



**SAFETY DATA SHEET
QUICSEAL 654
Q-RUS**

1. INFORMATION OF THE SUBSTANCE/COMPOUND AND THE SUPPLIER

Product Name: QUICSEAL 654 – Q-Rus
Product Use: Rust remover / treatment for granite

Details of the supplier:

*QUICSEAL CONSTRUCTION CHEMICALS PTE LTD
No. 7 Eunos Avenue 8A
Eunos Industrial Estate
Singapore 409460*

Emergency Contact No.: (65) 6742 4466

2. HAZARDS IDENTIFICATION

GHS Classification:

Acute oral toxicant – Category 4
Skin corrosive – Category 1B
Serious eye damage – Category 1
Specific target organ toxicant, single exposure – Category 3 (respiratory tract irritation)

GHS LABEL ELEMENTS

Symbol(s):



Signal Word

Danger

Hazard Statements:

H302: Harmful if swallowed
H314: Causes severe skin burns and serious eye damage
H335: May cause respiratory irritation

Precautionary Statements:

Prevention

P261: Do not breathe mist, spray, vapours.
P264: Wash exposed skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product
P271: Use only outdoors or in a well-ventilated area.
P280: Wear eye protection, face protection, protective clothing, protective gloves.

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Response

P331: Do NOT induce vomiting

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P333+P313: If skin irritation occurs: Get medical advice/attention.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

P310: Immediately call a POISON CENTER/doctor

P363: Wash contaminated clothing before reuse.

Storage

P403+P235: Store in a well ventilated place. Keep cool.

P405: Store locked up.

Disposal

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

This product contains the following components classified as hazardous:

COMPONENTS	CAS No.	EINECS No.	Index No.	Percentage
Orthophosphoric acid	7664-38-2	231-163-32	015-011-00-6	20 – 30%
Hydrogen chloride	7647-01-0	231-595-7	017-002-01-X	10 – 20%

4. FIRST-AID MEASURES**Inhalation**

Keep the patient calm. If unconscious place in stable sideways position. Protect against loss of body heat. If breathing stops, administer artificial respiration. Seek medical advice immediately and clearly identify substance.

Skin contact

Remove contaminated clothes at once. Wash off with plenty of water or water and soap immediately for 10-15 minutes. In serious cases, use emergency shower immediately. Seek medical advice immediately and clearly identify substance.

Eye contact

Rinse immediately with plenty of water for 10-15 minutes. Keep eyelids well open to rinse the whole eye surface and eyelids with water. Seek medical advice immediately and clearly identify substance. Continue to bathe eyes during transport to medical practitioner.

Ingestion

If conscious, give several small portions of water to drink. Do not induce vomiting. Seek medical advice immediately and clearly identify substance.

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5. FIRE-FIGHTING MEASURES

General Fire Hazards

This product is non-combustible, but contains a component that is considered as an indirect fire/explosion hazard (reacts with (some) metals: release of highly flammable gases/vapours (hydrogen)).

Suitable Fire-extinguishing Media

All extinguishing media like water, carbon dioxide, foam or chemical powders can be used.

Unsuitable Fire-extinguishing Media

There are no unsuitable extinguishing media known.

Fire-fighting Equipment / Instructions

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Excess pressure may form in containers exposed to fire at a risk of explosion. Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Hardhat with visor, fireproof clothing (fireproof jacket and trousers with ties around arms, legs and waist) work gloves (fireproof, cut proof and dielectric), self-respirator (self-protector). Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Hazardous Combustion Products

If material is involved in fire, highly flammable hydrogen gas may be liberated.

6. ACCIDENTAL RELEASE MEASURES

Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Personal Precautions and Protective equipment

Eliminate sources of ignition (cigarettes, flames, spark, etc.) from the air in which the leak occurred. If there are no contraindications, spray solid products with water to prevent the formation of dust. Gloves. Face-shield. Corrosion-proof suit. Large spills/in enclosed spaces: compressed air apparatus. Large spills/in enclosed spaces: gas-tight suit. Reactivity hazard: compressed air/oxygen apparatus. Reactivity hazard: gas-tight suit.

