

CRYSTAL VIOLET ACC. GRAM-WEIGERT Stain for bacteria acc. Gram's staining protocol

Safety Data Sheet dated 18/4/2018, version 4



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

- 1.1. Product identifier
 - Mixture identification:
 - Trade name: CRYSTAL VIOLET ACC. GRAM-WEIGERT Stain for bacteria acc. Gram's staining protocol
 - trade code: C0171-2-3-C017AA-C017AC
 - CAS number: 0
- 1.2. Relevant identified uses of the substance or mixture and uses advised against
 - Recommended use: Reagent for Anatomy Pathology
 - Uses advised against: not any
- 1.3. Details of the supplier of the safety data sheet
 - Company: DIAPATH SpA - Via Savoldini , 71 - 24057 Martinengo (BG) -ITALY
 - DIAPATH SpA - phone +(39) 0363/986411 (8.30-17.30)
 - Competent person responsible for the safety data sheet: msds@diapath.com
- 1.4. Emergency telephone number
 - Centro Antiveleni - Ospedale di Niguarda - Milano - Tel. +39 02/66101029
 - Centro Antiveleni - Osp. Maggiore - Unità operativa di Tossicologia - Bologna - Tel. +39 051/382984235
 - Centro Antiveleni - Università di Roma, Policlinico Umberto I - Tel.+39 06/490663
 - Centro Antiveleno - Università di Torino - Tel. +39 011/637637
 - Centro Antiveleni - Ospedali Riuniti Cardarelli (c/o Usl 40) - Napoli - Tel. +39 081/5453333
 - Centro Antiveleni - Unità degli Studi di Messina (c/o Facoltà di Farmacia) - Tel. 090/6764059
 - Centro Antiveleni - Centro di Rianimazione e Terapia Intensiva, Osp. Generale Regionale
 - Centro Antiveleni - Istituto per l'Infanzia - Trieste - Tel. +39 040/3785373

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture
 - EC regulation criteria 1272/2008 (CLP):
 - Flam. Liq. 2, H225 Highly flammable liquid and vapour.
 - Eye Dam. 1, H318 Causes serious eye damage.
 - Skin Sens. 1, H317 May cause an allergic skin reaction.
 - Muta. 2, H341 Suspected of causing genetic defects.
 - Carc. 2, H351 Suspected of causing cancer.
 - STOT RE 2, H373 May cause damage to organs through prolonged or repeated exposure.
 - Aquatic Chronic 2, H411 Toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

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Hazard statements:

- H225 Highly flammable liquid and vapour.
- H318 Causes serious eye damage.
- H317 May cause an allergic skin reaction.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:

- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER/doctor/...
- P370+P378 In case of fire: Use ... to extinguish.
- P391 Collect spillage.
- P403+P235 Store in a well-ventilated place. Keep cool.

Special Provisions:

None

Contains

C.I. Basic Violet 3; 4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride aniline

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

>= 7% - < 10% ethanol; ethyl alcohol

Index number: 603-002-00-5, CAS: 64-17-5, EC: 200-578-6

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

Eye Irrit. 2 H319 Causes serious eye irritation.

>= 3% - < 5% C.I. Basic Violet 3; 4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride

Index number: 612-204-00-2, CAS: 548-62-9, EC: 208-953-6

Acute Tox. 4 H302 Harmful if swallowed.

Eye Dam. 1 H318 Causes serious eye damage.

Carc. 2 H351 Suspected of causing cancer.

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

>= 1% - < 3% aniline

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Index number: 612-008-00-7, CAS: 62-53-3, EC: 200-539-3
 Acute Tox. 3 H311 Toxic in contact with skin.
 Acute Tox. 3 H301 Toxic if swallowed.
 Skin Sens. 1 H317 May cause an allergic skin reaction.
 Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.
 Acute Tox. 3 H331 Toxic if inhaled.
 Eye Dam. 1 H318 Causes serious eye damage.
 Muta. 2 H341 Suspected of causing genetic defects.
 Carc. 2 H351 Suspected of causing cancer.
 STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.

>= 0.1% - < 0.25% methanol

Index number: 603-001-00-X, CAS: 67-56-1, EC: 200-659-6
 Flam. Liq. 2 H225 Highly flammable liquid and vapour.
 Acute Tox. 3 H311 Toxic in contact with skin.
 Acute Tox. 3 H331 Toxic if inhaled.
 Acute Tox. 3 H301 Toxic if swallowed.
 STOT SE 1 H370 Causes damage to organs.

SVHC Substances:

>= 3% - < 5% C.I. Basic Violet 3; 4-[4,4'-bis(dimethylamino)
 benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride
 Index number: 612-204-00-2, CAS: 548-62-9, EC: 208-953-6
 Substance SVHC

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.
 Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.
 OBTAIN IMMEDIATE MEDICAL ATTENTION.
 Wash thoroughly the body (shower or bath).
 Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
 Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

None

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

SECTION 5: Firefighting measures

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- 5.1. Extinguishing media
 - Suitable extinguishing media:
In case of fire: Use ... to extinguish.
 - Extinguishing media which must not be used for safety reasons:
None in particular.
- 5.2. Special hazards arising from the substance or mixture
 - Do not inhale explosion and combustion gases.
 - Burning produces heavy smoke.
- 5.3. Advice for firefighters
 - Use suitable breathing apparatus .
 - Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
 - Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

- 6.1. Personal precautions, protective equipment and emergency procedures
 - Wear personal protection equipment.
 - Remove all sources of ignition.
 - Remove persons to safety.
 - See protective measures under point 7 and 8.
- 6.2. Environmental precautions
 - Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
 - Retain contaminated washing water and dispose it.
 - In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
 - Suitable material for taking up: absorbing material, organic, sand
- 6.3. Methods and material for containment and cleaning up
 - Wash with plenty of water.
- 6.4. Reference to other sections
 - See also section 8 and 13

SECTION 7: Handling and storage

- 7.1. Precautions for safe handling
 - Avoid contact with skin and eyes, inhalation of vapours and mists.
 - Exercise the greatest care when handling or opening the container.
 - Don't use empty container before they have been cleaned.
 - Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
 - Contaminated clothing should be changed before entering eating areas.
 - Do not eat or drink while working.
 - See also section 8 for recommended protective equipment.
- 7.2. Conditions for safe storage, including any incompatibilities
 - Always keep in a well ventilated place.
 - Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.
 - Keep away from food, drink and feed.
 - Incompatible materials:
None in particular.
 - Instructions as regards storage premises:
Cool and adequately ventilated.
- 7.3. Specific end use(s)
 - None in particular

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ethanol; ethyl alcohol - CAS: 64-17-5

TLV/STEL - TWA: 1880 mg/m³, 1000 ppm

ACGIH - STEL: 1000 ppm - Notes: A3 - URT irr

aniline - CAS: 62-53-3

ACGIH - TWA(8h): 2 ppm - Notes: Skin, A3, BEI - MeHb-emia

methanol - CAS: 67-56-1

TLV-ACGIH - TWA(8h): 200 ppm - STEL(15min): 250 ppm

OEL - TWA(8h): 260 mg/m³, 200 ppm

EU - TWA(8h): 260 mg/m³, 200 ppm - Notes: Skin

ACGIH - TWA(8h): 200 ppm - STEL: 250 ppm - Notes: Skin, BEI - Headache, eye dam, dizziness, nausea

