



Material Safety Data Sheet

According to Regulation No 1907/2006/EC – REACH, No. 453/2010 and No 1272/2008/EC - CLP

Date of revision : 01/23/2015

Version No: 6.1

Replaced version No: 6.0

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| SECTION 1 | Identification of the substance/mixture and of the company/undertaking | |
| 1.1 | Product identifier | FOMAFIX P(U5); part B |
| | Other name or labeling of product: | |
| 1.2 | Relevant identified uses of the substance or mixture and uses advised against | |
| | Three-piece powder rapid fixer for processing of RTG 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 (Czech) | Toxicologic institute (TIS) Na Bojišti 1, 128 21 Praha 2 Tel. 224919293, 224915402 (continuous telephone information service) |

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| SECTION 2 | Hazards identification | |
| 2.1 | Classification (according to Regulation No 1272/2008 – CLP) | |
| | Acute Tox.4;H302 Eye Irrit.2;H319 | |
| | <u>The most important adverse physicochemical, human health and environmental effects:</u> Causes serious eye irritation.Harmful if swallowed. | |

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| 2.2 | Label elements (according to Regulation No 1272/2008/EC– CLP) | |
| | Identification of product | FOMAFIX P (U5), part B |
| | hazard pictogram | |
| | signal word | Warning |

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| <i>hazard statement(s) (H-, phrases)</i> | H302 H319 | Harmful if swallowed. Causes serious eye irritation. |
| <i>precautionary statement (P- phrases)</i> | P305+P351+P338 P261 | IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing Avoid breathing dust. |
| | | Contein:amonium chloride |
| | | FOMA BOHEMIA spol. s r.o., J. Krušinky 1737/6, 500 02 Hradec Králové tel: 495 733 111 |

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

| SECTION 3 | | Composition/information on ingredients | | | | |
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| 3.1 | | Substances | | | | |
| Folder name | Registration number | Index number | CAS number | ES number | Content % in the solution | Classification |
| Ammonium chloride | Not available | 017-014-00-8 | 12125-02-9 | 235-186-4 | 100 | Acute Tox.4;H302 Eye Irrit.2;H319 Xn;R22 Xi;R36 |

(Full text R, H-phrases... section 16)

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| SECTION 4 | First aid measures |
| 4.1 | Description of first aid measures |
| | Disabled person to lead from the contaminated area, bringing it into a state of peace and to facilitate breathing by loosening clothing, watch, and if necessary to 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 eye as soon as possible wash with plenty water. If necessary, open up violence cramped eyelids. Avoid contamination not contaminated eye wash liquid.. Do not neutralize. Seek medical help. |
| | Exposure by inhalation: Remove patient to fresh air, warm water rinse eyes, mouth and nasal cavity. |
| | Ingestion: Affected person calm, clear water rinse. Place to drink a glass (about 0.4 dl) of cold water. Do not induce vomiting. If affected persone vomit spontaneously, control to prevent inhalation of vomit. Do not administer activated charcoal, and no neutralizing agent. Call a physician or transport the affected person to a doctor. |

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| 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. |

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| SECTION 5 | Firefighting measures |
| 5.1 | Extinguishing media |
| | The product is not very flammable. Extinguishing agents adapt burning nearby. |
| | Inappropriate extinguishing media: N.a. |
| 5.2 | Special hazards arising from the substance or mixture |
| | Incombustible substance; Maybe it emits flammable gases in case fire (ammonia or hydrogen chloride) |
| 5.3 | Advice for firefighters: Breathing apparatus |

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| SECTION 6 | Accidental release measures |
| 6.1 | Personal precautions, protective equipment and emergency procedures |
| | Zoom out persons not participating in the elimination of consequences of the accident out of reach. Ventilate enclosed spaces. When removing the consequences of the accident using the prescribed personal protective equipment. When working on the disposal of the accident contained breathing apparatus and full protective suit. No smoking and treatment with an open fire. |
| 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 labeled 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 |

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| SECTION 7 | Handling and storage |
| 7.1 | Precautions for safe handling |
| | While working to comply with basic requirements of safe work. Wear recommended personal protective equipment. Avoid contact with eyes. By manipulation prohibits eating, drinking and smoking, working with hot materials and open flame. Equipment must be equipped with means of extinguishing in enclosed areas, ventilation should be provided, either naturally or forced. 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 equipments must be installed in non explosion proof (including lighting). Workplaces must be kept clean and escape routes must remain free. |

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| 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. |
| 7.3 | Specific end use(s) |
| | See in 1.2. , Other uses – not available |

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| SECTION 8 | Exposure controls/personal protection |
| 8.1 | Control parameters |
| | Government Regulation No 361/2007 Coll. - Conditions for health workers at work and occupational exposure limits in the air of workplaces and ways of measuring and evaluating. (Czech) Amonium chloride: PEL 5 mg/m ³ NPK-P 10 mg/m ³ |
| | Substance is not listed in Notice. No.432/2003 Coll., Laying down limit values of biological exposure tests: not available |
| 8.2 | Exposure controls |
| | Individual protection measures, incl. protective equipment |
| | Technical measures: Working with a local source of suction and running water for the irrigation needs of the eyes, wash your hands or contaminated parts of the skin. |
| | Tightly closed containers and equipment, natural and mechanical ventilation. Do not allow product to the eyes, mouth, inhalation, skin contact. Do not eat, drink or smoke. Avoid contact with food substances and drinks. After work wash hands with soap and water. |
| | 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 glasses |
| | Skin protection: Workwear |
| | Environmental exposure: Provide preventing spill into waterways, soil and drainage. |

