

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Article
Product name : Silver Manganese Paper
Product code : INP246

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use, Industrial use
Use of the substance/mixture : Laboratory chemical
Function or use category : Laboratory chemicals

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Spectracer UK Ltd.

Second Floor,
27 Gloucester Place,
London,
W1U 8HU,
United Kingdom.

Tel: +44 (0) 207 193 9114

Fax: +44 (0) 203 432 4686

Email: contact@spectracer.co.uk

Web: www.spectracer.com

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	: +353 1 8379964	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD Msida	+356 2545 6504	
United Kingdom	National Poisons Information Service (NHS Direct)	http://www.npis.org	111 (England & Wales only) or 112 (EU) or 08454 24 24 24 (Scotland)	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Oxidising solids Not classified

Hazardous to the aquatic environment — Acute Hazard, Category 1 H400

Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS09

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P273 - Avoid release to the environment.
P391 - Collect spillage.

Silver Manganese Paper

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) as amended

WWW.FASTMSDS.COM

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
silver nitrate	(CAS-No.) 7761-88-8 (EC-No.) 231-853-9 (EC Index-No.) 047-001-00-2 (REACH-no) 01-2119513705-43-XXXX	0.1 – 0.5	Ox. Sol. 2, H272 Met. Corr. 1, H290 Skin Corr. 1B, H314 Aquatic Acute 1, H400 (M=1000) Aquatic Chronic 1, H410
manganese (II)sulphate, monohydrate substance with national workplace exposure limit(s) (BE, FI, GB)	(CAS-No.) 10034-96-5 (EC-No.) 232-089-9 (EC Index-No.) 025-003-00-4	0.1 – 0.5	STOT RE 2, H373 Aquatic Chronic 2, H411

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

:

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage.
Methods for cleaning up	: Mechanically recover the product.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Silver Manganese Paper

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) as amended

WWW.FASTMSDS.COM

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

silver nitrate (7761-88-8)

EU	Local name	Silver (soluble compounds as Ag)
EU	IOELV TWA (mg/m ³)	0.01 mg/m ³
EU	Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
Austria	Local name	Silber
Austria	MAK (mg/m ³)	0.1 mg/m ³
Austria	MAK Short time value (mg/m ³)	0.1 mg/m ³
Austria	Regulatory reference	BGBl. II Nr. 186/2015
Belgium	Local name	Argent (composés solubles) (en Ag) # Zilver (oplosbare verbindingen, als Ag)
Belgium	Limit value (mg/m ³)	0.01 mg/m ³ (Argent (composés solubles) (en Ag); Belgium; Time-weighted average exposure limit 8 h)
Belgium	Regulatory reference	Koninklijk besluit/Arrêté royal 02/09/2018
Bulgaria	Local name	Сребро, метал*
Bulgaria	OEL TWA (mg/m ³)	0.1 mg/m ³ 0.1 mg/m ³ метал 0.01 mg/m ³ разтворими съединения (като сребро)
Bulgaria	Notes	* (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
Bulgaria	Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр.73 от 4 септември 2018 г.)
Croatia	Local name	Srebro, metal
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	0.1 mg/m ³ 0.01 mg/m ³
Croatia	Naznake (HR)	EU* (naznaka da se radi o tvarima za koje su utvrđene indikativne granične vrijednosti izloženosti prema Direktivi 2000/39/ EC (prva lista))
Croatia	Regulatory reference	Pravilnik o izmjenama i dopunama Pravilnika o graničnim vrijednostima izloženosti opasnim tvarima pri radu i o biološkim graničnim vrijednostima (NN 91/2018)
Czech Republic	Local name	Stříbro
Czech Republic	Expoziční limity (PEL) (mg/m ³)	0.1 mg/m ³
Czech Republic	Expoziční limity (NPK-P) (mg/m ³)	0.3 mg/m ³
Czech Republic	Regulatory reference	Nařízení vlády č. 361/2007 Sb. (zpracovány změny č. 246/2018 Sb.)
Denmark	Local name	Sølv, pulver, støv og opløselige forbindelser
Denmark	Grænseværdie (langvarig) (mg/m ³)	0.01 mg/m ³ beregnet som Ag
Denmark	Anmærkninger (DK)	E (betyder, at stoffet har en EF-grænseværdi)
Denmark	Regulatory reference	BEK nr 655 af 31/05/2018
Estonia	Local name	Hõbe, metall, vähelahustuvad ühendid (arvutatudhõbedale)

