

SAFETY DATA SHEET



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

Astasol AN900110N

Creation date 20th March 2020
Revision date Version 1.0

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

- 1.1. Product identifier**
Substance / mixture Astasol AN900110N
Number mixture
AN900110N
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**
Mixture's intended use
The use descriptors
SU 24 Scientific research and development
PC 21 Laboratory chemicals
Mixture uses advised against The product should not be used in ways other than those referred in Section 1.
- 1.3. Details of the supplier of the safety data sheet**
Manufacturer
Name or trade name Analytika, spol. s r.o.
Address Ke Klíčovu 816/2a, Praha 9 - Vysočany, 190 00
Czech Republic
Identification number (CRN) 14891883
VAT Reg No CZ14891883
Phone +420 286 589 616
E-mail sales@analytika.net
Web address www.analytika.net
Competent person responsible for the safety data sheet
Name Analytika, spol. s r.o.
E-mail sales@analytika.net
- 1.4. Emergency telephone number**
National Health Service (NHS) 111
National poisoning information centre Scotland, NHS 24: 111
112

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture**
Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

Met. Corr. 1, H290
Skin Corr. 1, H314
Aquatic Chronic 3, H412

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse physico-chemical effects

May be corrosive to metals.

Most serious adverse effects on human health and the environment

Causes severe skin burns and eye damage. Harmful to aquatic life with long lasting effects.

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2.2. Label elements

Hazard pictogram



Signal word

Danger

Hazardous substances

nitric acid
silver nitrate

Hazard statements

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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 doctor.

2.3. Other hazards

Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

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SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture of substances and additives specified below.

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

| Identification numbers | Substance name | Content in % weight | Classification according to Regulation (EC) No 1272/2008 | Note. |
|---|----------------|---------------------|---|-------|
| Index: 007-004-00-1 CAS: 7697-37-2 EC: 231-714-2 Registration number: 01-2119487297-23-0070 | nitric acid | 2 | Ox. Liq. 2, H272 Met. Corr. 1, H290 Skin Corr. 1A, H314 Acute Tox. 3, H331 EUH 071 Specific concentration limit: Skin Corr. 1A, H314: C ≥ 20 % Skin Corr. 1B, H314: 5 % ≤ C < 20 % Ox. Liq. 2, H272: C ≥ 99 % Ox. Liq. 3, H272: 65 % ≤ C < 99 % Met. Corr. 1, H290: C ≥ 1 % | 1, 2 |
| Index: 047-001-00-2 CAS: 7761-88-8 EC: 231-853-9 | silver nitrate | 1,57 | Ox. Sol. 2, H272 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | |

Notes

1 Note B: Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ... %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

2 Substance for which exposure limits of Community for working environment exist.

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

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If inhaled

Take care of your own safety, do not let the affected person walk! Terminate the exposure immediately; move the affected person to fresh air. Beware of the contaminated clothes. Depending on the situation, call the medical rescue service and ensure medical treatment considering the frequent need of further observation for at least 24 hours.

If on skin

Remove contaminated clothes. Take off any rings, watches, bracelets before or during washing if worn in the contaminated areas of the skin. Depending on the situation, call the medical rescue service and always ensure medical treatment. Rinse contaminated areas with a flow of water, lukewarm at best, for 10-30 minutes; do not use any brush, soap or neutralizers. Rinse skin with water/shower. Rinse cautiously with water for several minutes.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. No neutralization should be performed in any case! Rinsing should be continued for 10-30 minutes from the inner to the outer eye corner to make sure that the other eye is not involved. Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible. Everyone must be referred for treatment even if affected only a little.

If swallowed

DO NOT INDUCE VOMITING - there is danger of further damage to the gastrointestinal tract!!! Danger of esophageal and gastric perforation! RINSE THE MOUTH WITH WATER IMMEDIATELY AND LET THE PERSON DRINK 2-5 dl of cold water to reduce the heating effect of the corrosive substance. Consuming larger amounts of liquid is not advisable as it may induce vomiting and potential inhaling of the corrosive substances in the lungs. The affected person must not be forced to drink, particularly if already feeling pain in the mouth or throat. In this case let the affected person only rinse the mouth with water. DO NOT PROVIDE ACTIVATED CARBON! Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible.

