus and complete protective suit when working on the disposal of the accident. Smoking and manipulation with open fire is prohibited.
6.2	Environmental precautions
	Do not allow substance to enter soil, sewage system, surface and groundwater.
6.3	Methods and material for containment and cleaning up
	Let soak it to inert absorption products. Rinse the affected area thoroughly with water. Small leak strongly dilute with water.
6.4	Reference to other sections
	See section 13

SECTION 7	Handling and storage
7.1	Precautions for safe handling
	Follow the safety rules while working. Wear recommended personal protective equipment. Avoid contact with eyes. Eating, drinking, smoking, working with burning materials and open fire is prohibited while working. Equipment must contain fire extinguishers in enclosed areas, ventilation must be ensured naturally or mechanically in enclosed spaces. Workplaces must be kept clean and escape routes must remain free.
7.2	Conditions for safe storage, including any incompatibilities
	Store in original containers in a cool, dry and well ventilated place. Containers should be stored separately from food. The working solution must be prepared according to the instructions.
7.3	Specific end use(s)
	See in 1.2. , Other uses – not available

SECTION 8 Exposure controls/personal protection

8.1 Control parameters

International limit values for chemical agents (Occupational exposure limits, OELs):

4-aminophenol	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m³	ppm	mg/m³
Latvia		1		

Potasiium hydroxide	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m³	ppm	mg/m³
Australia				2 (1)
Austria		2 inhalable aerosol		
Belgium				2
Canada - Ontario				2 (1)
Canada - Québec				2 (1)
Denmark		2		2
Finland				2 (1)
France				2
Hungary		2		2
Ireland				2 (1)
Japan - JSOH		2 (1)		
New Zealand				2 (1)
People's Republic of China				2 (1)
Poland		0,5		1
Singapore				2
South Korea				2 (1)
Spain		2		
Sweden		1		2 (1)
Switzerland		2 inhalable aerosol		
USA - NIOSH				2 (1)
United Kingdom				2

	Remarks
Australia	(1) Ceiling limit value
Canada - Ontario	(1) Ceiling limit value
Canada - Québec	(1) Ceiling limit value
Finland	(1) Ceiling limit value
Ireland	15 minutes reference period
Japan - JSOH	(1) Occupational exposure limit ceiling: Reference value to the maximal exposure concentration of the substance during a working day
New Zealand	(1) Ceiling limit value
People's Republic of China	(1) Ceiling limit value
South Korea	(1) Ceiling limit value
Sweden	(1) 15 minutes average value
USA - NIOSH	(1) Ceiling limit value

Laying down limit values of biological exposure tests: not available

Potassium hydroxide

DNELs

	Workers	Consumers
Route of exposure	Chronic effects local	Chronic effects local
Inhalation	1 mg/m^3	1 mg/m^3

PNECs - Not available

4-aminophenol*

DNELs

	Workers
Route of exposure	Chronic effects systemic
Inhalation	2.1 mg/m3
Dermal	1 mg/kg bw/day

PNECs

Environmental protection target	PNEC
Fresh water	4.9ug/L
Freshwater Intermittent release	890 ng/L
Marine water	490 ng/L
Microorganisms in sewage treatment	265 µg/L
Freshwater sediments	19.5 µg/kg sediment dw
Marine sediments	380ng /kg sediment dw
Soil (agricultural)	1 µg/kg sediment dw

*source : substance Brief Profile: *http://echa.europa.eu/*

8.2	Exposure controls
	Individual protection measures, incl. protective equipment
	Technical measures: Working place must be equipped with a local suction and a source of running water if the eyes irrigation and washing of hands or affected parts of skin is needed. Tightly closed containers and equipment, natural and mechanical ventilation. Avoid contact with eyes and mouth, avoid inhalation and skin staining. Eating, drinking and smoking is prohibited while working. Avoid contact with food substances and drinks. After work wash hands with soap and water. Take off polluted clothes if needed.
	Respiratory protection: During normal handling is not required.
	Hand protection: Use rubber (PE, nitril) gloves
	Eye protection: Safety glasses
	Skin protection: Workwear
	Environmental exposure: Secure the spaces against the leakage into watercourses, soil and sewage system.