Silver Manganese Paper

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) as amended

WWW.FASTMSDS.COM

silver nitrate (7761-88-8)		
Estonia	OEL TWA (mg/m ³)	0.1 mg/m ³
Estonia	Regulatory reference	Vabariigi Valitsuse 18. septembri 2001. a määruse nr 293 (RT I, 30.11.2011, 5)
Finland	Local name	Hopeanitraatti
Finland	HTP-arvo (8h) (mg/m ³)	0.01 mg/m ³ Ag
Finland	HTP-arvo (15 min)	0.03 mg/m ³ Ag
Finland	Huomautus (FI)	Ag
Finland	Regulatory reference	HTP-ARVOT 2018 (Sosiaali- ja terveystieteiden ministeriö)
France	Local name	Argent (métallique)
France	VME (mg/m ³)	0.1 mg/m ³
France	Note (FR)	Valeurs réglementaires indicatives
Germany	TRGS 900 Local name	Silber
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	0.1 mg/m ³ E (mg/m ³)
Germany	Limitation of exposure peaks	8(II)
Germany	TRGS 900 Remark	DFG,EU
Germany	TRGS 900 Regulatory reference	TRGS900
Germany	TRGS 910 Acceptable concentration notes	
Gibraltar	Eight hours mg/m ³	0.01 mg/m ³
Gibraltar	Name of agent	Silver (soluble compounds as Ag)
Gibraltar	Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Hungary	Local name	EZÜST, fém
Hungary	AK-érték	0.1 mg/m ³
Hungary	CK-érték	0.4 mg/m ³
Hungary	Megjegyzések (HU)	EU1
Ireland	Local name	Silver (metallic)
Ireland	OEL (8 hours ref) (mg/m ³)	0.1 mg/m ³
Ireland	Notes (IE)	IOELV
Ireland	Regulatory reference	Code of Practice for the Chemical Agents Regulations 2018
Italy	Local name	Argento, metallico
Italy	OEL TWA (mg/m ³)	0.1 mg/m ³
Italy	Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i.
Latvia	Local name	Sudrabs,metāliskais
Latvia	OEL TWA (mg/m ³)	0.1 mg/m ³
Malta	Local name	Silver,metallic
Malta	OEL TWA (mg/m ³)	0.1 mg/m ³
Malta	Regulatory reference	S.L.424.24 (L.N.57 of 2018)
Netherlands	Local name	Zilver, metallisch
Netherlands	Grenswaarde TGG 8H (mg/m ³)	0.1 mg/m ³
Poland	Local name	Srebro dymy i pyły
Poland	NDS (mg/m ³)	0.05 mg/m ³
Poland	Remark (PL)	Fracja wdychalna – frakcja aerozolu wnikająca przez nos i usta, która po zdeponowaniu w drogach oddechowych stwarza zagrożenie dla zdrowia.

Silver Manganese Paper

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) as amended

WWW.FASTMSDS.COM

silver nitrate (7761-88-8)		
Poland	Regulatory reference	Dz. U. 2018 poz. 1286
Portugal	Local name	Prata Metal, poeiras e fumos
Portugal	OEL TWA (mg/m ³)	0.1 mg/m ³ 0.01 mg/m ³
Slovakia	Regulatory reference	Norma Portuguesa NP 1796:2014
Romania	Local name	Argint
Romania	OEL TWA (mg/m ³)	0.1 mg/m ³ (Metalic)
Romania	Regulatory reference	Hotărârea nr. 584/2018
Slovakia	Local name	Striebro (ako Ag)
Slovakia	NPHV (priemerná) (mg/m ³)	0.1 mg/m ³ kovové 0.01 mg/m ³ rozpustné zlúčeniny
Slovakia	Regulatory reference	Nariadenie vlády č. 33/2018 Z.z.
Slovenia	Local name	srebro [7440-22-4] (topne spojine, računano kot Ag)
Slovenia	OEL TWA (mg/m ³)	0.01 mg/m ³
Slovenia	OEL STEL (mg/m ³)	0.02 mg/m ³
Slovenia	Remark (SI)	EU
Slovenia	Regulatory reference	Uradni list RS, št. 78/2018 z dne 4.12.2018
Spain	Local name	Plata
Spain	VLA-ED (mg/m ³)	0.1 mg/m ³ metal 0.01 mg/m ³ Compuestos solubles de plata, como Ag
Spain	Notes	VLÍ (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran al menos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembros disponen de un tiempo fijado en dichas directivas para su transposición a los valores límites de cada país miembro. Una vez adoptados, estos valores tienen la misma validez que el resto de los valores adoptados por el país).
Sweden	Local name	Silver, metall och svårösliga föreningar (som Ag)
Sweden	nivågränsvärde (NVG) (mg/m ³)	0.1 mg/m ³ totaldamm
Sweden	Anmärkning (SE)	2 (Med totaldamm menas de partiklar (aerosoler) som fastnar på ett filter i den provtagare som beskrivs i Metodserien, Provtagning av totaldamm och respirabelt damm, Metod nr 1010, Arbetarskyddsstyrelsen, numera Arbetsmiljöverket. Filterdiametern är normalt 37 mm, men kan även vara 25 mm. Trots sitt namn provtas inte den totala mängden luftburna partiklar med denna metod)
Sweden	Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom	Local name	Silver
United Kingdom	WEL TWA (mg/m ³)	0.01 mg/m ³ soluble compounds as Ag 0.1 mg/m ³ metallic
United Kingdom	Regulatory reference	EH40/2005 (Third edition, 2018). HSE
Iceland	Local name	Silfur, duft, ryk og leysanleg sambönd, sem Ag
Iceland	OEL (8 hours ref) (mg/m ³)	0.01 mg/m ³
Iceland	Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway	Local name	Sølv, metallstøv og røyk
Norway	Grenseverdier (AN) (mg/m ³)	0.1 mg/m ³