DNEL Exposure Limit Values

ethanol; ethyl alcohol - CAS: 64-17-5

Worker Industry: 1900 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Industry: 950 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 343 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

ethanol; ethyl alcohol - CAS: 64-17-5

Target: Fresh Water - Value: 0.96 mg/l

Target: Marine water - Value: 0.79 mg/l

Target: Freshwater sediments - Value: 3.6 mg/kg

Target: Marine water sediments - Value: 2.9 mg/kg

Target: Soil (agricultural) - Value: 0.63 mg/kg

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| Properties | Value | Method: | Notes: |
|------------------------|----------------|---------|--------|
| Appearance and colour: | liquid purple | -- | -- |
| Odour: | characteristic | -- | -- |

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| | | | |
|---|------|----|----|
| Odour threshold: | N.A. | -- | -- |
| pH: | 5.5 | -- | -- |
| Melting point / freezing point: | N.A. | -- | -- |
| Initial boiling point and boiling range: | N.A. | -- | -- |
| Flash point: | N.A. | -- | -- |
| Evaporation rate: | N.A. | -- | -- |
| Solid/gas flammability: | N.A. | -- | -- |
| Upper/lower flammability or explosive limits: | N.A. | -- | -- |
| Vapour pressure: | N.A. | -- | -- |
| Vapour density: | N.A. | -- | -- |
| Relative density: | N.A. | -- | -- |
| Solubility in water: | N.A. | -- | -- |
| Solubility in oil: | N.A. | -- | -- |
| Partition coefficient (n-octanol/water): | N.A. | -- | -- |
| Auto-ignition temperature: | N.A. | -- | -- |
| Decomposition temperature: | N.A. | -- | -- |
| Viscosity: | N.A. | -- | -- |
| Explosive properties: | N.A. | -- | -- |
| Oxidizing properties: | N.A. | -- | -- |

9.2. Other information

| Properties | Value | Method: | Notes: |
|--------------------------------------|-------|---------|--------|
| Miscibility: | N.A. | -- | -- |
| Fat Solubility: | N.A. | -- | -- |
| Conductivity: | N.A. | -- | -- |
| Substance Groups relevant properties | N.A. | -- | -- |

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SECTION 10: Stability and reactivity

- 10.1. Reactivity
Stable under normal conditions
- 10.2. Chemical stability
Stable under normal conditions
- 10.3. Possibility of hazardous reactions
None
- 10.4. Conditions to avoid
Stable under normal conditions.
- 10.5. Incompatible materials
Avoid contact with combustible materials. The product could catch fire.
- 10.6. Hazardous decomposition products
None.

SECTION 11: Toxicological information

- 11.1. Information on toxicological effects
Toxicological information of the product:
N.A.
Toxicological information of the main substances found in the product:
ethanol; ethyl alcohol - CAS: 64-17-5
 - a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 6200 mg/kg
Test: LC50 - Route: Inhalation - Species: Rat > 50 mg/m3
Test: LD50 - Route: Skin - Species: Rabbit = 20 g/kg
 - C.I. Basic Violet 3; 4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride - CAS: 548-62-9
 - a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat = 420 mg/kg
 - aniline - CAS: 62-53-3
 - a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat = 250 mg/kg
Test: LC50 - Route: Inhalation - Species: Mouse = 248 Ppm - Duration: 4h
Test: LD50 - Route: Skin - Species: Rabbit = 836 mg/kg
 - c) serious eye damage/irritation:
Test: Eye Irritant - Route: irritation - Species: Rabbit Positive
 - methanol - CAS: 67-56-1
 - a) acute toxicity:
Test: LC50 - Route: Inhalation - Species: Rat = 83.2 mg/l - Duration: 4h
Test: LD50 - Route: Oral - Species: Rat = 5300 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit = 15800 mg/kg
- If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:
- a) acute toxicity;
 - b) skin corrosion/irritation;
 - c) serious eye damage/irritation;
 - d) respiratory or skin sensitisation;
 - e) germ cell mutagenicity;
 - f) carcinogenicity;
 - g) reproductive toxicity;
 - h) STOT-single exposure;
 - i) STOT-repeated exposure;
 - j) aspiration hazard.

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SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.
ethanol; ethyl alcohol - CAS: 64-17-5

a) Aquatic acute toxicity:

Endpoint: EC10 - Species: chlorella vulgaris = 11.5 mg/l - Duration h: 72
Endpoint: EC10 - Species: selenastrum capricornutum = 0.44 g/l - Duration h: 72
Endpoint: NOEC - Species: chlamydomonas eugametos = 7.9 g/l - Duration h: 48
Endpoint: NOEC - Species: daphnia magna > 10 mg/l
Endpoint: NOEC - Species: ceriodaphnia dubia = 9.6 mg/l
Endpoint: EC50 - Species: artemia salina = 23.9 g/l - Duration h: 24
Endpoint: EC50 - Species: artemia salina nauplii = 857 mg/l - Duration h: 48
Endpoint: LC50 - Species: salmo gairdneri = 13 g/l - Duration h: 96
Endpoint: LC50 - Species: pimephales promelas > 13.5 g/l

C.I. Basic Violet 3; 4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride - CAS: 548-62-9

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: salmo gairdneri = 0.7 mg/l - Duration h: 96

c) Bacteria toxicity:

Endpoint: EC50 > 10 mg/l

aniline - CAS: 62-53-3

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 10.6 mg/l - Duration h: 96
Endpoint: EC50 - Species: daphnia magna = 80-380 mg/l - Duration h: 48
Endpoint: EC50 - Species: selenastrum capricornutum = 19.0 mg/l - Duration h: 72

12.2. Persistence and degradability

None

ethanol; ethyl alcohol - CAS: 64-17-5

Biodegradability: Readily biodegradable - Test: N.A. - Duration: N.A. - %: N.A. - Notes: N.A.

aniline - CAS: 62-53-3

Biodegradability: Readily biodegradable - Test: N.A. - Duration: N.A. - %: N.A. - Notes: N.A.

12.3. Bioaccumulative potential

ethanol; ethyl alcohol - CAS: 64-17-5

Bioaccumulation: little bioaccumulative - Test: N.A. N.A. - Duration: N.A. - Notes: N.A.

C.I. Basic Violet 3; 4-[4,4'-bis(dimethylamino)

benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride - CAS: 548-62-9

Bioaccumulation: Not bioaccumulative - Test: Kow - Partition coefficient 0.51 - Duration: N.A. - Notes: N.A.

