Material Safety Data Sheet

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

Date of revision : 02/17/2016 Version No: 6.0

Replaced version No: 5.1

SECTION 1	Identification of the substance/mixture and of the company/undertaking	
1.1	Product identifier	**Black and white reversal film set, part D**
	Other name or labeling of product:	
1.2	Relevant identified uses of the substance or mixture and uses advised against	
	Concentrate of acid fixer for processing of black and white reversal 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)

SECTION 2	Hazards identification
2.1	**Classification (according to Regulation No 1272/2008 – CLP)**
	The mixture is not classified - shows no hazardous properties
	<u>The most important adverse physicochemical, human health and environmental effects:</u> Upon contact with the eyes can cause moderate irritation.

2.2	Label elements (according to Regulation No 1272/2008/EC– CLP)	
Identification of product		**Black and white reversal film set, part D**
hazard pictogram		
signal word		
hazard statement(s) (H- , EUH- phrases)		

precautionary statement (P- phrases)		
		FOMA BOHEMIA spol. s r.o., J. Krušinky 1737/6, 500 02 Hradec Králové tel: 495 733 111

2.3	Other hazards
	Sodium tetraborate decahydrate belongs to the category SVHC

SECTION 3	Composition/information on ingredients					
3.2	Mixtures					
Folder name	Registration number	Index number	CAS number	ES number	Content % in the solution	Classification
Acetic acid	01-2119475328-30	607-002-00-6	64-19-7	200-580-7	< 5	Flam Liq.3;H226 Skin Corr.1A;H314
Sodium tetraborate decahydrate	01-2119490790-32-0000	005-011-01-1	1303-96-4	215-540-4	< 2	Repr.1B;H360FD Eye Irrit.2;H319
Trisodium nitrilotriacetate (Na3NTA) (Dissolvine A 92)	01-2119519239-36-0002	607-620-00-6	5064-31-3	225-768-6	< 1	AcuteTox4;H302 Eye Irrit.2;H319 Carc.2;H351
Citric acid	01-2119457026-42-xxxx	Not available	5949-29-1	201-069-1	< 1	Eye Irrit.2;H319

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 (cca 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 sulfur dioxide
5.3	Advice for firefighters: Breathing apparatus

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

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)
Acetic acid PEL 25 mg/m^3 NPK-P 35 mg/m^3
Substance is not listed in Notice. No.432/2003 Coll., Laying down limit values of biological exposure tests: not available

Acetic acid

DNEL :	Workers	General
Acute – inhal., local. effect	25 mg/m^3	25mg/m^3
Long-Term – inhal., local effect	25 mg/m^3	25mg/m^3

PNEC :	
Freshwater	3.058 mg/l
Marine water	0.3 mg/l
Sediment in freshwater	11 mg/kg sediment dw
Sediment in marine water	1.1 mg/kg sediment dw
Soil	0.47 mg/kg sediment dw
Sewage treatment plant(STP)	85 mg/l

Sodium teraborate

DNEL :	Workers	General
Long-term – inhal., systemic.effect	6.7 mg/m^3	3. 4 mg/m^3
Long-term – dermal., systemic.effect	316.4 mg/kg bw/d	159.5 mg/kg bw/d
Long-term – oral., systemic.effect		0.79 mg/kg bw/d
Acute – oral., systemic.effect		0.79 mg/kg bw/d

PNEC:	
Freshwater	2.9 mg/l
Marine water	2.9 mg/l
Soil	5.7 mg/kg sediment dw
Sewage treatment plant (STP)	10 mg/l

Trisodium- nitrilotriacetate (Dissolvine A92)

DNEL:	Workers	General
Long-Term – inhal., systemic. effect	3.5 mg/m^3	
Long-Term – inhal., local. effect	3.5 mg/m^3	
Acute – inhal., systemic. effect	5.25 mg/m^3	1.75 mg/m^3
Acute – inhal., local. effect	5.25 mg/m^3	1.75 mg/m^3
Long-Term – oral. systemic.effect		0.5 mg/kg bw/d

PNEC :	
Freshwater	6.4 mg/l
Marine water	0.64 mg/l
Intermittent releases	3.1 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.
	Hand protection: Use rubber (PE, nitril) gloves
	Eye protection: Safety glasses- recommended
	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	Colourless- Sightly yellow liquid
	Odour	Moderate, nonspecific
	pH (20 ^{o}C)	5,5-5,8
	Melting point/freezing point	< 0 ^{o}C
	Initial boiling point and boiling range	> 100 ^{o}C
	Flash point	Fireproof
	Evaporation rate	N.a.
	Flammability	Incombustible
	Upper/lower flammability or explosive limits	Irrelevant
	Vapour pressure	<20 mbar
	Vapour density	Unknown
	Oxidising properties	No
	Relative density	1,29-1,31 g/cm^3
	Solubility – watter	Solution
	Partition coefficient: n-octanol/water	Unknown
	Auto-ignition temperature	Irrelevant
	Decomposition temperature	N.a.
	Viscosity;	N.a.
	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 minerale acids
10.4	Conditions to avoid
	High temperature
10.5	Incompatible materials
	Not available
10.6	Hazardous Decomposition Products
	Possible development of sulfur dioxide at elevated temperatures and reaction with acids

