

# Safety Data Sheet

## RU2PN


Safety Data Sheet dated 22/5/2015, version 1



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

- 1.1. Product identifier  
Mixture identification:  
Trade name: RU2PN  
Trade code: AP032-352
- 1.2. Relevant identified uses of the substance or mixture and uses advised against
- 1.3. Details of the supplier of the safety data sheet  
Company:  
LEGOR GROUP S.p.A.  
Via del Lavoro, 1  
36050 Bressanvido (VI)  
Italy
- LEGOR GROUP S.p.A.  
tel. +39 0444 467911 fax +39 0444 660677
- Competent person responsible for the safety data sheet:  
info@legor.com
- 1.4. Emergency telephone number  
Centro Antiveleni  
Ospedale di Niguarda "Ca Grande"  
Piazza Ospedale Maggiore 3  
20162 Milano  
Telephone: +39 (0) 2/66 10 10 29  
Telefax: +39 (0) 2/64 44 27 68  
Italiano (French, English)  
(24-hour-service)

### SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture  
Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:  
Properties / Symbols:  
☒ Xi Irritant
- R Phrases:  
R36/38 Irritating to eyes and skin.
- 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  
Symbols:  

- Danger  
Hazard statements:  
H314 Causes severe skin burns and eye damage.
- Precautionary statements:  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

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P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.  
Rinse skin with water/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 or doctor/physician.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with applicable regulations.

### Special Provisions:

PACK1 The packing must be featured by a safety lock for children and have a tactile indications for blind people.

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

### Contents:

Ruthenium Trichloride  
sulphuric acid 97-98%

### 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

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## SECTION 3: Composition/information on ingredients

### 3.1. Substances

N.A.

### 3.2. Mixtures

Hazardous components within the meaning of EEC directive 67/548 and CLP regulation and related classification:

>= 3% - < 5% sulphuric acid 97-98%

Index number: 016-020-00-8, CAS: 7664-93-9, EC: 231-639-5

C; R35

⚠ 3.2/1A Skin Corr. 1A H314

>= 3% - < 5% Ruthenium Trichloride

CAS: 10049-08-8, EC: 233-167-5

Xn,C; R22-34

⚠ 3.1/4/Oral Acute Tox. 4 H302

⚠ 3.2/1B Skin Corr. 1B H314

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## 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.

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.

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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

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### SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

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.

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### 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

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### 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.

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

Keep away from food, drink and feed.

Incompatible materials:

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None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

None in particular

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### SECTION 8: Exposure controls/personal protection

8.1. Control parameters

sulphuric acid 97-98% - CAS: 7664-93-9

TLV TWA - 0,05 ppm, A2 - 0,2 mg/m<sup>3</sup>, A2

TLV STEL - A2

DNEL Exposure Limit Values

N.A.

PNEC Exposure Limit Values

N.A.

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

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### SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance and colour: Dark brown liquid

Odour: Odourless

Odour threshold: N.A.

pH: 0,5

Melting point / freezing point: n/a

Initial boiling point and boiling range: 100 °C

Solid/gas flammability: n/a

Upper/lower flammability or explosive limits: N.A.

Vapour density: n/a

Flash point: n/a ° C

Evaporation rate: N.A.

Vapour pressure: n/a

Relative density: 1,18 - 1,22 g/ml

Solubility in water: Total

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

Miscibility: N.A.

Fat Solubility: N.A.

Conductivity: N.A.

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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  
None in particular.
  - 10.6. Hazardous decomposition products  
None.
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### 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:  
N.A.  
If not differently specified, the information required in Regulation 453/2010/EC 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
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### 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.

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### SECTION 14: Transport information

- 14.1. UN number
- |                 |      |
|-----------------|------|
| ADR-UN number:  | 3264 |
| IATA-Un number: | 3264 |
| IMDG-Un number: | 3264 |
- 14.2. UN proper shipping name
- |                      |   |
|----------------------|---|
| ADR-Shipping Name:   | LIQUIDO INORGANICO CORROSIVO, ACIDO, N.A.S. (ACIDO SOLFAMMICO RUTENIO TRICLORURO)   |
| IATA-Technical name: | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SULPHAMIC ACID, RUTHENIUM TRICHLORIDE) |
| IMDG-Technical name: | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SULPHAMIC ACID, RUTHENIUM TRICHLORIDE) |
- 14.3. Transport hazard class(es)
- |             |   |
|-------------|---|
| ADR-Class:  | 8 |
| ADR-Label:  | 8 |
| IATA-Class: | 8 |
| IATA-Label: | 8 |
| IMDG-Class: | 8 |
- 14.4. Packing group
- |                     |    |
|---------------------|----|
| ADR-Packing Group:  | II |
| IATA-Packing group: | II |
| IMDG-Packing group: | II |
- 14.5. Environmental hazards
- |                   |    |
|-------------------|----|
| Marine pollutant: | No |
|-------------------|----|
- 14.6. Special precautions for user
- |                              |   |
|------------------------------|---|
| ADR-Tunnel Restriction Code: | (E)   |
| Rail (RID):                  | 8   |
| IATA-Passenger Aircraft:     | max.qty.: 1L, PI:851  |
| IATA-Cargo Aircraft:         | max.qty.:30L,PI:855   |
| IMDG-Technical name:         | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SULPHAMIC ACID, RUTHENIUM TRICHLORIDE) |
| IMDG-EMS:                    | F-A, S-B  |
- 14.7. Transport in bulk according to Annex II of MARPOL73/78 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. 67/548/EEC (Classification, packaging and labelling of dangerous substances)
  - Dir. 99/45/EC (Classification, packaging and labelling of dangerous preparations)
  - Dir. 98/24/EC (Risks related to chemical agents at work)
  - Dir. 2000/39/EC (Occupational exposure limit values)
  - Dir. 2006/8/EC
  - 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. 453/2010 (Annex I)
  - Regulation (EU) n. 286/2011 (ATP 2 CLP)
  - Regulation (EU) n. 618/2012 (ATP 3 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 82/501/EEC ('Activities linked to risks of serious accidents') and subsequent amendments.

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Regulation (EC) nr 648/2004 (detergents).  
1999/13/EC (VOC directive)

15.2. Chemical safety assessment  
No

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### SECTION 16: Other information

Text of phrases referred to under heading 3:

R22 Harmful if swallowed.

R34 Causes burns.

R35 Causes severe burns.

H314 Causes severe skin burns and eye damage.

H302 Harmful if swallowed.

This safety data sheet has been completely updated in compliance to Regulation 453/2010/EU.

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.
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.

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TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day.  
(ACGIH Standard).

WGK: German Water Hazard Class.