em-grade.com

SECURITY DATA SHEET

accordingly at regulation (CE) No. 1907/2006

Date revision 09.06.2022

RUBRIQUE 1: Identification

1.1 Identification

Product Name: **3% Lead citrate Reynolds**

Product Code: 11300, 11300-QG

1.2 Relevant identified uses of substance or mixture and not recommended uses

Contrast agent for electron microscopy

1.3 Information about the security data sheet provider

Company: em-grade.com distributed by

Delta Microscopies

22bis, Saint-Ybars Road
31190 MAURESSAC - FRANCE

Phone: (33) 05 61 73 60 14
Fax: (33) 05 61 80 78 53
Email address: contact@em-grade.com

1.4 Emergency call number

Emergency Call Number in France: 01 45 42 59 59 (ORFILA)

RUBRIQUE 2: Identification of hazards

2.1 Classification of substance or mixture:

GHS07

Skin corr. 2	**H315**	Causes an irritation skin
Eye Dam. 2	**H319**	Causes a severe irritation of the eyes
Stot S e 3	**H335**	May irritate the respiratory tract

2.2 Labeling items:

Etiquetage in accordance with the regulation (EC) No 1272/20008 [EU-GHS / CLP]

Pictogram :
Signal word : Warning
Hazard statement :
H315 Causes skin irritation.
H319 : Causes serious eye irritation.

H335 : May irritate the respiratory tract

Tips caution :
P261 Avoid breathing dust / fume / gas / mist / vapors / spray.
P280: Wear protective gloves/protective clothing /eye protection/face protection
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses if the victim is wearing them and they can be easily removed. Continue to rinse.
P405: Store locked up
P501: Dispose of contents in accordance with local/regional/national/international *regulation*

2.3 Other dangers:

Results of PBT and vPvB evaluations: Not applicable

RUBRIQUE 3: Composition/component information

3.1 Substances:

not applicable

3.2 Mixture:

Lead citrate in aqueous solution at 3% ; (1,2,3-Propanetricarboxylic acid, 2-hydroxy-, lead salt)

Formula: $PbC_6H_5O_7$

Molecular weight : 96,29

Composants	No.-CAS	No.-CE	% masse
Lead(II) nitrate	10099-74-8	233-245-9	<3%
Trisodium citrate dihydrate	6132-04-3	200-675-3	<4%
Sodium hydroxide	1310-73-2	215-185-5	<1%
Distilled water	7732-18-5	231-791-2	>92%

RUBRIQUE 4: First aid

4.1 Description of first aid

General advice : Consult a physician. Show this safety data sheet to the doctor in attendance.
In case of inhalation : T ransport the person out of the contaminated area. In case of respiratory arrest, give artificial respiration. See a doctor.
In case of skin contact : The aver soap with a large quantity of water. If irritation

develops, contact a physician.
In cace in eyes : Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing: If symptoms persist consult doctor

4.2 Main symptoms and effects, acute and delayed

Anemia, digestive disorders. Lead salts have been reported to cross the placenta, causing embryonic and fetal death. These salts are also teratogenic in certain animal species. No teratogenic effects have been reported following exposure to organometallic lead compounds. However, adverse effects of lead on human reproduction, embryonic and fetal development, and postnatal development (e.g. mental) have been reported. Excessive exposure may have an effect on the blood, nervous and digestive systems. Anemia develops as a result of inhibition of hemoglobin synthesis. If left untreated, there may be a risk of neuromuscular dysfunction, accompanied by possible paralysis and encephalopathy. Other symptoms of overexposure include pain in muscles and joints, weakness of extensor muscles (very often the hand and wrist), headache, dizziness, abdominal pain, diarrhea, constipation, nausea, vomiting, bluish gum line, insomnia and metallic taste in the mouth. High levels of this product in the body cause increased cerebrospinal pressure, brain damage and stupor, leading to coma and often death. Kidney damage can also occur

4.3 Indications of any immediate medical care and special treatment required

No further relevant information available

RUBRIQUE 5: Firefighting measures

5.1 Ways to extinguish

Adapt fire suppression measures to the environment.

5.2 Specific hazards resulting from substance or mixture

Carbon oxides, lead oxides

5.3 Advice to firefighters

Wear self-contained breathing apparatus for fire-fighting, if necessary.

RUBRIQUE 6: Measures in case of accidental dispersal

6.1 Individual precautions, protective equipment and emergency procedures

Use personal protective equipment **.** Avoid dust formation. Avoid breathing vapors, spray mist or gases. Provide adequate ventilation. Evacuate the staff to safe place. Avoid inhalation of dust.

6.2 Precautions for environmental protection

Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.

6.3 Containment and cleaning methods and equipment

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation

6.4 Reference to other topics

For information for safe handling, see Chapter 7. For information on personal protective equipment, see Chapter 8. For information on disposal, see Chapter 13.

RUBRIQUE 7: Manipulation and storage

7.1 Precautions to Take for Safe Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide adequate ventilation at places where dust is formed. For precautions, see section 2.2

7.2 Conditions for safe storage, including possible incompatibilities

Keep container tightly closed in a dry and well ventilated. Do not store in the refrigerator, this may induce a leak and increase the solubility of gases (air or CO2).

