Material Safety Data Sheet

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

Version No: 3.2

Date of revision: 03/26/2019 Replaced version No: 3.1

SECTION 1	Identification of the substance/mixture and of the company/undertaking	
1.1	Product identifier	**FOMA UNIVERSAL DEVELOPER, small part**
	Other name or labelling of product:	-
1.2	Relevant identified uses of the substance or mixture and uses advised against	
	Two-component powdery positive-working developer intended fir processing of black and white photographic papers	
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, 790/2009 – CLP)**
	Carc.2;H351 Muta.2;H341 AcuteTox.4;H302 Eye Dam.1;H318 Skin Sens.2;H317 Aquatic Acute1;H400 Aquatic Chronic 2;H411
	<u>The most important adverse physicochemical, human health and environmental effects:</u> Suspected of causing cancer and genetic defects. Harmful if swallowed, strongly damaging to eyes. May cause sensitization by skin contact. Very dangerous for the environment with long lasting effects. Contact with acids liberates toxic sulphur dioxide.

2.2	Label elements (according to Regulation No 1272/2008/EC, 790/2009/EC – CLP)
hazard pictogram	
signal word	Danger

hazard statement(s) (H-, phrases)	H351 H341 H302 H318 H317 H410 EUH031	Suspected of causing cancer Suspected of causing genetic defects Harmful if swallowed Causes serious eye damage May cause an allergic skin reaction Very toxic to aquatic life with long lasting effects. Contact with acids liberates toxic gas.
precautionary statement (P- phrases)	P102 P301+P310 P262 P305+P351+P338 P273 P501	Keep out of reach of children IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do not get in eyes, on skin, or on clothing 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.
		Contains: Hydroquinone, Phenidon, Sodium pyrosulfite

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 %	Classification
Sodium pyrosulfite	01-2119531326-45-0000	016-063-00-2	7681-57-4	231-673-0	< 80	Acute Tox.4;H302 Eye Dam.1;H318
Hydroquinone	01-2119524016-51-xxxx	604-005-00-4	123-31-9	204-617-8	< 24	Carc.2;H351 Muta.2;H341 AcuteTox.4;H302 EyeDam.1;H318 Skin Sens.1;H317 Aquatic Acute1; H400, M(acute)=10 Aquatic Chronic1;H410
Phenidon A (1-fenyl-3-pyrazolidon	Not available	606-022-00-2	92-43-3	202-155-1	< 2	AcuteTox.4;H302 Aquatic Chronic2; H411

(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
	When burning or contact with acids liberates sulphur dioxide
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
	The spilled product by mechanical collection. According to the extent of leakage select the appropriate tools: broom, dustpan, vacuum equipment, etc. Minimize dust. Gather into a suitable labelled container for further processing or disposal. Spill site with water. Contaminated washing water contain and remove.
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. Apparatus, which works with the substance must be tight, equipped with emergency escape in case of space (emergency baths, catch pits) and to prevent leakage into the environment. Electrical equipment must be installed in non explosion proof (including lighting). Workplaces must be kept clean and escape routes must remain free.
7.2	Conditions for safe storage, including any incompatibilities
	Store in original container 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):

Hydroquinone	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m³	ppm	mg/m³
Australia		2		
Austria		2 inhalable aerosol		4 inhalable aerosol
Belgium		2		
Canada - Ontario		1		
Canada - Québec		2		
Denmark		2		2
Finland		0,5		2 (1)
France		2		
Ireland		0,5		
People's Republic of China		1		2 (1)
Poland		1		2
Romania		1		2 (1)
Singapore		2		
South Korea		2		
Spain		2		
Sweden		0,5		1,5 (1)
Switzerland		2 inhalable aerosol		2 inhalable aerosol
USA - NIOSH				2 (1)
USA - OSHA		2		
United Kingdom		0,5		

	Remarks
Finland	(1) 15 minutes average value
People's Republic of China	(1) 15 minutes average value
Romania	(1) 15 minutes average value
Spain	sen
Sweden	(1) 15 minutes average value
USA - NIOSH	(1) Ceiling limit value (15 min)