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| SECTION 9 | Physical and chemical properties | |
| 9.1 | Information on basic physical and chemical properties | |
| | Appearance | White powder |
| | Odour | As ammonia |
| | pH | 4,5-5,5 |
| | Melting point/freezing point | 340°C |
| | Initial boiling point and boiling range | 520°C |
| | Flash point | Fireproof |
| | Evaporation rate | N.a. |
| | Flammability | Incombustible |
| | Upper/lower flammability or explosive limits | Irrelevant |
| | Vapour pressure | 1,3 kPa |

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| | Vapour density | Unknown |
| | Oxidising properties | No |
| | Relative density | 1,53 |
| | Solubility – watter | cca 370 g/l |
| | Partition coefficient: n-octanol/water | -4,37 |
| | Auto-ignition temperature | Irrelevant |
| | Decomposition temperature | N.a. |
| | Viscosity; | Irrelevant |
| | Explosive properties | No |
| 9.2 | Other information | |
| | Fat solubility | N.a. |
| | Conductivity | N.a. |

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| 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 |
| | Unknown. |
| 10.4 | Conditions to avoid |
| | N.a. |
| 10.5 | Incompatible materials |
| | N.a. |
| 10.6 | Hazardous Decomposition Products |
| | Ammonia,hydrogen chloride |

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| SECTION 11 | Toxicological informations |
| 11.1 | Information on toxicological effects |
| Acute toxicity | LD ₅₀ oral rat: 1650 mg/kg Harmful if swallowed |
| Skin corrosion/irritation | Skin-rabbit –moderate irritation -24hour |
| Serious eye damage/eye irritation | Causes serious eye damage |
| Respiratory or skin sensitisation | Based on available data, the criteria for this classification are not match up |
| Germ cell mutagenicity | Based on available data, the criteria for this classification are not match up |
| Carcinogenicity | Based on available data, the criteria for this classification are not match up |

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| 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 | May cause irritation mucous membrane |
| <u>Likely routes of exposure and symptoms related to the physical, chemical and toxicological characteristics:</u> | |
| Toxicity oral. (ingestion / swallowing): Harmful | |
| Toxicity inhal. (inhalation): Harmful- May cause irritation mucous membrane | |
| Toxicity dermal. Moderate irritation | |
| Eye Contact: Causes serious eye irritation | |
| Immediate, delayed and chronic effects of short and long term exposure: N.a. | |

| SECTION | Ecological information |
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| 12 | |
| 12.1 | Toxicity |
| | LC ₅₀ (fish)/96hour: 209-725 mg/l EC ₅₀ (daphnia)/16hour: n.a. EC ₅₀ (water algae)/72hour: n.a. mg/l |
| 12.2 | Persistence and degradability |
| | Inorganic substances- Irrelevant |
| 12.3 | Bioaccumulative potential |
| | It is not expected |
| 12.4 | Mobility in soil |
| | N.a. |
| 12.5 | Results of PBT and vPvB assessment |
| | Not available. Substances are not identified as a PBT or vPvB |
| 12.6 | Other adverse effects |
| | Harmful for aquatic life |

| SECTION | Disposal considerations |
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| 13.1 | Waste treatment methods | |
| | Code and type of waste | 09 01 04* –solutions of fixers 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 labeled 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 |

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| SECTION 14 | Transport information |
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Land transport (road / rail) ADR/RID , Maritime transport IMDG, Air transport ICAO-TI and IATA-DGR:

For the transport of the product **is not** classified as a dangerous thing (goods).

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| 14.1 | UN number | |
| 14.2 | UN proper shipping name | |
| 14.3 | Transport hazard class(es) | |
| 14.4 | Packing group | |
| | Classification code | |
| | Kemmler code | |
| | Labels | |
| 14.5 | Environmental hazards | see SECTION 12 |
| 14.6 | Special precautions for user | |
| 14.7 | Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | |

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| 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, autorisation, restriction chemicals (REACH) Regulation (EC) No 453/2010 Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures Direction No 67/548/EHS (DSD), 1999/45/ES (DPD) Act No. 350/2011 Coll. On chemical 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 |

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| | European Agreement concerning the international carriage of dangerous goods (ADR) applicable as from 1. January 2015 IMDG Code, MSC 93/22/Add.2 IATA Dangerous Goods Regulations, 56 th Edition |
| 15.2 | Chemical safety assessment |
| | The chemical safety assessment for the product was'n made. |

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| SECTION 16 | |
| Abbreviations, symbols | |
| Eye Irrit.2 | Serious eye irritation(Category 2) |
| Acute Tox.4 | Acute toxicity (oral), Hazard (Category 4) |
| Xn | harmfull |
| Xi | irritation |
| CLP | Regulation (ES) č.1272/2008 |
| DPD | Direction (ES) 1999/45/ES |
| PBT | Persistent, bioaccumulation, toxic |
| vPvB | High persistent, high bioaccumulation |
| SVHC | Substance of very hight concerns |
| DNEL | Derivated No-Effect Level |
| PNEC | Prediction No-Effect Concentration |

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| Materials used for the processing of safety data sheet | |
| Information provided by the producer Material Safety Data Sheets (MSDS) for chemical substances | |
| R, H-phrases : | |
| H302 | Harmful if swallowed |
| H319 | Causes serious eye irritation |
| R22 | Harmful if swallowed |
| R36 | Irritating to eyes. |
| 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 substance, which is not consistent with those of MSDS, excludes liability for defects, respectively damage, which would otherwise meet the producer, importer or retailer. | |

Revised safety data sheet:
version 6.1 – changes in section 1.3 and 2.2– address of supplier