



Safety Data Sheet dated 20/7/2022, version 2

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

1.1. Product identifier

Mixture identification:

Trade name: RIO PLUS

Trade code: CD405

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

Recommended use:

DESCALER FOR COFFE MACHINES

Uses advised against:

Do not use for uses not recommended

1.3. Details of the supplier of the safety data sheet

Company:

AXOR SRL

Via dell'Artigianato 8

35020 Pernumia (PD)

AXOR-S.R.L. - Tel. 0039-0429 - 763476 from Monday to Friday 8.30-17.30

Competent person responsible for the safety data sheet:

axor@axor.net

1.4. Emergency telephone number

AXOR-S.R.L. - Tel. 0039-0429 - 763476 from Monday to Friday 8.30-17.30

CENTRO ANTIVELENI DI BERGAMO tel: 0039-800-883300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)



Danger, Skin Corr. 1A, Causes severe skin burns and eye damage.



Danger, Eye Dam. 1, Causes serious eye damage.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Product contents:

List of all ingredients by decreasing weight, divided into percentage weight categories (Reg 648/2004EC Ann. VII, C).

The product also contains:

Allergens:

Preservatives:

Hazard pictograms:



Danger

Hazard statements:

H314 Causes severe skin burns and eye damage.

Precautionary statements:

Safety Data Sheet

RIO PLUS

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing 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 POISON CENTER/doctor/...

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

PACK1 The packing must be featured by a safety lock for children.

PACK2 The packing must have tactile indications of danger for blind people.

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

None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$

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:

Qty	Name	Ident. Number	Classification
$\geq 10\%$ - $< 20\%$	sulphamidic acid; sulphamic acid	Index 016-026-00-0 number: CAS: 5329-14-6 EC: 226-218-8 REACH No.: 01-21194886 33-28	 3.3/2 Eye Irrit. 2 H319  3.2/2 Skin Irrit. 2 H315 4.1/C3 Aquatic Chronic 3 H412

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

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.

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

Safety Data Sheet

RIO PLUS

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:

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.

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.

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.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

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

Safety Data Sheet

RIO PLUS

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No occupational exposure limit available

DNEL Exposure Limit Values

sulphamidic acid; sulphamic acid - CAS: 5329-14-6

Worker Professional: 0.0075 mg/l - Consumer: 10 mg/l - Exposure: Human Dermal - Frequency: Short Term, systemic effects

Consumer: 1.06 mg/kg/d - Exposure: Human Oral - Frequency: Long Term, systemic effects

Consumer: 5 mg/kg/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

sulphamidic acid; sulphamic acid - CAS: 5329-14-6

Target: Fresh Water - Value: 1.0048 mg/l

Target: Marine water - Value: 0.0048 mg/l

Target: Freshwater sediments - Value: 0.173 mg/kg

Target: Marine water sediments - Value: 0.0173 mg/kg

Target: Soil (agricultural) - Value: 3 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:
Physical state:	Liquid	--	--
Colour:	N.A.	--	--
Odour:	characteristic	--	--
Melting point/freezing point:	0	--	--
Boiling point or initial boiling point and boiling range:	$\geq 100^{\circ}\text{C}$	--	--
Flammability:	N.A.	--	--
Lower and upper explosion limit:	Non Applicable	--	--
Flash point:	N.A.	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--

Safety Data Sheet

RIO PLUS

pH:	1.7	--	Acid reserve: approx. 6.10 gNaOH / 100g thus produced within the ranges > -0.5 and <1.0 provided by J.R.Young et al.
Kinematic viscosity:	N.A.	--	--
Solubility in water:	SOLUBLE	--	--
Solubility in oil:	INSOLUBLE	--	--
Partition coefficient n-octanol/water (log value):	N.A.	--	--
Vapour pressure:	N.A.	--	--
Density and/or relative density:	1.08	--	--
Relative vapour density:	N.A.	--	--
Particle characteristics:			
Particle size:	N.A.	--	--

9.2. Other information

No other relevant information

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 hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological information of the product:

RIO PLUS

a) acute toxicity

Not classified

Based on available data, the classification criteria are not met

b) skin corrosion/irritation

The product is classified: Skin Corr. 1A H314

c) serious eye damage/irritation

The product is classified: Eye Dam. 1 H318

d) respiratory or skin sensitisation

Not classified

Based on available data, the classification criteria are not met

e) germ cell mutagenicity

Not classified

Based on available data, the classification criteria are not met

f) carcinogenicity

Not classified

Based on available data, the classification criteria are not met

g) reproductive toxicity

Safety Data Sheet

RIO PLUS

Not classified

Based on available data, the classification criteria are not met

h) STOT-single exposure

Not classified

Based on available data, the classification criteria are not met

i) STOT-repeated exposure

Not classified

Based on available data, the classification criteria are not met

j) aspiration hazard

Not classified

Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:

sulphamidic acid; sulphamic acid - CAS: 5329-14-6

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 3160 mg/kg

Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration $\geq 0.1\%$

SECTION 12: Ecological information

12.1. Toxicity

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

RIO PLUS

Not classified for environmental hazards

Based on available data, the classification criteria are not met

sulphamidic acid; sulphamic acid - CAS: 5329-14-6

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 70.3 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 71.6 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 48 mg/l - Duration h: 72

12.2. Persistence and degradability

sulphamidic acid; sulphamic acid - CAS: 5329-14-6

Biodegradability: Not persistent and Biodegradable

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. Endocrine disrupting properties

No endocrine disruptor substances present in concentration $\geq 0.1\%$

12.7. 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

14.1. UN number or ID number

ADR-UN number: 3264

14.2. UN proper shipping name

Safety Data Sheet

RIO PLUS

ADR-Shipping Name:	LIQUIDO INORGANICO CORROSIVO, ACIDO, N.A.S., (ACIDO SOLFAMMICO)
14.3. Transport hazard class(es)	
ADR-Class:	8
14.4. Packing group	
ADR-Packing Group:	III
14.5. Environmental hazards	
14.6. Special precautions for user	
14.7. Maritime transport in bulk according to IMO instruments	
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) n. 2020/878
 - 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)
 - Regulation (EU) n. 2017/776 (ATP 10 CLP)
 - Regulation (EU) n. 2018/669 (ATP 11 CLP)
 - Regulation (EU) n. 2018/1480 (ATP 13 CLP)
 - Regulation (EU) n. 2019/521 (ATP 12 CLP)
 - Regulation (EU) n. 2020/217 (ATP 14 CLP)
 - Regulation (EU) n. 2020/1182 (ATP 15 CLP)
 - Regulation (EU) n. 2021/643 (ATP 16 CLP)

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

None

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

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

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H319 Causes serious eye irritation.

H315 Causes skin irritation.

H412 Harmful to aquatic life with long lasting effects.

Safety Data Sheet

RIO PLUS

Hazard class and hazard category	Code	Description
Skin Corr. 1A	3.2/1A	Skin corrosion, Category 1A
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

This safety data sheet has been completely updated in compliance to Regulation 2020/878. 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
Skin Corr. 1A, H314	Calculation method
Eye Dam. 1, H318	Calculation method

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:

ECDDIN - 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.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
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.

Safety Data Sheet

RIO PLUS

STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.