1-Phenyl-3-pyrazolidone (Phenidon A)-International limit values for chemical agents (Occupational exposure limits, OELs) – not available

Disodium disulphite

DNELs

	Workers	Consumers
Route of exposure	Chronic effects systemic	Chronic effects systemic
Oral	Not available	8.60 mg/kg bw/day
Inhalation	225 mg/m^3	66 mg/m^3

PNECs

Environmental protection target	PNEC
Fresh water	1 mg/L
Marine water	0.1 mg/L
Microorganisms in sewage treatment	75.4 mg/L

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 poluted clothes if needed.
	Respiratory protection: During normal handling is not required. In sensitive people (due to possible respiratory irritation) is recommended when mixing solution respirator use
	Hand protection: Use rubber (PE, nitril) gloves
	Eye protection: Safety glassesor protective face
	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	White powder
	Odour	Moderate, nonspecific
	pH	about 10,5 (solution after mixing small and big part)
	Melting point/freezing point	N.a.
	Initial boiling point and boiling range	N.a.
	Flash point	Fireproof
	Evaporation rate	N.a.
	Flammability	Incombustible
	Upper/lower flammability or explosive limits	Irrelevant
	Vapour pressure	Unknown
	Vapour density	Unknown
	Oxidising properties	No
	Relative density	N.a.
	Solubility – water	about 200 g/l
	Partition coefficient: n-octanol/water	Unknown

	Auto-ignition temperature	Irrelevant
	Decomposition temperature	N.a.
	Viscosity;	Irrelevant
	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
	N.a.
10.4	Conditions to avoid
	High temperature
10.5	Incompatible materials
	Strong mineral acids
10.6	Hazardous Decomposition Products
	Maybe it emits sulphur dioxide at high temperature or contact with acids

SECTION 11	Toxicological information
11.1	Information on toxicological effects

Acute toxicity	ATE_{mix} (oral)= 832 mg/kg(calculation) - Harmful is swallowed. **Hydroquinone** LD50/ oral/ rat : > 375 mg/kg LD50/ dermal/ rabbit : > 2000 mg/kg **1 phenyl-3 pyrazolidone (Phenidon A)** LD50/oral/ rat: 475 mg/kg bw *LD50/dermal/rat: 2000 mg/kg bw *source : substance Brief Profile: *http://echa.europa.eu/* **Disodium disulphite** LD50/oral/rat: 1540 mg/kg bw LD50/dermal/rat: >2000 mg/kg bw LC50/inhal/rat/4 hr: > 5,5 mg/L air
Skin corrosion/irritation	Based on available data, the criteria for this classification are not match up
Serious eye damage/eye irritation	Causes serious eye damage
Respiratory or skin sensitisation	May cause an allergic skin reaction
Germ cell mutagenicity	Suspected of causing genetic defects

Carcinogenicity	Suspected of causing cancer
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 —	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 nausea.

Toxicity inhal. (inhalation):

The product is not dangerous. Sensitive individuals may irritate respiratory system

Toxicity dermal.

May cause irritation skin

Eye Contact:

Causes serious eye damage

Immediate, delayed and chronic effects of short and long term exposure:
May cause cancer and genetic defects through prolonged or repeated exposure

SECTION 12	Ecological information
12.1	Toxicity
	Mixture is very toxic for aquatic life with long lasting effects. **Hydroquinone** LC50(fish)/96hr: 0.638 mg/L EC50(daphnia)/48hr: 0.134 mg/L EC50(water algae)/72hr: 0.33 mg/L NOEC(daphnia) /21d:0.0057mg/L NOEC(algae)/72 hr.: 0.019 mg/L **1-phenyl-3 pyrazolidone-Fenidon A** LC50/fish/96 hr.: 1-10 mg/L EC50/invertebrates(Daphnia magna)/96hr = 10 mg/L **Disodium disulphite** LC50/freshwater fish (Onchorhynchus mykiss)/96 hr:177.8mg/L EC50/freshwater invertebrates (Daphnia magna)/48 hr: 89 mg/L EC50/freshwater algae (Scenedesmus subspicatus)/72 hr : 43.8 mg/L EC50/bacterie (Pseudomonas putida)/17 hr: 56 mg/L NOEC/freshwater invertebrates (Daphnia magna)/21 d: >10 mg/L
12.2	Persistence and degradability
	Hydroquinone is considered to be biologically degradable (test OECD 301C).
12.3	Bioaccumulative potential,
	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
	WGK=1, lightly risking water