12.4. Mobility in soil

ethanol; ethyl alcohol - CAS: 64-17-5

Mobility in soil: evaporates quickly - Test: N.A. N.A. - Duration: N.A. - Notes: N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

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SECTION 14: Transport information



- 14.1. UN number
 ADR-UN Number: 1992
 IATA-UN Number: 1992
 IMDG-UN Number: 1992
- 14.2. UN proper shipping name
 ADR-Shipping Name: FLAMMABLE LIQUID, TOXIC, N.O.S. (ethanol; ethyl alcohol, aniline)<CMPDATA,1,0,EWL856,EWL1828>
 IATA-Shipping Name: FLAMMABLE LIQUID, TOXIC, N.O.S. (ethanol; ethyl alcohol, aniline)<CMPDATA,1,0,EWL856,EWL1828>
 IMDG-Shipping Name: FLAMMABLE LIQUID, TOXIC, N.O.S. (ethanol; ethyl alcohol, aniline)<CMPDATA,1,0,EWL856,EWL1828>
- 14.3. Transport hazard class(es)
 ADR-Class: 3
 ADR-Label: 6.1
 ADR - Hazard identification number: 336
 IATA-Class: 3
 IATA-Label: 3 + 6.1
 IMDG-Class: 3
 IMDG-Class: 6.1 TOXICOLOGICAL SUBSTANCE
- 14.4. Packing group
 ADR-Packing Group: II
 IATA-Packing group: II
 IMDG-Packing group: II
- 14.5. Environmental hazards
 ADR-Environmental Pollutant: Yes
 IMDG-Marine pollutant: Marine Pollutant
 Most important toxic component: C.I. Basic Violet 3; 4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride<CMPDATA,1,0,13.20-349>
- 14.6. Special precautions for user
 ADR-Subsidiary risks: 6.1
 ADR-S.P.: 274
 ADR-Transport category (Tunnel restriction code): (D/E)
 IATA-Passenger Aircraft: 352
 IATA-Subsidiary risks: 6.1
 IATA-Cargo Aircraft: 364
 IATA-S.P.: A3
 IATA-ERG: 3HP
 IMDG-EmS: F-E , S-D
 IMDG-Subsidiary risks: 6.1
 IMDG-MFAG: 335
 IMDG-Stowage and handling: Category B
 IMDG-Segregation: Clear of living quarters.
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
 N.A.

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SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
- Dir. 98/24/EC (Risks related to chemical agents at work)
 - Dir. 2000/39/EC (Occupational exposure limit values)
 - Regulation (EC) n. 1907/2006 (REACH)
 - Regulation (EC) n. 1272/2008 (CLP)
 - Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
 - Regulation (EU) 2015/830
 - Regulation (EU) n. 286/2011 (ATP 2 CLP)
 - Regulation (EU) n. 618/2012 (ATP 3 CLP)
 - Regulation (EU) n. 487/2013 (ATP 4 CLP)
 - Regulation (EU) n. 944/2013 (ATP 5 CLP)
 - Regulation (EU) n. 605/2014 (ATP 6 CLP)
 - Regulation (EU) n. 2015/1221 (ATP 7 CLP)
 - Regulation (EU) n. 2016/918 (ATP 8 CLP)
 - Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restriction 40

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

Dir. 2004/42/EC (VOC directive)

SVHC Substances:

Substances in candidate list (Art. 59 Reg. 1907/2006, REACH):

C.I. Basic Violet 3; 4-[4,4'-bis(dimethylamino)

benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride

SVHC

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

Product belongs to category: P5c, E2

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Text of phrases referred to under heading 3:

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H351 Suspected of causing cancer.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

| Hazard class and hazard category | Code | Description |
|----------------------------------|-------|------------------------------|
| Flam. Liq. 2 | 2.6/2 | Flammable liquid, Category 2 |

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| | | |
|-------------------|--------------|--|
| Acute Tox. 3 | 3.1/3/Dermal | Acute toxicity (dermal), Category 3 |
| Acute Tox. 3 | 3.1/3/Inhal | Acute toxicity (inhalation), Category 3 |
| Acute Tox. 3 | 3.1/3/Oral | Acute toxicity (oral), Category 3 |
| Acute Tox. 4 | 3.1/4/Oral | Acute toxicity (oral), Category 4 |
| Eye Dam. 1 | 3.3/1 | Serious eye damage, Category 1 |
| Eye Irrit. 2 | 3.3/2 | Eye irritation, Category 2 |
| Skin Sens. 1 | 3.4.2/1 | Skin Sensitisation, Category 1 |
| Muta. 2 | 3.5/2 | Germ cell mutagenicity, Category 2 |
| Carc. 2 | 3.6/2 | Carcinogenicity, Category 2 |
| STOT SE 1 | 3.8/1 | Specific target organ toxicity - single exposure, Category 1 |
| STOT RE 1 | 3.9/1 | Specific target organ toxicity - repeated exposure, Category 1 |
| STOT RE 2 | 3.9/2 | Specific target organ toxicity - repeated exposure, Category 2 |
| Aquatic Acute 1 | 4.1/A1 | Acute aquatic hazard, category 1 |
| Aquatic Chronic 1 | 4.1/C1 | Chronic (long term) aquatic hazard, category 1 |
| Aquatic Chronic 2 | 4.1/C2 | Chronic (long term) aquatic hazard, category 2 |

Paragraphs modified from the previous revision:

SECTION 1: Identification of the substance/mixture and of the company/undertaking
SECTION 2: Hazards identification
SECTION 3: Composition/information on ingredients
SECTION 7: Handling and storage
SECTION 15: Regulatory information

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

| Classification according to Regulation (EC) Nr. 1272/2008 | Classification procedure |
|---|--------------------------|
| Flam. Liq. 2, H225 | On basis of test data |
| Eye Dam. 1, H318 | Calculation method |
| Skin Sens. 1, H317 | Calculation method |
| Muta. 2, H341 | Calculation method |

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| | |
|-------------------------|--------------------|
| Carc. 2, H351 | Calculation method |
| STOT RE 2, H373 | Calculation method |
| Aquatic Chronic 2, H411 | Calculation method |

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,
Commission of the European Communities
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van
Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

| | |
|-------------|--|
| ADR: | European Agreement concerning the International Carriage of Dangerous Goods by Road. |
| CAS: | Chemical Abstracts Service (division of the American Chemical Society). |
| CLP: | Classification, Labeling, Packaging. |
| DNEL: | Derived No Effect Level. |
| EINECS: | European Inventory of Existing Commercial Chemical Substances. |
| GefStoffVO: | Ordinance on Hazardous Substances, Germany. |
| GHS: | Globally Harmonized System of Classification and Labeling of Chemicals. |
| IATA: | International Air Transport Association. |
| IATA-DGR: | Dangerous Goods Regulation by the "International Air Transport Association" (IATA). |
| ICAO: | International Civil Aviation Organization. |
| ICAO-TI: | Technical Instructions by the "International Civil Aviation Organization" (ICAO). |
| IMDG: | International Maritime Code for Dangerous Goods. |
| INCI: | International Nomenclature of Cosmetic Ingredients. |
| KSt: | Explosion coefficient. |
| LC50: | Lethal concentration, for 50 percent of test population. |
| LD50: | Lethal dose, for 50 percent of test population. |
| PNEC: | Predicted No Effect Concentration. |
| RID: | Regulation Concerning the International Transport of Dangerous Goods by Rail. |
| STEL: | Short Term Exposure limit. |
| STOT: | Specific Target Organ Toxicity. |
| TLV: | Threshold Limiting Value. |
| TWA: | Time-weighted average |
| WGK: | German Water Hazard Class. |