SECTION 9	Physical and chemical properties	
9.1	Information on basic physical and chemical properties	
	Appearance	Dark brown liquid
	Odour	Not characteristic
	pH	11.8
	Melting point/freezing point	Not determined
	Initial boiling point and boiling range	100 °C
	Flash point	Not applicable
	Evaporation rate	N.a.
	Flammability	Incombustible
	Upper/lower flammability or explosive limits	Not explosive
	Vapour pressure	23 hPa
	Vapour density	Unknown

	Oxidising properties	No
	Relative density	1.36 g/cm^3
	Solubility – water	Solution- miscible
	Partition coefficient: n-octanol/water	Unknown
	Auto-ignition temperature	Irrelevant
	Decomposition temperature	N.a.
	Viscosity;	Not determined
	Explosive properties	No
9.2	Other information	
	Fat solubility	N.a.
	Conductivity	N.a.

SECTION 10	Stability and reactivity
10.1	Reactivity
	Under normal conditions the product is stable
10.2	Chemical stability
	Under normal conditions the product is stable
10.3	Possibility of hazardous reactions
	Strong mineral acids – react with acids releasinf sulphur dioxide
10.4	Conditions to avoid
	High temperature
10.5	Incompatible materials
	Aluminium
10.6	Hazardous Decomposition Products
	Possible development of sulphur dioxide at elevated temperatures and reaction with acids

SECTION 11	Toxicological information
11.1	Information on toxicological effects
Acute toxicity	ATE_{mix}(oral) = 3160 mg/kg (calculation) ATE_{mix}(inhal -dust) = 68.4 mg/L (calculation) Based on available data, the criteria for this classification are not match up **4-aminophenol** LD50/oral/rat: 375 mg/kg bw *LC50/inhal/rat/4hr :3,42 mg/L air **source: http://echa.europa.eu/- registration dossier* **Potassium hydroxide** LD50/ oral/ rat : 273 mg/kg

Skin corrosion/irritation	Causes severe skin burns
Serious eye damage/eye irritation	Causes severe eye damage
Respiratory or skin sensitisation	Based on available data, the criteria for this classification are not match up
Germ cell mutagenicity	Suspected of causing genetic defects
Carcinogenicity	Based on available data, the criteria for this classification are not match up
Reproductive toxicity	Based on available data, the criteria for this classification are not match up
Specific target organ toxicity — single exposure	Based on available data, the criteria for this classification are not match up
Specific target organ toxicity — repeated exposure	Based on available data, the criteria for this classification are not match up
Aspiration hazard	Based on available data, the criteria for this classification are not match up
Likely routes of exposure and symptoms related to the physical, chemical and toxicological characteristics:	
Toxicity oral. (ingestion / swallowing): Ingestion may cause irritation or burns to the digestive tract. It causes nausea.	
Toxicity inhal. (inhalation): React with strong acids may causes caustic effect on mucous membranes	
Toxicity dermal. Caustic effect on skin	
Eye Contact: Causes serious eye damage	
Immediate, delayed and chronic effects of short and long term exposure: Possible risk of irreversible effects.	

SECTION 12	Ecological information
12.1	Toxicity
	Mixture is toxic to aquatic life with long lasting effects **Potassium hydroxide** LD50, fish/96 h: 80 mg/L Water hazard class.:3 (German Regulation) **4-aminophenol*** LC50/freshwater fish/96 hr: 0.82 mg/L EC50/freshwater invertebrates /48 hr: 0.089 mg/L EC50/ freshwater algae/72hr: 0,253mg/L EC50/microorganisms/ 3 hr: 29.9mg/L EC10/LC10/NOEC/ freshwater fish/41 d: 0.049 mg/L EC10/LC10/NOEC/ freshwater invertebrates /21 d: 0.206 mg/L LC10/NOEC/ freshwater algae)/72hr: 0.083mg/L LC10/NOEC/microorganisms/3 hr: 2.65 mg/L *source: http://echa.europa.eu/- substance Brief profile*
12.2	Persistence and degradability
	The product has not been yet tested in practice that way. But toxicological information about its components is available. Organic substance 4-aminophenol is considered to be hard biologically degradable