7.3 Special Final Use

Laboratory use

RUBRIQUE 8: Exposure controls/individual protection

8.1 Control Settings

Components with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace
Additional information: The lists that were valid during the creation were used as basis

8.2 Exposure control

Appropriate engineering controls : Handle in accordance with good industrial hygiene practices and safety guidelines . Wash hands before breaks and at the end of the work day.
Personal protective equipment :
Eye / face protection **:** Safety glasses with side shields. Use eye protection equipment tested and approved according to applicable standards and regulations. Such as NIOSH (US) or EN 166 (EU).
Hand / Skin Protection : Handle with gloves. Use an appropriate glove removal technique to prevent skin contact with the product (ie without touching the outer surface of the glove). Gloves p rotection selected must satisfy the specifications of EU Directive 89/686 / EEC and standard EN 374 that follows. Thickness mini 0.1mm. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practice. Wash and dry hands.
In case of immersion
Material: nitrile rubber
Minimum thickness: 0.11mm
Penetration time: > 480mn

Spray contact
Material: nitrile rubber
Minimum thickness: 0.11mm

Penetration time: > 30mn
For use in mixtures with other substances, and under conditions differing from EN 374, please contact the supplier of CE-approved gloves. This recommendation is given for information only and should be assessed by an industrial hygiene and safety specialist familiar with our customers' intended use. It should not be construed as an endorsement in any usage scenario.
General measures are protection and hygiene : A nsure the presence of rinses eye and a do uche safety. Use adequate ventilation. Handle in accordance with good industrial hygiene practices and safety instructions. Wash hands before breaks and at the end of the work day.
Respiratory protection : In the event of nuisance exposure, use a respirator with a particle filter type P1 (EN143) or type N95 (US). Use equipment tested and approved by standards such as NIOSH (US) or CEN (EU).
Body protection : C hoose protection according to the amount and concentration of the dangerous substance at work.

RUBRIQUE 9: Physical and chemical properties

9.1 Information on essential physical and chemical properties

Appearance: Liquid

Color: transparent

Smell: no characteristic odor

Olfactory threshold: data not available

pH: close to 12

Melting point: data not available

Boiling point/interval: env. 212.00 °F / 100.00 °C

Flashpoint: data not available

Flammability (solid, gas): data not available

Decomposition temperature: data not available

Danger of explosion data not available.

Explosive limit, higher: data not available

Explosive limit, lower: data not available

Vapor pressure : data not available

Relative density: data not available

Relative steam density: not applicable

Solubility in / Miscibility with Water: soluble

Partition coefficient (n-octanol/water): Not determined.

Viscosity, dynamic: not applicable

Viscosity, cinematic: not applicable

9.2 More information

void

RUBRIQUE 10: Stability and responsiveness

10.1 reactivity

stable under recommended storage conditions.

10.2 Chemical stability

no data available

10.3 Conditions to avoid

strong oxidizers

10.4 Incompatible materials

Strong oxidizing agents

10.5 Dangerous composition products

no data available

10.6 Possibility of dangerous reaction

no data available

RUBRIQUE 11: Toxicological information

11.1 Toxicological Effects Information

Acute toxicity
no data available
Skin corrosion/skin irritation
No data available
Serious eye damage/eye irritation
No data available
Respiratory or skin sensitization
No data available
Germ cell mutagenicity
No data available
Carcinogenicity
No data available
This product contains no known carcinogenic chemicals.

Reproductive toxicity
No data available
Specific target organ toxicity - single exposure
May irritate the respiratory tract
Specific target organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available

RUBRIQUE 12: Ecological information

12.1 Toxicity
no data available
12.2 Persistence and degradability
no data available
12.3 Bioaccumulation Potential
No other important information available.
12.4 Mobility in the ground
Water pollution class 1 (D) (Self-assessment): slightly polluting Do not allow undiluted or large quantities of the product to reach groundwater, water course or sewage system.
12.5 Results of PBT and vPvB evaluations
no data available
12.6 Other adverse effects
No other important information available.

RUBRIQUE 13: Elimination considerations

13.1 Waste Treatment Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.
Disposal of contaminated packaging : Dispose of as unused product.

RUBRIQUE 14: Transportation information

14.1 UN Number **ADR**	*Void*
14.2 United Nations Shipping Name **ADR**	*Void*
14.3 Transport Danger Class	*Void*
ADR	
class	
label	
IMDG, IATA	
class	
label	
14.4 Packing Group **ADR, IMDG, IATA**	*Void*
14.5 DAngers for the environment	*No applicable*
14.6 Special precautions to be taken by the user	*Pas de précautions spéciales requises* *Groupes de ségrégation (SGG7)* *Métaux lourds et leurs sels (y compris leurs composés organométalliques), (SGG9)* *plomb et ses composés* *Catégorie d'arrimage A*
14.7 Bulk transport in accordance with Schedule II of the MARPOL Convention and the IBC	*No applicable*
ADR	
Quantités exceptées (EQ)	Code: E1 Quantité maximale nette par emballage intérieur: 30 ml Quantité maximale nette par emballage extérieur: 1000 ml
IMDG	
Quantités exceptées (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "standard rules"	*Void*

RUBRIQUE 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific to the substance or mixture

Directives and regulations according to CE : SDS according to Reg CE N ° 1907/2006
Identification and characterization of the product : Al_2O_3

15.2 Chemical safety assessment:. data not available

RUBRIQUE 16: More information

These indications are based on the current state of our knowledge, but do not constitute a guarantee as to the properties of the product and do not give rise to a contractual legal relationship. They do not claim to be exhaustive and should be considered as a guide

Other information :
ADR : European Agreement on the Transport of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
End of the SDS