according to european directive 2006/8/EC **MATERIAL SAFETY DATA SHEET -**

and Regulation n. 1907/2006

Manufactured by: HARPO spa - Rialto division 34123 Trieste (Italy)

Tech. Sheet Nº: 30A/P/RI

RIALTO ALKAL 1 Product name:

Revision nr. 6 dated: 01.10.2007



01. IDENTIFICATION OF THE PREPARATION AND THE COMPANY

1.1 Identification of the substance or preparation:

Product name: Rialto Alkal 1.

1.2 Use of the substance/preparation:

Intended use: Rialto Alkal 1 is suitable for cleaning siliceous materials.

Chemical name and synonym:

Acid detergent for siliceous materials. Contains fluoridric acid.

1.3 Company Identification:

Name: HARPO spa. Full address: Via Torino, 34 34123 - Trieste, Italy, **District and Country:**

tel. +39 040 3186611, fax +39 0403186666

E-mail address of the competent

person responsible for the Safety rialto@rialto-colors.com (rif. Dr. Renni - technical manager)

Data Sheet:

Product distribution by: Harpo spa

1.4 Telephone number for urgent

+ 39 040 2397211 (timetable: 8.00 - 16.30) inquiries:

02. HAZARD IDENTIFICATION

Substance/Preparation Classification.

This compound is dangerous under 67/548/EEC and 1999/45/EC regulations and subsequent amendments (directive 2006/8/EC and regulation 1907/EC). This compound requires a safety data sheet according to the regulation 1907/EC and subsequent amendments. Further information on health and/or environmental hazards can be found in sections 11 and 12 of this sheet.

Danger Symbol: T+, C

Phrases R: 26/27/28 - 35

Danger identification.

VERY TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED. CAUSES SEVERE BURNS.

03. COMPOSITION/INFORMATION ON INGREDIENTS

Classification Name Concentr.(C) Fluoridric acid 10,00 - 15,00 % T+ R26/27/28 N°Cas 7664-39-3 C R35

N°CE 231-634-8 009-003-00-1 N°Index

Phosphoric acid 1,00 - 5,00 % C R34

N°Cas 7664-38-2 N°CE 231-011-2 N°Index 015-011-00-6

The complete text of -R- phrases is specified in section 16.

04. FIRST AID MEASURES

EYES: Irrigate copiously with clean, fresh water for at least 15 minutes. Seek medical advice.

SKIN: Wash immediately with plenty of water. Remove contaminated clothing. If irritation persists seek medical attention. Wash contaminated clothing before using them.

INHALATION: Remove to fresh air. If breathing is irregular seek medical advice.

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INGESTION: Obtain immediate medical attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person.



In all cases of doubt or if symptoms persist, resorting to medical care. Never give anything by mouth, if the person is unconscious.

05. FIRE FIGHTING MEASURES

Allow containers to cool in order to avoid product decomposition and generation of substances which might injure the health and be dangerous for safety reasons. Wear the fire equipment all the time.

06. ACCIDENTAL RELEASE MEASURES

Limit the spreading of the spillage with inert absorbent material (sand, earth etc). Neutralize and remove as far as possible the treated mass; wash the remainder with plenty of water.

07. HANDLING AND STORAGE

Store in a well ventilated place keeping the containers closed when not used. Do not smoke while handling. Keep far away from sources of heat, naked flames and sparks and other sources of ignition; do not spray in the vicinity of flames or incandescent materials. For information on environmental and health risks, protection of the respiratory airways, ventilation and individual protective measures refer to the other sections of this sheet.

08. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure limit values:

FLUORIDRIC ACID

1 2001 (10110) (012			
- TLV TWA	3	mg/m³	ACGIH
PHOSPHORIC ACID		_	
TLV TWA	1	mg/m³	ACGIH
TLV STEL	3	mg/m ³	ACGIH

^{*} The data refer to the substances and not to the mixture

8.2 Exposure controls:

Against corrosive properties of the product and according to the type of working, suitable protection equipment should be worn. Such as: a mask to protect the face, the head and the neck, waterproof gloves and overalls, resistant to the product.



Do not eat, drink or smoke while handling it; wash carefully with soap and water before meals and after work shift; a shower is recommended.

09. PHYSICAL AND CHEMICAL PROPERTIES

Odour Slightly acid

Physical appearance Slimy whitish liquid - weak colour

Solubility in solvents N.A.

Solubility in water Totally miscible

Volatile substances % by volume 80

80%

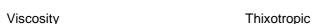
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Vapour density < 1
Evaporation speed N.D.
Comburent properties N/D
Partition coefficient: n-octanol/water N.A.

pH 1,00 – 2,00
Boiling point Ca. 100°C
Flash point N.D.
Explosive properties N.D.
Vapour pressure 25,00 kPa

Specific gravity $1,040 \pm 0,005 \text{ Kg/l}$

10. STABILITY AND REACTIVITY

The product is stable in normal conditions of use and storage. Due to thermal decomposition or in the event of a fire vapours may be produced potentially dangerous to health. Phosphoric acid decomposes when heated forming toxic fumes of phosphorus oxide; it reacts with several metals with the formation of hydrogen which is explosive. Above $200 \, \mathbb{C}$ it also attacks gl ass.