PHLOXINE B ACC. GRAM Stain for bacteria acc. to Gram staining protocol

Safety Data Sheet dated 18/4/2018, version 3

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

- 1.1. Product identifier
 - Mixture identification:
 - Trade name: PHLOXINE B ACC. GRAM Stain for bacteria acc. to Gram staining protocol
 - trade code: C0391-3-C039AA
 - CAS number: 0
- 1.2. Relevant identified uses of the substance or mixture and uses advised against
 - Recommended use: Reagent for Anatomy Pathology
 - Uses advised against: not any
- 1.3. Details of the supplier of the safety data sheet
 - Company: DIAPATH SpA - Via Savoldini , 71 - 24057 Martinengo (BG) -ITALY
 - DIAPATH SpA - phone +(39) 0363/986411 (8.30-17.30)
 - Competent person responsible for the safety data sheet: msds@diapath.com
- 1.4. Emergency telephone number
 - Centro Antiveleni - Ospedale di Niguarda - Milano - Tel. +39 02/66101029
 - Centro Antiveleni - Osp. Maggiore - Unità operativa di Tossicologia - Bologna - Tel. +39 051/382984235
 - Centro Antiveleni - Università di Roma, Policlinico Umberto I - Tel.+39 06/490663
 - Centro Antiveleno - Università di Torino - Tel. +39 011/637637
 - Centro Antiveleni - Ospedali Riuniti Cardarelli (c/o Usl 40) - Napoli - Tel. +39 081/5453333
 - Centro Antiveleni - Unità degli Studi di Messina (c/o Facoltà di Farmacia) - Tel. 090/6764059
 - Centro Antiveleni - Centro di Rianimazione e Terapia Intensiva, Osp. Generale Regionale
 - Centro Antiveleni - Istituto per l'Infanzia - Trieste - Tel. +39 040/3785373

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture
 - EC regulation criteria 1272/2008 (CLP):
 - The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).
 - Adverse physicochemical, human health and environmental effects:
 - No other hazards
- 2.2. Label elements
 - Hazard pictograms: None
 - Hazard statements: None
 - Precautionary statements: None
 - Special Provisions: None
 - Special provisions according to Annex XVII of REACH and subsequent amendments: None
- 2.3. Other hazards

PHLOXINE B ACC. GRAM Stain for bacteria acc. to Gram staining protocol

vPvB Substances: None - PBT Substances: None
Other Hazards:
No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:
None.

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Wash with plenty of water and soap.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

None

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

Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

PHLOXINE B ACC. GRAM Stain for bacteria acc. to Gram staining protocol

- 6.2. Environmental precautions
 - Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
 - Retain contaminated washing water and dispose it.
 - In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
 - Suitable material for taking up: absorbing material, organic, sand
- 6.3. Methods and material for containment and cleaning up
 - Wash with plenty of water.
- 6.4. Reference to other sections
 - See also section 8 and 13

SECTION 7: Handling and storage

- 7.1. Precautions for safe handling
 - Avoid contact with skin and eyes, inhalation of vapours and mists.
 - Do not eat or drink while working.
 - See also section 8 for recommended protective equipment.
- 7.2. Conditions for safe storage, including any incompatibilities
 - Keep away from food, drink and feed.
 - Incompatible materials:
 - None in particular.
 - Instructions as regards storage premises:
 - Adequately ventilated premises.
- 7.3. Specific end use(s)
 - None in particular

SECTION 8: Exposure controls/personal protection

- 8.1. Control parameters
 - No occupational exposure limit available
 - DNEL Exposure Limit Values
 - N.A.
 - PNEC Exposure Limit Values
 - N.A.
- 8.2. Exposure controls
 - Eye protection:
 - Not needed for normal use. Anyway, operate according good working practices.
 - Protection for skin:
 - No special precaution must be adopted for normal use.
 - Protection for hands:
 - Not needed for normal use.
 - Respiratory protection:
 - Not needed for normal use.
 - Thermal Hazards:
 - None
 - Environmental exposure controls:
 - None
 - Appropriate engineering controls:
 - None

SECTION 9: Physical and chemical properties

- 9.1. Information on basic physical and chemical properties

PHLOXINE B ACC. GRAM Stain for bacteria acc. to Gram staining protocol

| Properties | Value | Method: | Notes: |
|---|-------------|---------|--------|
| Appearance and colour: | liquid pink | -- | -- |
| Odour: | odorless | -- | -- |
| Odour threshold: | N.A. | -- | -- |
| pH: | 7.3 | -- | -- |
| Melting point / freezing point: | N.A. | -- | -- |
| Initial boiling point and boiling range: | N.A. | -- | -- |
| Flash point: | N.A. | -- | -- |
| Evaporation rate: | N.A. | -- | -- |
| Solid/gas flammability: | N.A. | -- | -- |
| Upper/lower flammability or explosive limits: | N.A. | -- | -- |
| Vapour pressure: | N.A. | -- | -- |
| Vapour density: | N.A. | -- | -- |
| Relative density: | N.A. | -- | -- |
| Solubility in water: | N.A. | -- | -- |
| Solubility in oil: | N.A. | -- | -- |
| Partition coefficient (n-octanol/water): | N.A. | -- | -- |
| Auto-ignition temperature: | N.A. | -- | -- |
| Decomposition temperature: | N.A. | -- | -- |
| Viscosity: | N.A. | -- | -- |
| Explosive properties: | N.A. | -- | -- |
| Oxidizing properties: | N.A. | -- | -- |

9.2. Other information

PHLOXINE B ACC. GRAM Stain for bacteria acc. to Gram staining protocol

| Properties | Value | Method: | Notes: |
|--------------------------------------|-------|---------|--------|
| Miscibility: | N.A. | -- | -- |
| Fat Solubility: | N.A. | -- | -- |
| Conductivity: | N.A. | -- | -- |
| Substance Groups relevant properties | N.A. | -- | -- |

SECTION 10: Stability and reactivity

- 10.1. Reactivity
Stable under normal conditions
- 10.2. Chemical stability
Stable under normal conditions
- 10.3. Possibility of hazardous reactions
None
- 10.4. Conditions to avoid
Stable under normal conditions.
- 10.5. Incompatible materials
None in particular.
- 10.6. Hazardous decomposition products
None.

SECTION 11: Toxicological information

- 11.1. Information on toxicological effects
Toxicological information of the product:
N.A.
Toxicological information of the main substances found in the product:
If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:
 - a) acute toxicity;
 - b) skin corrosion/irritation;
 - c) serious eye damage/irritation;
 - d) respiratory or skin sensitisation;
 - e) germ cell mutagenicity;
 - f) carcinogenicity;
 - g) reproductive toxicity;
 - h) STOT-single exposure;
 - i) STOT-repeated exposure;
 - j) aspiration hazard.

SECTION 12: Ecological information

- 12.1. Toxicity
Adopt good working practices, so that the product is not released into the environment.
N.A.
- 12.2. Persistence and degradability
None
N.A.
- 12.3. Bioaccumulative potential
N.A.