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:	The spilled product by mechanical collection. Minimize dust. Gather into a suitable labelled container for further processing or disposal. Spill site with water. Contaminated washing water and mix the solution contain and remove. Spilled product let soak up with inert absorbent material and pass the person authorized to remove. Must not be disposed of with household or other waste. Do not wash into sewerage.
	The recommended method of disposal of contaminated product packaging:	Emptied containers pass to the authorized person
	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	3077
14.2	UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,N.O.S. (HYDROQUINONE)
14.3	Transport hazard class(es)	9
14.4	Packing group	III
	Labels	9 
14.5	Environmental hazard	Product contains environmentally hazardous substances: (Hydroquinone,). Mixture is environmentally hazardous according to the criteria of the UN Model Regulations- see to section 12
	Marine pollutant	Yes
14.6	Special precautions for user	See to section 8- 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 carried in single or combination packaging containing a net quantity per single or inner packaging of 5 kg or less and is not subject to any other provisions of ADR provided packaging meet the general provisions of 4.1.1.1., 4.1.1.2 and 4.1.1.4 to 4.1.1.8 (according to chapter 3.3 ADR, special provisions 375) **IMDG:** The product is packaged in single or combination packaging containing a net quantity per single or inner packaging of 5 kg or less and is not subject to any other provisions of IMDG Code relevant to marine pollutants provided the packaging meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. (according to Chapter 2.10, paragraphs 2.10.2.7and 2.10.2.3) **ICAO/IATA**: The product is transported in single or combination packaging containing a net quantity per single or inner packaging of 5 kg or less and is not subject to any other provisions of the IATA Dangerous Goods Regulations provided the packaging used defined standards. (according to part 4.4 , Special provisions A197)	

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	
Carc.2	Carcinogenicity (Category 2)
Muta.2	Mutagenicity (Category 2)
Eye Dam.1	Serious eye damage (Category 1)
Skin Sens.1	Skin sensibilisation (Category 1)
Acute Tox.4	Hazardous to the aquatic environment, acute (Category 4)
Aquatic Acute 1	Hazardous to the aquatic environment, acute (Category 1)
Aquatic Chronic1	Hazardous to the aquatic environment, chronic (Category 1)

Aquatic Chronic2	Hazardous to the aquatic environment, chronic (Category 2)

CLP : Regulation (EC) č.1272/2008
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
SVHC: Substance of very hight 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 percent
EC50: Median Effective Concentration
LOAEL: Lowest observed adverse effect level
NOAEL: No Observed Adverse Effect Level
NOEC: No Observed Effect Concentration
M: multiplier factor
N.a.. not available
bw: body weight

Materials used for the processing of safety data sheet

Information provided by the producer- Material Safety Data Sheets (MSDS) for chemical substances **,** GESTIS database (www.gduv.de), European Chemicals Agency http://echa.europa.eu/

Classification (according to Regulation No 1272/2008 – CLP): calculation method

H-phrases **:**

H351	Suspected of causing cancer
H341	Suspected of causing genetic defects
H302	Harmful if swallowed
H318	Causes serious eye damage
H317	May cause an allergic skin reaction
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
EUH 031	Contact with acids liberates toxic gas.

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:

Version 3.2 – changed sections 1.4, 2.2, 8.1, 11.1, 12.1, 16 (added contact information- EU Poison Information Centres