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

If inhaled

Inhaling vapours can cause corrosion of the breathing system.

If on skin

Causes severe skin burns.

If in eyes

Causes serious eye damage.

If swallowed

Corrosion of the digestion system can occur.

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

Symptomatic treatment.

More information

Other information is not available.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

May be corrosive to metals. Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale aerosols. Prevent contact with skin and eyes.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents. Absorb spillage to prevent material damage.

6.4. Reference to other sections

See the Section 7, 8 and 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Prevent formation of gases and vapours in concentrations exceeding the occupational exposure limits. Do not inhale aerosols. Prevent contact with skin and eyes. Wash hands and exposed parts of the body thoroughly after handling. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Avoid release to the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Do not expose to sunlight. Store locked up. Keep only in original container.

Storage class 8B - Non-combustible corrosive substances

Material of package GL (72), Brown glass (Glass)



GL

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

European Union

| Substance name (component) | Type | Time of exposure | Value | Note | Source |
|------------------------------|------|------------------|-----------------------|------|-----------|
| nitric acid (CAS: 7697-37-2) | OEL | Short-term | 2,6 mg/m ³ | | EU limits |
| | OEL | Short-term | 1 ppm | | |

United Kingdom of Great Britain and Northern Ireland

| Substance name (component) | Type | Time of exposure | Value | Note | Source |
|------------------------------|------|------------------|-----------------------|------|--------|
| nitric acid (CAS: 7697-37-2) | WEL | 1 hour | 2,6 mg/m ³ | | GBR |
| | WEL | 1 hour | 1 ppm | | |

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8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Protective goggles or face shield (based on the nature of the work performed).

Skin protection

Hand protection: Protective gloves resistant to the product. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.

Respiratory protection

Use a mask with filter when the exposition limits of the substances are exceeded or at the place with insufficient ventilation.

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state

liquid at 20°C

color

data not available

Odour

data not available

Odour threshold

data not available

pH

1 (undiluted)

Melting point/freezing point

data not available

Initial boiling point and boiling range

data not available

Flash point

data not available

Evaporation rate

data not available

Flammability (solid, gas)

data not available

Upper/lower flammability or explosive limits

flammability limits

data not available

explosive limits

data not available

Vapour pressure

data not available

Vapour density

data not available

Relative density

data not available

Solubility(ies)

solubility in water

soluble

solubility in fats

data not available

Partition coefficient: n-octanol/water

data not available

Auto-ignition temperature

data not available

Decomposition temperature

data not available

Viscosity

data not available

Explosive properties

data not available

Oxidising properties

data not available

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data not available

9.2. Other information

Density data not available
ignition temperature data not available
none

SECTION 10: Stability and reactivity

10.1. Reactivity

not available

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents. May be corrosive to metals.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

No toxicological data is available for the mixture.

Acute toxicity

Based on available data the classification criteria are not met.

nitric acid

| Route of exposure | Parameter | Value | Time of exposure | Species | Sex |
|-------------------|------------------|-----------------------|------------------|---------|-----|
| Inhalation | LC ₅₀ | 260 mg/m ³ | 30 min | Rat | |

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Causes severe skin burns and eye damage.

Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

Germ cell mutagenicity

Based on available data the classification criteria are not met.

Carcinogenicity

Based on available data the classification criteria are not met.

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Reproductive toxicity

Based on available data the classification criteria are not met.

nitric acid

| Effect | Parameter | Value | Time of exposure | Specific target organ | Result | Species | Sex |
|------------------------|-----------|-------------|------------------|-----------------------|--------------|---------|-----|
| Developmental toxicity | TDLo | 21150 mg/kg | 21 day | Fetus | Fetotoxicity | Rat | |

Toxicity for specific target organ - single exposure

Based on available data the classification criteria are not met.

Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

Aspiration hazard

Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time.

