

1 Commercial product name and supplier

1.1	Commercial product name / designation	RF10 FIXER FOR LASER PRINTER 2 X 24 I
1.2	Application / use	Photographic B&W Fixer
1.3	Producer	
1.4	Supplier	
1.5	TOX emergency number	
1.6	BAG T No. (CH)	
1.7	Product No.	951087

2 Composition

2.1	Chemical characterisation	Aqueous solution containing inorganic salts.
	Active ingredient:	(NH ₄) ₂ S ₂ O ₃
	CAS No.:	7783-18-8 ammonium thiosulfate
2.2	Components	tribu nium
	CAS Nr. :	7783-18-8
	EINECS:	231-982-0
	CAS Nr. :	7757-83-7
	EINECS:	231-821-4
	CAS Nr. :	64-19-7
	EINECS:	200-580-7
	CAS Nr. :	
	EINECS:	
	CAS Nr. :	7772-98-7
	EINECS:	231-867-5
		3 - 7 % sodium sulfite
		N/Ap
		3 - 7 % acetic acid
		C: Corrosive. R10: Flammable. R35: Causes severe burns.
		1 - 5 % sodium thiosulphate
		N/Ap
2.3	Further information	None.

3 Hazards identification

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4 First aid measures

4.1	Eye contact	Irrigate with flowing water immediately and continuously for 3 minutes. Consult medical personnel.
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4.2	Skin contact	Remove contaminated clothing.
4.3	Ingestion	Consult a physician or transport to emergency facility immediately.
4.4	Inhalation	Remove to fresh air.
4.5	Further information	None.
5	Fire-fighting measures	
5.1	Suitable extinguishing media	Water. Water fog, carbon dioxide, foam, dry chemicals.
5.2	Extinguishing media to avoid	None under normal conditions.
5.3	Further information	
6	Accidental release measures	Wear adequate personal protective equipment, see Section 8 (Exposure Controls/Personal Protection) Prevent from entering into soil, waterways and groundwater. Spills should be contained by, and covered with suitable absorbent material and removed for disposal. Dispose of according to local and national regulations.
7	Handling and storage	
7.1	Handling	Avoid eye contact. Wash hands and exposed skin before eating, drinking or smoking and after work.
7.2	Industrial hygiene	Follow normal industrial hygiene standards. Do not consume or store food in the work area.
7.3	Storage	Keep container tightly closed and dry.
7.4	Fire- and explosion protection	Not combustible.
8	Exposure controls / personal protection	
8.1	Technical equipment	Good general ventilation should be sufficient for most processing operations. Vent work area to ensure airborne concentrations are below the current occupational exposure limits. 10 or more room air changes per hour containing a minimum of 15% fresh air, will meet these requirements.
8.2	Control of threshold limits	None established.
8.3	Personal protective equipment	
8.3.1	Respiratory protection	No respiratory protection needed under normal conditions. Good general ventilation should be sufficient.
8.3.2	Hand protection	Use chemical resistant gloves. In case of prolonged immersion or frequently repeated contact use gloves made of the materials: Butyl rubber (thickness \geq 0.36 mm, breakthrough time $>$ 480 min), nitrile rubber (thickness \geq 0.38 mm, breakthrough time $>$ 480 min) or neoprene (thickness \geq 0.65 mm, breakthrough time $>$ 240 min). For intermittent splash protection corresponding gloves with breakthrough times $>$ 60 min can be used. Avoid gloves made of: natural rubber.

- 8.3.3 Eye protection Use chemical safety goggles.
Eye wash fountain should be located in immediate work area.
- 8.3.4 Other Appropriate protective clothing.

9 Physical and chemical properties

- 9.1 Appearance liquid
- 9.2 Color colourless
- 9.3 Odour vinegar
- 9.4 Change in physical state
 Melting point N/Av °C
 Boiling point N/Av °C
- 9.5 Density 1.331 g/cm³ (20 °C)
- 9.6 Vapour pressure ----- mm Hg (21 °C)
- 9.7 Viscosity ----- cP
- 9.8 Solubility in water ----- g/l (20 °C)
completely soluble
- 9.9 pH-value (25 °C)
acidic
- 9.10 Flash point ----- °C
- 9.11 Ignition temperature ----- °C
- 9.12 Explosion limits
 Lower: ----- vol.%
 Upper: ----- vol.%
- remark(s) None.
- 9.13 Further information None.