12.3	Bioaccumulative potential
	It is not expected
12.4	Mobility in soil
	N.a., the product is soluble in water
12.5	Results of PBT and vPvB assessment
	Not available. Substances are not identified as a PBT or vPvB
12.6	Other adverse effects
	Toxic for fish and plankton in water bodies and aquatic organisms

SECTION 13	Disposal considerations	
13.1	Waste treatment methods	
	Code and type of waste	09 01 01* – aqueous developer solutions 15 01 10 * - packaging containing residues of hazardous substances
	The recommended method of disposal of the substance/ preparation:	Spilled product let absorb in inert absorbent material and pass it on to a person who is in charge of its removal. The product cannot be removed together with local or other waste. Do not wash away into sewers.
	The recommended method of disposal of contaminated product packaging:	Emptied containers (after thorough flushing) can be reused, or put away into a container, designated for separate collection (plastics).
	Waste legislation	Directive No. 2008/98/ES

SECTION 14	Transport information

Land transport ADR/RID (cross- border), Maritime transport IMDG, Air transport ICAO-TI and IATA-DGR:

14.1	UN number	1814
14.2	UN proper shipping name	POTASSIUM HYDROXIDE SOLUTION
14.3	Transport hazard class(es)	8
14.4	Packing group	III
	Labels	8 
14.5	Environmental hazard	Product contains environmentally hazardous substance: (p- aminophenol).
	Marine pollutant	Yes
14.6	Special precautions for user	See to section 8- Corrosive mixture, Avoid release to the environment
14.7	Transport in bulk according to Annex II of Marpol and the IBC Code	Not expected

Special provisions, remarks:	**ADR:** The product is packed in limited quantities according to chapter 3.4 ADR , it means in combination packaging with not more than 5 litres per inner packaging and not more than 30 kg per package Marking for packages containing limited quantities- according to chapter 3.4.7 **IMDG**: The product is packed in limited quantities according to chapter 3.4 IMDG, it means in combination packaging with not more than 5 litres per inner packaging and not more 30 kg per package Marking for packages containing limited quantities according to chapter 3.4.5 **ICAO/IATA**: Packing Instruction PAX 852, CAO 856

SECTION 15	Regulatory information
15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture
	Regulation (EC) No 1907/2006, registration, evaluation, authorisation, restriction chemicals (REACH) Regulation (EC) No 2015/830, Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures Decree No. 381/2001 Coll. Establishing the Waste Catalogue. Government Regulation No. 361/2007 Coll. On the health conditions of workers at work European Agreement concerning the international carriage of dangerous goods (ADR) International Maritime Dangerous Goods Code (IMDG Code) IATA Dangerous Goods Regulations (DGR)
15.2	Chemical safety assessment
	The chemical safety assessment for the product was not made.

SECTION 16	Other information
Abbreviations, symbols	
Muta.2	Mutagenicity (Category 2)
Skin Corr. 1A	Skin corrosion (Category 1A)
Acute Tox.4	Hazardous to the aquatic environment, acute (Category 4)
Skin Corr. 1B	Skin caustic (burns) (Cat. 1B)
Aquatic Acute 1	Hazardous to the aquatic environment, acute (Category1)
Aquatic Chronic1	Hazardous to the aquatic environment, chronic (Category 1)
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic (Category 2)
Met.Corr.1	Substance or mixture corrosive to metals
Eye Dam.1	Serious eye damage (Category 1)

CLP : Regulation (EC) č.1272/2008
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
SVHC: Substance of very high concerns
PBT: Persistent, bioaccumulative and toxic
vPvB **:**(very) Persistent, (very) Bioaccumulative
RID: Regulations Concerning the International Transport of Dangerous Goods by Rail
ICAO: International Civil Aviation Organisation
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level
PNEC: Predicted No-Effect Concentration
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percentEC50: Median Effective Concentration
LOAEL: Lowest observed adverse effect level
NOAEL: No Observed Adverse Effect Level
NOEC: No Observed Effect Concentration
N.a.: not available
bw: body weight
dw: dry weight

Materials used for the processing of safety data sheet

Information provided by the producer- Material Safety Data Sheets (MSDS) for mixture**,**

GESTIS database (www.gduv.de), European Chemicals Agency http://echa.europa.eu/

Classification (according to Regulation No 1272/2008 – CLP): Classification of provided by the producer

H-phrases **:**

H318	Causes serious eye damage.
H341	Suspected of causing genetic defects
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H314	Causes severe skin burns and eye damage
H332	Harmful if inhaled.