PHLOXINE B ACC. GRAM Stain for bacteria acc. to Gram staining protocol

- 12.4. Mobility in soil
N.A.
- 12.5. Results of PBT and vPvB assessment
vPvB Substances: None - PBT Substances: None
- 12.6. Other adverse effects
None

SECTION 13: Disposal considerations

- 13.1. Waste treatment methods
Recover if possible. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

- 14.1. UN number
Not classified as dangerous in the meaning of transport regulations.
- 14.2. UN proper shipping name
N.A.
- 14.3. Transport hazard class(es)
N.A.
- 14.4. Packing group
N.A.
- 14.5. Environmental hazards
- 14.6. Special precautions for user
N.A.
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
N.A.

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
 - Dir. 98/24/EC (Risks related to chemical agents at work)
 - Dir. 2000/39/EC (Occupational exposure limit values)
 - Regulation (EC) n. 1907/2006 (REACH)
 - Regulation (EC) n. 1272/2008 (CLP)
 - Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
 - Regulation (EU) 2015/830
 - Regulation (EU) n. 286/2011 (ATP 2 CLP)
 - Regulation (EU) n. 618/2012 (ATP 3 CLP)
 - Regulation (EU) n. 487/2013 (ATP 4 CLP)
 - Regulation (EU) n. 944/2013 (ATP 5 CLP)
 - Regulation (EU) n. 605/2014 (ATP 6 CLP)
 - Regulation (EU) n. 2015/1221 (ATP 7 CLP)
 - Regulation (EU) n. 2016/918 (ATP 8 CLP)
 - Regulation (EU) n. 2016/1179 (ATP 9 CLP)
- Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:
 - Restrictions related to the product:
No restriction.
 - Restrictions related to the substances contained:
No restriction.
- Where applicable, refer to the following regulatory provisions :
Directive 2012/18/EU (Seveso III)

PHLOXINE B ACC. GRAM Stain for bacteria acc. to Gram staining protocol

Regulation (EC) nr 648/2004 (detergents).
Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):
Seveso III category according to Annex 1, part 1
None

15.2. Chemical safety assessment
No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Paragraphs modified from the previous revision:

SECTION 1: Identification of the substance/mixture and of the company/undertaking
SECTION 2: Hazards identification
SECTION 4: First aid measures
SECTION 6: Accidental release measures
SECTION 11: Toxicological information
SECTION 15: Regulatory information
SECTION 16: Other information

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,
Commission of the European Communities
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van
Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

| | |
|-------------|--|
| ADR: | European Agreement concerning the International Carriage of Dangerous Goods by Road. |
| CAS: | Chemical Abstracts Service (division of the American Chemical Society). |
| CLP: | Classification, Labeling, Packaging. |
| DNEL: | Derived No Effect Level. |
| EINECS: | European Inventory of Existing Commercial Chemical Substances. |
| GefStoffVO: | Ordinance on Hazardous Substances, Germany. |
| GHS: | Globally Harmonized System of Classification and Labeling of Chemicals. |
| IATA: | International Air Transport Association. |
| IATA-DGR: | Dangerous Goods Regulation by the "International Air Transport Association" (IATA). |
| ICAO: | International Civil Aviation Organization. |
| ICAO-TI: | Technical Instructions by the "International Civil Aviation Organization" (ICAO). |
| IMDG: | International Maritime Code for Dangerous Goods. |
| INCI: | International Nomenclature of Cosmetic Ingredients. |
| KSt: | Explosion coefficient. |

PHLOXINE B ACC. GRAM Stain for bacteria acc. to Gram staining protocol

| | |
|-------|---|
| LC50: | Lethal concentration, for 50 percent of test population. |
| LD50: | Lethal dose, for 50 percent of test population. |
| PNEC: | Predicted No Effect Concentration. |
| RID: | Regulation Concerning the International Transport of Dangerous Goods by Rail. |
| STEL: | Short Term Exposure limit. |
| STOT: | Specific Target Organ Toxicity. |
| TLV: | Threshold Limiting Value. |
| TWA: | Time-weighted average |
| WGK: | German Water Hazard Class. |

IODINE SOLUTION ACC. GRAM Solution for Gram staining

Safety Data Sheet dated 24/4/2018, version 4

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

- 1.1. Product identifier
 - Mixture identification:
 - Trade name: IODINE SOLUTION ACC. GRAM Solution for Gram staining
 - trade code: G0081-2-G008AA-G008AC
 - CAS number: 0
- 1.2. Relevant identified uses of the substance or mixture and uses advised against
 - Recommended use: Reagent for Anatomy Pathology
 - Uses advised against: not any
- 1.3. Details of the supplier of the safety data sheet
 - Company: DIAPATH SpA - Via Savoldini , 71 - 24057 Martinengo (BG) -ITALY
 - DIAPATH SpA - phone +(39) 0363/986411 (8.30-17.30)
 - Competent person responsible for the safety data sheet: msds@diapath.com
- 1.4. Emergency telephone number
 - Centro Antiveleni - Ospedale di Niguarda - Milano - Tel. +39 02/66101029
 - Centro Antiveleni - Osp. Maggiore - Unità operativa di Tossicologia - Bologna - Tel. +39 051/382984235
 - Centro Antiveleni - Università di Roma, Policlinico Umberto I - Tel.+39 06/490663
 - Centro Antiveleno - Università di Torino - Tel. +39 011/637637
 - Centro Antiveleni - Ospedali Riuniti Cardarelli (c/o Usl 40) - Napoli - Tel. +39 081/5453333
 - Centro Antiveleni - Unità degli Studi di Messina (c/o Facoltà di Farmacia) - Tel. 090/6764059
 - Centro Antiveleni - Centro di Rianimazione e Terapia Intensiva, Osp. Generale Regionale
 - Centro Antiveleni - Istituto per l'Infanzia - Trieste - Tel. +39 040/3785373

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture
 - EC regulation criteria 1272/2008 (CLP):
 - The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).
 - Adverse physicochemical, human health and environmental effects:
 - No other hazards
- 2.2. Label elements
 - Hazard pictograms:
 - None
 - Hazard statements:
 - None
 - Precautionary statements:
 - None
 - Special Provisions:
 - None
 - Special provisions according to Annex XVII of REACH and subsequent amendments:
 - None
- 2.3. Other hazards
 - vPvB Substances: None - PBT Substances: None

IODINE SOLUTION ACC. GRAM Solution for Gram staining

Other Hazards:
No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

None.

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

None

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

Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible

IODINE SOLUTION ACC. GRAM Solution for Gram staining

authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No occupational exposure limit available

DNEL Exposure Limit Values

N.A.

PNEC Exposure Limit Values

N.A.