Silver Manganese Paper

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) as amended

WWW.FASTMSDS.COM

silver nitrate (7761-88-8)		
Norway	Merknader (NO)	E (EU har en veiledende grenseverdi for stoffet)
Switzerland	Local name	Silber
Switzerland	MAK (mg/m ³)	0.1 mg/m ³ 0.01 mg/m ³
Switzerland	KZGW (mg/m ³)	0.8 mg/m ³ 0.02 mg/m ³
Switzerland	Critical toxicity	Peau / Haut
Switzerland	Remark	e(mg/m ³) - Haut ^{KT HU} - NIOSH, OSHA
Switzerland	Regulatory reference	www.suva.ch, 01.07.2019
USA - ACGIH	Local name	Silver
USA - ACGIH	ACGIH TWA (mg/m ³)	0.01 mg/m ³ (Silver Soluble compounds, as Ag; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
USA - ACGIH	Remark (ACGIH)	TLV [®] Basis: Argyria
USA - ACGIH	Regulatory reference	ACGIH 2019

manganese (II)sulphate, monohydrate (10034-96-5)		
Belgium	Limit value (mg/m ³)	0.2 mg/m ³ (Manganèse et ses composés (en Mn); Belgium; Time-weighted average exposure limit 8 h)
Finland	Local name	Mangaani-(II)-sulfaatti, monohydraatti
Finland	HTP-arvo (8h) (mg/m ³)	0.02 mg/m ³ alveolijae
Finland	Huomautus (FI)	Mn, alveolijae
Finland	Regulatory reference	HTP-ARVOT 2018 (Sosiaali- ja terveystieteiden ministeriö)
Germany	TRGS 910 Acceptable concentration notes	
United Kingdom	WEL TWA (mg/m ³)	0.5 mg/m ³ Manganese inorganic compounds (as Mn); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
USA - ACGIH	ACGIH TWA (mg/m ³)	0.1 mg/m ³ (Manganese, inorganic compounds, as Mn; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction)

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protective equipment:

Avoid all unnecessary exposure. Gloves. Safety glasses. Protective clothing.

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Silver Manganese Paper

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) as amended

WWW.FASTMSDS.COM

Personal protective equipment symbol(s):



Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: Not applicable
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Silver Manganese Paper

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) as amended

WWW.FASTMSDS.COM

silver nitrate (7761-88-8)

LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

silver nitrate (7761-88-8)

LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight
----------------------------	----------------------

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.

silver nitrate (7761-88-8)

LC50 fish 1	1.5 µg/l (Silver (Ag))	Pimephales promelas (Fathead minnow)
EC50 Daphnia 1	0.22 µg/l Silver (Ag)	

manganese (II)sulphate, monohydrate (10034-96-5)

LC50 fish 2	33.8 mg/l (LC50; 96 h)
EC50 Daphnia 1	8.28 mg/l (EC50; 48 h)

12.2. Persistence and degradability

manganese (II)sulphate, monohydrate (10034-96-5)

Persistence and degradability	Biodegradability: Not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

12.3. Bioaccumulative potential

silver nitrate (7761-88-8)

BCF fish 1	11 – 19
Partition coefficient n-octanol/water (Log Pow)	0.19 (estimated value)

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component

silver nitrate (7761-88-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
----------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