SECTION 11	Toxicological informations
11.1	Information on toxicological effects

Acute toxicity	Based on available data, the criteria for this classification are not match up
Skin corrosion/irritation	Based on available data, the criteria for this classification are not match up
Serious eye damage/eye irritation	Based on available data, the criteria for this classification are not match up
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
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

Acetic acid
LD_{50} / oral/rat: 3310 mg/kg
LD_{50} / dermal/rabbit: 1060 mg/kg
LC_{50} inhal, rat, (4h): 11.4 mg/l
Trisodium- nitrilotriacetát (Dissolvine A92):
LD_{50} oral, rat 1.000 - 2.000 mg/kg (BASF-test)
LC_{50} inhal., rat: > 5 mg/l 4 h
LD_{50} dermal, rabbit: > 10.000 mg/kg
Sodium tetraborate:
LD_{50} oral, rat (mg/kg): 4500 - 5000
LD_{50} dermal, rabbit (mg/kg): > 10000
LD_{50} inhal,rat (mg/l): > 2

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):

The product (solution) is not dangerous.

Toxicity dermal.

The product (solution) is not dangerous.

Eye Contact:

Upon contact with the eyes can cause moderate irritation.

Immediate, delayed and chronic effects of short and long term exposure:
N.a.

SECTION 12	Ecological information

12.1	Toxicity

Trisodium- nitrilotriacetát (Dissolvine A92)
LC_{50} (96 h) > 100 mg/l, Pimephales promelas
EC_{50} (96 h) 98 mg/l, Gammarus sp.
EC_{50} (72 h) > 91,5 mg/l , Scenedesmus subspicatus
EC_{50} (8 h) 3.200 - 5.600 mg/l, Pseudomonas fluorescens

Acetic acid:

LC_{50} ,fish (96h)- Lepomis macrochirus: 75 mg/l
EC_{50}-Daphnia magna, (24h): 47mg/l
Algae- IC_5 , scenedesmus quaudricauda, (16h): 4000 mg/l

Sodium tetraborate:
LC_{50} Rainbow trout, 24 days (mg B/l): 88
LC_{50} Rainbow trout, 32 days (mg B/l): 54
LC_{50} Goldfish, 7 days (mg B/l): 65
LC_{50} Goldfish, 3 days (mg B/l): 71
LC_{50} Dab, 96 h (mg B/l): 74
EC_{50} Daphnie, 24 h (mg B/l): 242
LC_{50} Midge larva, 28 days (mg B/kg): 27
LC_{50} Earthworm, 14 days (mg B/kg): 175
EC_{10} Green algae, 96 h (mg B/l): 24

	Low toxicity to the environment
12.2	Persistence and degradability
	Acetic acid: well biodegradace. Well biodegradace is supposed at other substances.
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
	Not available

SECTION 13	Disposal considerations	
13.1	Waste treatment methods	
	Code and type of waste	09 01 04* – fixer solutions 15 01 10 * - packaging containing residues of hazardous substances
	The recommended method of disposal of the substance/ preparation:	Spilled product let absorp 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 (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).

14.1	UN number	Not applicable
14.2	UN proper shipping name	Not applicable
14.3	Transport hazard class(es)	Not applicable
14.4	Packing group	Not applicable
	Labels	
14.5	Environmental hazard	See to section 12
	Marine pollutant	Not

14.6	Special precautions for user	See to section 8
14.7	Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable

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 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´n made.

SECTION 16	Other information
Abbreviations, symbols	
Carc.2	Carcinogenicity (Category 2)
Flam Liq.3	Flammable liquid (Category 3)
Repr.1B	Reproductive toxicity (Category 1B)
Acute Tox.4	Acute toxicity (Category 4)
Skin Corr. 1A	Skin corrosion (Cat. 1A)
Eye Irrit.2	Serious eye irritation (Cat. 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
NPK-P, PEL: Hygienic limits of chemical substances for working environment (the Czech Republic)

Materials used for the processing of safety data sheet

Information provided by the producter
Material Safety Data Sheets (MSDS) for chemical substances

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

H-phrases **:**

H351	Suspected of causing cancer
H226	Flammable liquid and vapour
H302	Harmful if swallowed
H319	Causes serious eye irritation
H314	Causes severe skin burns and eye damage
H360FD	May damage fertility or the unborn child

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.

Revised safety data sheet:

Revision:

Version 6.0 – new format MSDS (Regulation 2015/830)