Based on available data the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

Harmful to aquatic life with long lasting effects.

nitric acid

| Parameter | Value | Time of exposure | Species | Environment | Source |
|------------------|-------------|------------------|--|-------------|-------------|
| LD ₅₀ | 100-10 mg/l | 96 hour | | | medisalar m |
| LC 100 | 25-36 mg/l | | Fishes | | medisalar m |
| TLm | 72 mg/l | 96 hour | Fishes (Gambusia affinis) | Freshwater | |
| LC 100 | 36 mg/l | | Fishes (Lepomis macrochirus) | | |
| LC ₅₀ | 33-100 mg/l | 48 hour | Aquatic invertebrates (Ophryotrocha diadema) | Salt water | |

12.2. Persistence and degradability

Data not available.

12.3. Bioaccumulative potential

Not available.

12.4. Mobility in soil

Not available.

12.5. Results of PBT and vPvB assessment

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12.6. Other adverse effects

Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

Waste type code

20 01 14 Acids *

Packaging waste type code

15 01 10 packaging containing residues of or contaminated by hazardous substances *

(*) - Hazardous waste according to Directive 2008/98/EC on hazardous waste

SECTION 14: Transport information

14.1. UN number

UN 2031

14.2. UN proper shipping name

NITRIC ACID

14.3. Transport hazard class(es)

8 Corrosive substances

14.4. Packing group

III - substances presenting low danger

14.5. Environmental hazards

not available

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not available

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Additional information

Hazard identification No.
UN number
Classification code
Safety signs

80
2031
C1
8



SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended.

15.2. Chemical safety assessment

not available

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H272 May intensify fire; oxidiser.
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H331 Toxic if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

Guidelines for safe handling used in the safety data sheet

P260 Do not breathe vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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 doctor.

A list of additional standard phrases used in the safety data sheet

EUH 071 Corrosive to the respiratory tract.

Other important information about human health protection

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The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

| | |
|---------------------|---|
| ADR | European agreement concerning the international carriage of dangerous goods by road |
| BCF | Bioconcentration Factor |
| CAS | Chemical Abstracts Service |
| CLP | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures |
| DNEL | Derived no-effect level |
| EC | Identification code for each substance listed in EINECS |
| EC ₅₀ | Concentration of a substance when it is affected 50% of the population |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| EmS | Emergency plan |
| EU | European Union |
| IATA | International Air Transport Association |
| IBC | International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals |
| IC ₅₀ | Concentration causing 50% blockade |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods |
| INCI | International Nomenclature of Cosmetic Ingredients |
| ISO | International Organization for Standardization |
| IUPAC | International Union of Pure and Applied Chemistry |
| LC ₅₀ | Lethal concentration of a substance in which it can be expected death of 50% of the population |
| LD ₅₀ | Lethal dose of a substance in which it can be expected death of 50% of the population |
| LOAEC | Lowest observed adverse effect concentration |
| LOAEL | Lowest observed adverse effect level |
| log K _{ow} | Octanol-water partition coefficient |
| MARPOL | International Convention for the Prevention of Pollution From Ships |
| NOAEC | No observed adverse effect concentration |
| NOAEL | No observed adverse effect level |
| NOEC | No observed effect concentration |
| NOEL | No observed effect level |
| OEL | Occupational Exposure Limits |
| PBT | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted no-effect concentration |
| ppm | Parts per million |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Agreement on the transport of dangerous goods by rail |
| UN | Four-figure identification number of the substance or article taken from the UN Model Regulations |
| UVCB | Substances of unknown or variable composition, complex reaction products or biological materials |
| VOC | Volatile organic compounds |

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vPvB Very Persistent and very Bioaccumulative

| | |
|-----------------|--------------------------------------|
| Acute Tox. | Acute toxicity |
| Aquatic Acute | Hazardous to the aquatic environment |
| Aquatic Chronic | Hazardous to the aquatic environment |
| Met. Corr. | Corrosive to metals |
| Ox. Liq. | Oxidising liquid |
| Skin Corr. | Skin corrosion |

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

More information

Classification procedure - calculation method.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.