11. TOXICOLOGICAL INFORMATION

Acute effects: this product is highly toxic and causes rapid poisoning by inhalation, cutaneous absorption and ingestion. Poisoning by inhalation may give rise to a series of symptoms, which may include: stinging and irritated eyes, mouth, throat; cough, respiratory disorders, dizziness, headache, nausea and sickness. In the most serious cases, inhalation of this product may cause larynx and bronchial tube edema, chemical pneumonia and pulmonary edema, reduction or increase of heart-beat, copious salivation, blood sputum, loss of consciousness, behavioural disorders (depression or euphoria). Poisoning by cutaneous absorption may give rise to symptoms, which may include: increase of skin temperature, swelling, itchiness, headache, respiratory disorders and sometimes even burns and cauterizations. Ingestion of even small amounts of product may cause serious health problems and symptoms such as burns, mouth and throat lesions, nausea, stomach pain, sickness, diarrhoea, sudoresis, convulsions, loss of consciousness.

This product is corrosive and causes serious burns and vescicles on the skin, which can arise even after exposure. Burns are very stinging and painful. Upon contact with eyes, it may cause serious harm such as cornea opacity, iris lesions, irreversible eye coloration. Possible vapours are caustic for the respiratory system and may cause pulmonary edema, whose symptoms sometimes arise only after some hours. Exposure symptoms may include: sting, cough, asthma, laryngitis, respiratory disorders, headache, nausea and sickness. If swallowed, it may cause mouth, throat and oesophagus burns, sickness, diarrhoea, edema, larynx swelling and, consequently, asphyxia, perforation of the gastro-intestinal tract.

FLUORIDRIC ACID: may cause burns LDL0 inhalation: 50 ppm/30 min. PHOSPHORIC ACID: irritant LD50 (rabbit) skin:2.740 mg/Kg

12. ECOLOGICAL INFORMATION

This product is dangerous for the environment and the aquatic organisms. In the long term, it may even have negative effects on the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Consider the possibility of burning the product in a suitable inceneritor. Acid or basic products must always be neutralized before undergoing any treatment, including biological treatment whenever feasible. If the waste is solid, it can be disposed of in a landfill.



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14. TRANSPORT INFORMATIONS

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations. These goods must be packed in their original packings or in packings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

Road and rail transport:

ADR: 8,II UN 2922

Label: 8, 6.1 Nr. Kemler: 86

Proper Shipping Name: CORROSIVE LIQUID, TOXIC N.O.S. (FLUORIDRIC ACID,

PHOSPHORIC ACID)



Carriage by sea (shipping):

IMO class: 8, UN 2922

Packing Group: II
Special provision: A3
EMS: F-A, S-B

Proper Shipping Name: CORROSIVE LIQUID, TOXIC N.O.S. (FLUORIDRIC ACID,

PHOSPHORIC ACID)



Transport by air:

IATA: 8 UN:2922

Packing Group:

Label: 8,6.1

Cargo

Packaging instructions: 812 Maximum quantity: 30 L

Pass.:

Packaging instructions: 808 Maximum quantity: 1 L

Limited quantity:

Packaging instructions: Y808 Maximum quantity: 0,5 L



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rialto

15. REGULATORY INFORMATION

Health hazard symbol



T+ VERY TOXIC

C CORROSIVE

R26/27/28 VERY TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF

SWALLOWED.

R35 CAUSES SEVERE BURNS.

S26 IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH

PLENTY OF WATER AND SEEK MEDICAL ADVICE.

S27 TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING.
S28 AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH

PLENTY OF WATER.

S36/37/39 WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND

EYE/FACE PROTECTION.

S45 IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK

MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE

POSSIBLE).

S63 IN CASE OF ACCIDENT BY INHALATION: REMOVE CASUALTY

TO FRESH AIR AND KEEP AT REST.

Contains:

Fluoridric acid (10 % sol.).

Special disposal: this product contains biodegradable nonionic surfactants (average 90% min.).

Danger labelling under regulations 67/548/CEE and 1999/45/CE and following amendments and adjustments (2006/8/CE, Regulation (EC) 1907/2006).

Workers exposed to this chemical agent must undergo health checks according to regulation 98/24/CE.

DIRECTIVE 2004/42/EC (VOC): this product is not included

16. FURTHER INFORMATIONS

Text of -R- phrases quoted in section 3 of the sheet.

R26/27/28 VERY TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF

SWALLOWED.

R34 CAUSES BURNS.

R35 CAUSES SEVERE BURNS.

GENERAL BIBLIOGRAPHY

- 1. Regulation 2006/8/CE
- 2. Regulation 1999/45/CE and following amendments (technical adjustment XXIX);
- 3. Regulation 67/548/CEE and following amendments and adjustments (technical adjustment XXVIII);
- 4. Regulation 91/155/CEE and following amendments;
- 5. Regulation (EC) 1907/2006 and subsequent amendments.
- 6. The Merck Index. 10th Edition;
- 7. Handling Chemical Safety;
- 8. Niosh Registry of Toxic Effects of Chemical Substances;

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- 9. INRS Fiche Toxicologique (toxicological sheet);
- 10. Patty Industrial Hygiene and Toxicology;
- 11. N.I. Sax-Dangerous properties of Industrial Materials-7, 1989 Edition;

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product. This document must not de regarded as a guarantee on any specific product property. The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Changes to previous review The following sections were modified: 01/02/03/15/16