8.2. Exposure controls

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Not needed for normal use.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| Properties | Value | Method: | Notes: |
|------------------------|----------------|---------|--------|
| Appearance and colour: | liquid brown | -- | -- |
| Odour: | characteristic | -- | -- |

IODINE SOLUTION ACC. GRAM Solution for Gram staining

| | | | |
|---|------|----|----|
| Odour threshold: | N.A. | -- | -- |
| pH: | 6.7 | -- | -- |
| Melting point / freezing point: | N.A. | -- | -- |
| Initial boiling point and boiling range: | N.A. | -- | -- |
| Flash point: | N.A. | -- | -- |
| Evaporation rate: | N.A. | -- | -- |
| Solid/gas flammability: | N.A. | -- | -- |
| Upper/lower flammability or explosive limits: | N.A. | -- | -- |
| Vapour pressure: | N.A. | -- | -- |
| Vapour density: | N.A. | -- | -- |
| Relative density: | N.A. | -- | -- |
| Solubility in water: | N.A. | -- | -- |
| Solubility in oil: | N.A. | -- | -- |
| Partition coefficient (n-octanol/water): | N.A. | -- | -- |
| Auto-ignition temperature: | N.A. | -- | -- |
| Decomposition temperature: | N.A. | -- | -- |
| Viscosity: | N.A. | -- | -- |
| Explosive properties: | N.A. | -- | -- |
| Oxidizing properties: | N.A. | -- | -- |

9.2. Other information

| Properties | Value | Method: | Notes: |
|--------------------------------------|-------|---------|--------|
| Miscibility: | N.A. | -- | -- |
| Fat Solubility: | N.A. | -- | -- |
| Conductivity: | N.A. | -- | -- |
| Substance Groups relevant properties | N.A. | -- | -- |

IODINE SOLUTION ACC. GRAM Solution for Gram staining**SECTION 10: Stability and reactivity**

- 10.1. Reactivity
Stable under normal conditions
- 10.2. Chemical stability
Stable under normal conditions
- 10.3. Possibility of hazardous reactions
None
- 10.4. Conditions to avoid
Stable under normal conditions.
- 10.5. Incompatible materials
None in particular.
- 10.6. Hazardous decomposition products
None.

SECTION 11: Toxicological information

- 11.1. Information on toxicological effects
Toxicological information of the product:
N.A.
Toxicological information of the main substances found in the product:
If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:
 - a) acute toxicity;
 - b) skin corrosion/irritation;
 - c) serious eye damage/irritation;
 - d) respiratory or skin sensitisation;
 - e) germ cell mutagenicity;
 - f) carcinogenicity;
 - g) reproductive toxicity;
 - h) STOT-single exposure;
 - i) STOT-repeated exposure;
 - j) aspiration hazard.

SECTION 12: Ecological information

- 12.1. Toxicity
Adopt good working practices, so that the product is not released into the environment.
N.A.
- 12.2. Persistence and degradability
None
N.A.
- 12.3. Bioaccumulative potential
N.A.
- 12.4. Mobility in soil
N.A.
- 12.5. Results of PBT and vPvB assessment
vPvB Substances: None - PBT Substances: None
- 12.6. Other adverse effects
None

SECTION 13: Disposal considerations

- 13.1. Waste treatment methods
Recover if possible. In so doing, comply with the local and national regulations currently in force.

IODINE SOLUTION ACC. GRAM Solution for Gram staining**SECTION 14: Transport information**

- 14.1. UN number
Not classified as dangerous in the meaning of transport regulations.
- 14.2. UN proper shipping name
N.A.
- 14.3. Transport hazard class(es)
N.A.
- 14.4. Packing group
N.A.
- 14.5. Environmental hazards
ADR-Environmental Pollutant: No
IMDG-Marine pollutant: No
- 14.6. Special precautions for user
N.A.
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
N.A.

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) 2015/830
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:
Restrictions related to the product:
No restriction.
Restrictions related to the substances contained:
No restriction.
Where applicable, refer to the following regulatory provisions :
Directive 2012/18/EU (Seveso III)
Regulation (EC) nr 648/2004 (detergents).
Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):
Seveso III category according to Annex 1, part 1
None
- 15.2. Chemical safety assessment

IODINE SOLUTION ACC. GRAM Solution for Gram staining

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Paragraphs modified from the previous revision:

SECTION 1: Identification of the substance/mixture and of the company/undertaking
SECTION 15: Regulatory information

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,
Commission of the European Communities
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van
Nostrand Reinold

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This MSDS cancels and replaces any preceding release.

| | |
|-------------|--|
| ADR: | European Agreement concerning the International Carriage of Dangerous Goods by Road. |
| CAS: | Chemical Abstracts Service (division of the American Chemical Society). |
| CLP: | Classification, Labeling, Packaging. |
| DNEL: | Derived No Effect Level. |
| EINECS: | European Inventory of Existing Commercial Chemical Substances. |
| GefStoffVO: | Ordinance on Hazardous Substances, Germany. |
| GHS: | Globally Harmonized System of Classification and Labeling of Chemicals. |
| IATA: | International Air Transport Association. |
| IATA-DGR: | Dangerous Goods Regulation by the "International Air Transport Association" (IATA). |
| ICAO: | International Civil Aviation Organization. |
| ICAO-TI: | Technical Instructions by the "International Civil Aviation Organization" (ICAO). |
| IMDG: | International Maritime Code for Dangerous Goods. |
| INCI: | International Nomenclature of Cosmetic Ingredients. |
| KSt: | Explosion coefficient. |
| LC50: | Lethal concentration, for 50 percent of test population. |
| LD50: | Lethal dose, for 50 percent of test population. |
| PNEC: | Predicted No Effect Concentration. |
| RID: | Regulation Concerning the International Transport of Dangerous Goods by Rail. |
| STEL: | Short Term Exposure limit. |
| STOT: | Specific Target Organ Toxicity. |
| TLV: | Threshold Limiting Value. |
| TWA: | Time-weighted average |
| WGK: | German Water Hazard Class. |

XILOLO-ANILINA SEC. GRAM Soluzione per colorazione Gram

Safety Data Sheet dated 19/4/2016, version 2



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

- 1.1. Product identifier
Mixture identification:
Trade name: XILOLO-ANILINA SEC. GRAM Soluzione per colorazione Gram
trade code: X004AA-X0042
- 1.2. Relevant identified uses of the substance or mixture and uses advised against
Recommended use:
Reagent for Anatomy Pathology
Uses advised against:
not any
- 1.3. Details of the supplier of the safety data sheet
Company:
DIAPATH SpA - Via Savoldini , 71 - 24057 Martinengo (BG) -ITALY
DIAPATH SpA - phone +(39) 0363/986411 (8.30-17.30)
Competent person responsible for the safety data sheet:
msds@diapath.com
- 1.4. Emergency telephone number
Centro Antiveleni - Ospedale di Niguarda - Milano - Tel. +39 02/66101029
Centro Antiveleni - Osp. Maggiore - Unità operativa di Tossicologia - Bologna - Tel. +39 051/382984235
Centro Antiveleni - Università di Roma, Policlinico Umberto I - Tel.+39 06/490663
Centro Antiveleno - Università di Torino - Tel. +39 011/637637
Centro Antiveleni - Ospedali Riuniti Cardarelli (c/o Usl 40) - Napoli - Tel. +39 081/5453333
Centro Antiveleni - Unità degli Studi di Messina (c/o Facoltà di Farmacia) - Tel. 090/6764059
Centro Antiveleni - Centro di Rianimazione e Terapia Intensiva, Osp. Generale Regionale
Centro Antiveleni - Istituto per l'Infanzia - Trieste - Tel. +39 040/3785373