10 Stability and reactivity

- 10.1 Thermal decomposition Is stable under normal storage conditions.
- 10.2 Hazardous decomposition products
 In case of thermal decomposition poisonous and irritant gases/fumes can be released.
 Hazardous Decomposition Products:
 NH₃, SO₂
- 10.3 Hazardous reactions
 Release of ammonia with contact of alkalies.
 Release of sulfurdioxides with contact of acides.
- 10.4 Further information None.

11 Toxicological information

Product Information:

LD50, oral: > 5000 mg/kg Test Animal: Rats

LD50, dermal: N/Av Test Animal: N/Av

11.1 Acute Overexposure:

Primary Skin Irritation Index: N/Av N/Av

Primary Eye Irritation Index: N/Av N/Av

11.2 Further information

Ingredients information

CAS No.	Component	LD50 (mg/kg)	Test Animal:
7783-18-8	ammonium thiosulfate	2890	Rats
7757-83-7	sodium sulfite	820	Mice
64-19-7	acetic acid	3310	Rats
127-09-3	sodium acetate	3530	Rats
	sodium thiosulphate	> 2500	Rats
	Further information	None.	

12 Ecological information

Ecotox Data: N/Av

Chemical Fate Data:

Ingredients information

CAS No.	Component	Fish Toxicity	Fish Organism
7783-18-8	ammonium thiosulfate	LC50 N/Av	
	sodium sulfite	LC50 N/Av	
	acetic acid	LC50 251 ppm	Gambusia affinis
	sodium acetate		
	sodium thiosulphate		

13 Disposal considerations

Dispose of according to local and national regulations. Containers must be disposed of in accordance with local regulations.

13.1 EC-Waste Code

090104

13.2 Origin

Photographic Industry

14 Transport information

14.1 Road transport

UN-Number -----

Name and description (PSN)

GGVSE class

Classification code -----

RID / ADR class

Classification code -----

Packing group

Labels -----

Special provisions -----

Limited quantities -----

Packing instructions

Special pack. prov. -----

Mixed pack. prov. -----

Tremcard

Further information

nd (road,

14.2 Marine transport

UN-Number -----

Proper Shipping Name (PSN)

Class or division

GGVSee: -----

ADNR: -----

Subsidiary risk(s)

Packing group -----

Special provisions

Limited quantities -----

Packing instructions

Packing provisions -----

IBC instructions

IBC provisions -----

EmS

MFAG -----

Marine pollutant

Further information

ea.

14.3 Air transport

ICAO / IATA-GDR -----

UN-No. -----

PSN -----

Subsidiary risk

Labels -----

Packing group

Passenger aircraft

Cargo aircraft only

Further information

Material not classified for air transport.

15 Regulatory information

This product does not require classification according to the criteria of the EC and the "Gefahrstoffverordnung".

15.1 UN-No.

15.2 Swiss toxicity class

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15.3 EC-No.

15.4	Hazard symbols	-
15.5	Hazard designation	-----
15.6	Risk phrases	R: -
15.7	Safety phrases	S: -
15.8	TLV / MAK/...	NH3: MAK 20 ppm, 14 mg/m3, TLV 25 ppm / SO2: MAK 0.5 ppm, 1.3 mg/m3, TLV 2 ppm
15.9	BVD classification	-----
15.10	VbF	-----
15.11	Further information	None.

16	Other information	The use of the preparation is restricted to professional users!
16.1	Safety Data Sheet new / changed in section:	15.8 (TLV/MAK): Values updated
16.2	R-phrases mentioned in point 2.2 (components):	see section 2 of the Safety Data Sheet

The above mentioned data correspond to our present state of knowledge and experience. The safety data sheet serves as description of the products in regard to necessary safety measures. The indications have not the meaning of guarantees on properties.

N/Av = Not available N/Ap = Not applicable