12.6. Other adverse effects

No additional information available

Silver Manganese Paper

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) as amended

WWW.FASTMSDS.COM






SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 3077	UN 3077	UN 3077	UN 3077	UN 3077
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (silver nitrate ; manganese (II)sulphate, monohydrate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (silver nitrate ; manganese (II)sulphate, monohydrate)	Environmentally hazardous substance, solid, n.o.s. (silver nitrate ; manganese (II)sulphate, monohydrate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (silver nitrate ; manganese (II)sulphate, monohydrate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (silver nitrate ; manganese (II)sulphate, monohydrate)
Transport document description				
UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (silver nitrate ; manganese (II)sulphate, monohydrate), 9, III, (-)	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (silver nitrate ; manganese (II)sulphate, monohydrate), 9, III, MARINE POLLUTANT	UN 3077 Environmentally hazardous substance, solid, n.o.s. (silver nitrate ; manganese (II)sulphate, monohydrate), 9, III	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (silver nitrate ; manganese (II)sulphate, monohydrate), 9, III	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (silver nitrate ; manganese (II)sulphate, monohydrate), 9, III
14.3. Transport hazard class(es)				
9	9	9	9	9
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR) : M7
Special provisions (ADR) : 274, 335, 375, 601
Limited quantities (ADR) : 5kg
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P002, IBC08, LP02, R001
Special packing provisions (ADR) : PP12, B3
Mixed packing provisions (ADR) : MP10
Portable tank and bulk container instructions (ADR) : T1, BK1, BK2, BK3
Portable tank and bulk container special provisions (ADR) : TP33
Tank code (ADR) : SGAV, LGBV

Silver Manganese Paper

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) as amended

WWW.FASTMSDS.COM

Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V13
Special provisions for carriage - Bulk (ADR)	: VC1, VC2
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13
Hazard identification number (Kemler No.)	: 90
Orange plates	:



Tunnel restriction code (ADR)	: -
EAC code	: 2Z

Transport by sea

Special provisions (IMDG)	: 274, 335, 966, 967, 969
Limited quantities (IMDG)	: 5 kg
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP02, P002
Special packing provisions (IMDG)	: PP12
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B3
Tank instructions (IMDG)	: BK1, BK2, BK3, T1
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW23

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y956
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 956
PCA max net quantity (IATA)	: 400kg
CAO packing instructions (IATA)	: 956
CAO max net quantity (IATA)	: 400kg
Special provisions (IATA)	: A97, A158, A179, A197
ERG code (IATA)	: 9L

Inland waterway transport

Classification code (ADN)	: M7
Special provisions (ADN)	: 274, 335, 375, 601
Limited quantities (ADN)	: 5 kg
Excepted quantities (ADN)	: E1
Equipment required (ADN)	: PP, A
Number of blue cones/lights (ADN)	: 0
Additional requirements/Remarks (ADN)	: * Only in the molten state. ** For carriage in bulk see also 7.1.4.1. *** Only in the case of transport in bulk.

Rail transport

Classification code (RID)	: M7
Special provisions (RID)	: 274, 335, 375, 601
Limited quantities (RID)	: 5kg
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P002, IBC08, LP02, R001
Special packing provisions (RID)	: PP12, B3
Mixed packing provisions (RID)	: MP10
Portable tank and bulk container instructions (RID)	: T1, BK1, BK2, BK3

Silver Manganese Paper

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) as amended

WWW.FASTMSDS.COM

Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAV, LGBV
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W13
Special provisions for carriage – Bulk (RID)	: VC1, VC2
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW31
Colis express (express parcels) (RID)	: CE11
Hazard identification number (RID)	: 90

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

15.1.1. EU-Regulations

Contains no substance on the REACH candidate list

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

Germany

Regulatory reference	: WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)
Storage class (LGK)	: LGK 13 - Non-combustible solids
Employment restrictions	: Observe restrictions according Act on the Protection of Working Mothers (MuSchG) Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen	: manganese (II)sulphate, monohydrate is listed
SZW-lijst van mutagene stoffen	: manganese (II)sulphate, monohydrate is listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	: None of the components are listed

Denmark

Danish National Regulations	: Pregnant/breastfeeding women working with the product must not be in direct contact with the product
-----------------------------	--------------------------------------------------------------------------------------------------------

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BLV	Biological limit value
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level

Silver Manganese Paper

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) as amended

WWW.FASTMSDS.COM

DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Aquatic Acute 1	H400
Aquatic Chronic 3	H412

Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Met. Corr. 1	Corrosive to metals, Category 1
Ox. Sol. 2	Oxidising Solids, Category 2
Ox. Sol. Not classified	Oxidising solids Not classified
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.
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.
H412	Harmful to aquatic life with long lasting effects.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Ox. Sol. Not classified		Expert judgment
-------------------------	--	-----------------

Silver Manganese Paper

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) as amended

WWW.FASTMSDS.COM

Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 3	H412	Calculation method

SDS EU Mod H F (REACH ANNEX II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.