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture
Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:
EC regulation criteria 1272/2008 (CLP):
Flam. Liq. 2, H225 Highly flammable liquid and vapour.
Acute Tox. 4, H302 Harmful if swallowed.
Acute Tox. 3, H311 Toxic in contact with skin.
Acute Tox. 3, H331 Toxic if inhaled.
Skin Irrit. 2, H315 Causes skin irritation.
Eye Dam. 1, H318 Causes serious eye damage.
Skin Sens. 1, H317 May cause an allergic skin reaction.
Muta. 2, H341 Suspected of causing genetic defects.
Carc. 2, H351 Suspected of causing cancer.
STOT SE 3, H335 May cause respiratory irritation.
STOT RE 1, H372 Causes damage to organs through prolonged or repeated exposure.
Aquatic Chronic 1, H410 Very toxic to aquatic life with long lasting effects.
Adverse physicochemical, human health and environmental effects:
No other hazards
- 2.2. Label elements
Symbols:

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Danger

Hazard statements:

H225 Highly flammable liquid and vapour.
 H302 Harmful if swallowed.
 H311+H331 Toxic in contact with skin or if inhaled.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H317 May cause an allergic skin reaction.
 H341 Suspected of causing genetic defects.
 H351 Suspected of causing cancer.
 H335 May cause respiratory irritation.
 H372 Causes damage to organs through prolonged or repeated exposure.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor/...
 P370+P378 In case of fire: Use ... to extinguish.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Special Provisions:

None

Contents:

aniline
 xylene [4]

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

>= 50% - < 60% aniline

Index number: 612-008-00-7, CAS: 62-53-3, EC: 200-539-3

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H301 Toxic if swallowed.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

Acute Tox. 3 H331 Toxic if inhaled.

Eye Dam. 1 H318 Causes serious eye damage.

Muta. 2 H341 Suspected of causing genetic defects.

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Carc. 2 H351 Suspected of causing cancer.
STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.

>= 50% - < 60% xylene [4]
Index number: 601-022-00-9, CAS: 1330-20-7, EC: 215-535-7
Flam. Liq. 3 H226 Flammable liquid and vapour.
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
Acute Tox. 4 H312 Harmful in contact with skin.
Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

SECTION 4: First aid measures**4.1. Description of first aid measures**

In case of skin contact:

Immediately take off all contaminated clothing.
Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.
OBTAIN IMMEDIATE MEDICAL ATTENTION.
Wash thoroughly the body (shower or bath).
Remove contaminated clothing immediately and dispose off safely.
After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
Protect uninjured eye.

In case of Ingestion:

Do NOT induce vomiting.
Give nothing to eat or drink.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.
In case of inhalation, consult a doctor immediately and show him packing or label.

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

None

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

SECTION 5: Firefighting measures**5.1. Extinguishing media**

Suitable extinguishing media:
Extinguishing media which must not be used for safety reasons:
None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.
Burning produces heavy smoke.

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5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Exercise the greatest care when handling or opening the container.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Always keep in a well ventilated place.

Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

aniline - CAS: 62-53-3

TLV TWA - ppm 2 Skin A3

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TLV STEL - Skin A3
 xylene [4] - CAS: 1330-20-7
 STEL (EC) - LTE: 442 mg/m³, 100 ppm
 TWA (EC) - LTE: 221 mg/m³, 50 ppm
 DNEL Exposure Limit Values
 xylene [4] - CAS: 1330-20-7
 Consumer: 174 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term (acute)
 Consumer: 108 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects
 Consumer: 14.8 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term (repeated)
 Consumer: 108 mg/kg - Exposure: Human Dermal - Frequency: Long Term (repeated)
 Consumer: 14.8 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term (repeated)
 Consumer: 1.6 mg/kg - Exposure: Human Oral - Frequency: Long Term (repeated)
 Worker Industry: 289 mg/kg - Exposure: Human Inhalation - Frequency: Short Term (acute)
 Worker Industry: 289 mg/kg - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
 Worker Industry: 180 mg/kg - Exposure: Human Dermal - Frequency: Long Term (repeated)
 Worker Industry: 77 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term (repeated)
 PNEC Exposure Limit Values
 xylene [4] - CAS: 1330-20-7
 Target: Fresh Water - Value: 0.32 mg/l
 Target: Marine water - Value: 0.32 mg/l
 Target: Freshwater sediments - Value: 12.46 mg/kg
 Target: Marine water sediments - Value: 12.46 mg/kg
 Target: Soil (agricultural) - Value: 2.31 mg/kg
 Target: purification plant - Value: 6.58 mg/kg
 8.2. Exposure controls
 Eye protection:
 Use close fitting safety goggles, don't use eye lens.
 Protection for skin:
 Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.
 Protection for hands:
 Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.
 Respiratory protection:
 Use respiratory protection where ventilation is insufficient or exposure is prolonged.
 Use adequate protective respiratory equipment.
 Thermal Hazards:
 None
 Environmental exposure controls:
 None
 Appropriate engineering controls:
 None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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| Properties | Value | Method: | Notes: |
|---|------------------|---------|--------|
| Appearance and colour: | liquid colorless | -- | -- |
| Odour: | characteristic | -- | -- |
| Odour threshold: | N.A. | -- | -- |
| pH: | N.A. | -- | -- |
| Melting point / freezing point: | N.A. | -- | -- |
| Initial boiling point and boiling range: | N.A. | -- | -- |
| Flash point: | 21 ° C | -- | -- |
| Evaporation rate: | N.A. | -- | -- |
| Solid/gas flammability: | N.A. | -- | -- |
| Upper/lower flammability or explosive limits: | N.A. | -- | -- |
| Vapour pressure: | N.A. | -- | -- |
| Vapour density: | N.A. | -- | -- |
| Relative density: | N.A. | -- | -- |
| Solubility in water: | N.A. | -- | -- |
| Solubility in oil: | N.A. | -- | -- |
| Partition coefficient (n-octanol/water): | N.A. | -- | -- |
| Auto-ignition temperature: | N.A. | -- | -- |
| Decomposition temperature: | N.A. | -- | -- |
| Viscosity: | N.A. | -- | -- |
| Explosive properties: | N.A. | -- | -- |
| Oxidizing properties: | N.A. | -- | -- |

9.2. Other information

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| Properties | Value | Method: | Notes: |
|--------------------------------------|-------|---------|--------|
| Miscibility: | N.A. | -- | -- |
| Fat Solubility: | N.A. | -- | -- |
| Conductivity: | N.A. | -- | -- |
| Substance Groups relevant properties | N.A. | -- | -- |

SECTION 10: Stability and reactivity

- 10.1. Reactivity
Stable under normal conditions
- 10.2. Chemical stability
Stable under normal conditions
- 10.3. Possibility of hazardous reactions
None
- 10.4. Conditions to avoid
Stable under normal conditions.
- 10.5. Incompatible materials
Avoid contact with combustible materials. The product could catch fire.
- 10.6. Hazardous decomposition products
None.