Guidance regarding the training of workers:

Workers coming into contact with hazardous chemicals or products must have access to data which are presented in this MSDS and be familiar with them clearly.
Person transporting hazardous chemicals and preparations must be familiar with guidelines for emergency response in accordance with regulations on hazardous goods within the meaning of ADR / RID.
The information contained in this MSDS are currently valid data and best practices for use and handling of this substance under normal conditions. Any other use or handling of this mixture which is not consistent with those of MSDS excludes the responsibility for defects, more precisely for damage for which the producer, importer or retailer would be otherwise responsible.

EU Poison Information Centres

Country	Poison Centre	Tel number 24hour every day/ other time
Austria	Poison Information Center/Vergiftungsinformationszentrale	+ 43 1 406 43 43
Belgium	Cente Antipoisons-Antigifcentrum center	+32 70 245 245
Bulgaria	National Toxicology Information center- Hospital for Active Medical Treatment and Emergency Medicine 'N.I.Pirigov', Sofia	+359 2 9154 409
Croatia	Poison Information Center/ Centar za kontrolu otrovanja	+385 1 2348 342
Denmark	Poison Center Hotline	+45 82 12 12 12
Estonia	Poisoning centre Hotline Mürgistusinfo	+372 16662
Finland	Poison Information Centre	+358 9 471977
France	Centre Antipoison et de Toxicovigilance de Paris	+33 1 40 05 48 48
Germany	Poison Information Centre in Berlin	+49 30 192 40
Greece	Poison Information Centre	+30 2107793777
Iceland	Poisons Information Center (Eitrunarmiðstöð)	+354 543 2222
Ireland	National Poisons Information Centre	+353 1 809 2566
Hungary	Poison Information Service (National Institute for chemical safety) **Információszolgáltatás akut mérgezés eseén)**	+36 80 201 199
Italy	Poisons Center CAV-Centro Antiveleni Roma	+39 06 68593726, +39 06 3054343, +39 06 49978000
Latvia	Toksikoloģijas un sepses klīnikas Saindēšanās un zāļu informācijas centrs	+371 67042473
Lithuania	Poison Information Bureau -PIB	+370 8-5 236 20 52
Luxembourg	Belgian Poison Center	+352 8002 5500
Netherlands	National Poisons Information Center (nationaal vergiftigingen Informatie centrum,NVIC)	+031 (0) 30 274 8888
Norway	Poison center (Giftinformasjonen)	+47 22 59 13 00
Poland	National Poisons Information Centre Lodz	+48 42 63 14 724
Portugal	**Centro de Informação Antivenenos**	+351 808 250 143
Romania	National iIstitute for Public Health (Centrum National de Informare Toxicologica)	+40 21 318 36 06
Slovakia	National Toxicological Information Centre (Národné toxikologické informačné centrum	+421 2 54 774 166
Spain	Toxicological Information Service (Servicio de Información toxicologica)	+34 91 562 04 20
Sweden	Giftinformationscentralen (Swedish poisons Information Centre)	112/ mon-fri 9.00-17.00 +46 10 456 6700
Switzerland	The Swiss Toxicological Information Centre (STIC)	145
United Kingdom	National Poisons Information Service -NPIS(Birmingham)	England, Wales, Scotland 111
Turkey	Toxicolog Department and Poisons Centre	+ 90 0312 433 7001,+90 0800 314 7900

Revised safety data sheet:

Revision:
Version 3.2– changes in sections 1.4, 2.2, 8.1, 11.1, 12.1, 16 (added contact information- EU Poison Information Centres)