SECTION 11: Toxicological information

- 11.1. Information on toxicological effects
Toxicological information of the mixture:
N.A.
 - Toxicological information of the main substances found in the mixture:
aniline - CAS: 62-53-3
 - a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat = 250 mg/kg
Test: LC50 - Route: Inhalation - Species: Mouse = 248 Ppm - Duration: 4h
Test: LD50 - Route: Skin - Species: Rabbit = 836 mg/kg
 - c) serious eye damage/irritation:
Test: Eye Irritant - Route: irritation - Species: Rabbit Positive
 - xylene [4] - CAS: 1330-20-7
 - a) acute toxicity:
Test: LD50 - Route: Oral - Species: Mouse = 5627 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 5000 ml/kg
Test: LC50 - Route: Inhalation - Species: Rat = 6700 Ppm - Duration: 4h
 - g) reproductive toxicity:
Test: Reproductive Toxicity - Species: Rat = 500 Ppm
- If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:
- a) acute toxicity;
 - b) skin corrosion/irritation;
 - c) serious eye damage/irritation;
 - d) respiratory or skin sensitisation;
 - e) germ cell mutagenicity;
 - f) carcinogenicity;

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- g) reproductive toxicity;
- h) STOT-single exposure;
- i) STOT-repeated exposure;
- j) aspiration hazard.

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

aniline - CAS: 62-53-3

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 10.6 mg/l - Duration h: 96

Endpoint: EC50 - Species: daphnia magna = 80-380 mg/l - Duration h: 48

Endpoint: EC50 - Species: selenastrum capricornutum = 19.0 mg/l - Duration h: 72

xylene [4] - CAS: 1330-20-7

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: salmo gairdneri = 2.6 mg/l - Duration h: 96

Endpoint: IC50 - Species: daphnia magna = 1 mg/l - Duration h: 24

Endpoint: CE0 - Species: pseudokirchneriella subcapitata = 0.44 mg/l - Duration h: 73

Endpoint: EC50 - Species: pseudokirchneriella subcapitata = 4.36 mg/l - Duration h: 73

Endpoint: EC10 - Species: selenastrum capricornutum = 1.9 mg/l - Duration h: 73

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Fish > 1.3 mg/l - Notes: 56 giorni

Endpoint: NOEC - Species: daphnia magna = 1.57 mg/l - Notes: 21 giorni

12.2. Persistence and degradability

None

aniline - CAS: 62-53-3

Biodegradability: Readily biodegradable - Test: N.A. - Duration: N.A. - %: N.A. - Notes: N.A.

xylene [4] - CAS: 1330-20-7

Biodegradability: potenzialmente biodegradabile - Test: N.A. - Duration: diap1 - %: 70 - Notes: N.A.

12.3. Bioaccumulative potential

xylene [4] - CAS: 1330-20-7

Bioaccumulation: little bioaccumulative - Test: N.A. N.A. - Duration: N.A. - Notes: N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information



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- 14.1. UN number
 ADR-UN Number: 2929
 IATA-UN Number: 2929
 IMDG-UN Number: 2929
- 14.2. UN proper shipping name
 ADR-Shipping Name: TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (aniline, xylene [4])
 IATA-Shipping Name: TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (aniline, xylene [4])
 IMDG-Shipping Name: TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (aniline, xylene [4])
- 14.3. Transport hazard class(es)
 ADR-Class: 6.1
 ADR - Hazard identification number: 63
 IATA-Class: 6.1
 IATA-Label: 6.1 + 3
 IMDG-Class: 6.1
- 14.4. Packing group
 ADR-Packing Group: II
 IATA-Packing group: II
 IMDG-Packing group: II
- 14.5. Environmental hazards
 ADR-Environmental Pollutant: Yes
 IMDG-Marine pollutant: Marine Pollutant
 Most important toxic component: aniline
- 14.6. Special precautions for user
 ADR-Subsidiary risks: 3
 ADR-S.P.: 274
 ADR-Tunnel Restriction Code: (D/E)
 IATA-Passenger Aircraft: 654
 IATA-Subsidiary risks: 3
 IATA-Cargo Aircraft: 662
 IATA-S.P.: A4 A137
 IATA-ERG: 6F
 IMDG-EmS: F-E , S-D
 IMDG-Subsidiary risks: 3
 IMDG-Storage category: Category B
 IMDG-Storage notes: Clear of living quarters.
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
 N.A.

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
 Dir. 98/24/EC (Risks related to chemical agents at work)
 Dir. 2000/39/EC (Occupational exposure limit values)
 Regulation (EC) n. 1907/2006 (REACH)
 Regulation (EC) n. 1272/2008 (CLP)
 Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
 Regulation (EU) 2015/830
 Regulation (EU) n. 286/2011 (ATP 2 CLP)
 Regulation (EU) n. 618/2012 (ATP 3 CLP)
 Regulation (EU) n. 487/2013 (ATP 4 CLP)
 Regulation (EU) n. 944/2013 (ATP 5 CLP)
 Regulation (EU) n. 605/2014 (ATP 6 CLP)

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Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restriction 40

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions :

Directive 82/501/EEC ('Activities linked to risks of serious accidents') and subsequent amendments.

Regulation (EC) nr 648/2004 (detergents).

1999/13/EC (VOC directive)

Provisions related to directives 82/501/EC(Seveso), 96/82/EC(Seveso II):

N.A.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Paragraphs modified from the previous revision:

SECTION 2: Hazards identification

SECTION 3: Composition/information on ingredients

SECTION 4: First aid measures

SECTION 5: Firefighting measures

SECTION 7: Handling and storage

SECTION 8: Exposure controls/personal protection

SECTION 9: Physical and chemical properties

SECTION 11: Toxicological information

SECTION 12: Ecological information

SECTION 14: Transport information

SECTION 15: Regulatory information

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,
Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van
Nostrand Reinold

CCNL - Appendix 1

Insert further consulted bibliography

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of
Dangerous Goods by Road.

CAS: Chemical Abstracts Service (division of the American Chemical
Society).

CLP: Classification, Labeling, Packaging.

DNEL: Derived No Effect Level.

EINECS: European Inventory of Existing Commercial Chemical Substances.

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| | |
|-------------|---|
| GefStoffVO: | Ordinance on Hazardous Substances, Germany. |
| GHS: | Globally Harmonized System of Classification and Labeling of Chemicals. |
| IATA: | International Air Transport Association. |
| IATA-DGR: | Dangerous Goods Regulation by the "International Air Transport Association" (IATA). |
| ICAO: | International Civil Aviation Organization. |
| ICAO-TI: | Technical Instructions by the "International Civil Aviation Organization" (ICAO). |
| IMDG: | International Maritime Code for Dangerous Goods. |
| INCI: | International Nomenclature of Cosmetic Ingredients. |
| KSt: | Explosion coefficient. |
| LC50: | Lethal concentration, for 50 percent of test population. |
| LD50: | Lethal dose, for 50 percent of test population. |
| LTE: | Long-term exposure. |
| PNEC: | Predicted No Effect Concentration. |
| RID: | Regulation Concerning the International Transport of Dangerous Goods by Rail. |
| STE: | Short-term exposure. |
| STEL: | Short Term Exposure limit. |
| STOT: | Specific Target Organ Toxicity. |
| TLV: | Threshold Limiting Value. |
| TWATLV: | Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard). |
| WGK: | German Water Hazard Class. |