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

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Methods and materials for containment and cleaning up

Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. Hazardous reaction: measure explosive gas-air mixture. If reacting: dilute combustible/toxic gases/vapours. Take account of toxic/corrosive precipitation water. Heat exposure: dilute toxic gas/vapour with water spray.

Liquid spill: neutralize with soda (sodium carbonate). Neutralized substance: take up in absorbent material. Scoop absorbed substance into closing containers. Damaged/cooled tanks must be emptied. Carefully collect the spill/leftovers. Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

7. HANDLING AND STORAGE**Precautions for Safe Handling**

Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labelled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area at a temperature of 2-25°C. Keep containers locked up. Avoid storage near incompatible materials (from strong oxidizers, bases, amines, metals).

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**Control Parameters / Occupational Exposure Limits**

Singapore Permissible Exposure Level (PEL)

<u>COMPONENTS</u>	<u>CAS No.</u>	<u>Long-term PEL</u>		<u>Short-term PEL</u>	
Orthophosphoric acid	7664-38-2	--	1 mg/m ³	--	3 mg/m ³
Hydrogen chloride	7647-01-0	--	--	5 ppm	7.5 mg/m ³

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Engineering Measures

As the use of adequate technical equipment must always take priority over personal protection equipment, make sure that the workplace is well aired through effective local aspiration or bad air vent. If such operations do not make it possible to keep the concentration of the product below the permitted workplace exposure thresholds a suitable respiratory tract protection must be used. See product label for hazard details during use. Ask your chemical substance suppliers for advice when choosing personal protection equipment. Personal protection equipment must comply with the rules in force indicated below. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal Protective Equipment:Hand Protection

Use acid-resistant gloves.

Eye Protection

Wear sealed protective goggles with side shields (see standard EN 166).

Skin Protection

Wear acid-resistant/corrosion-resistant overalls with long sleeves and professional safety footwear (see standard EN 344). Wash with soap and water after removing protective clothing. Wash clothing before reuse.

Respiratory Protection

If workplace maximum concentration thresholds are exceeded, wear a gas mask with filter type B or gas mask with filter type E. For high vapour/gas concentration, use self-contained respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Opaque/yellowish
Odour:	Characteristic/pungent
Flash Point:	Not flammable
Initial boiling point and boiling range:	Not available
Freezing / Melting point:	Not available
Flammability Limits:	Not available
Vapor pressure (20°C):	Not available
Vapor density:	Not available
Water Solubility (25°C):	Soluble

10. STABILITY AND REACTIVITY**Chemical stability**

The product is stable under normal standard conditions.

Possibility of hazardous reactions

The hydrogen chloride component decomposes on exposure to temperature rise: release of (highly) toxic gases/vapours (chlorine). On exposure to air: release of corrosive mist. Reacts violently with (some) bases. Reacts exothermically with many compounds. Reacts with (strong) oxidizers: release of (highly) toxic gases/vapours (chlorine). Reacts with (some) metals: release of highly flammable gases/vapours (hydrogen).

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Conditions to avoid

Avoid high temperatures and pressures, open flames, sparks, welding, smoking and other ignition sources.

Incompatible materials

Avoid strong bases, metals, cyanides, silver nitrate.

Hazardous decomposition products

Hydrogen chloride may be liberated during thermal decomposition

11. TOXICOLOGICAL INFORMATION

This product has not been tested and all the toxicological statements have been derived from the respective components' available toxicity information.

Acute toxicity

Experimental/calculated data:

LD50 (rat), oral: < 5,000 mg/kg (the product is harmful if swallowed.)

LD50 (rabbit), dermal: > 5,000 mg/kg (the product is not harmful in contact with skin)

LC50 (4 hr exposure): > 20 mg/L (the product is not harmful if inhaled)

Skin and Eye Irritation

The product contains orthophosphoric acid and hydrogen chloride which are both classified as Category 1 Skin Corrosive and Eye Damage.

The product causes severe skin burns and serious eye damage.

Respiratory / Skin sensitization

The product is not expected to cause respiratory or skin sensitization.

Carcinogenicity / Developmental toxicity / Reproductive toxicity

The product has no known carcinogenic effect, is not expected to cause developmental toxicity and has no known negative reproductive effects.

Specific target organ toxicity - single exposure

The product may cause respiratory tract irritation through single exposure.

Aspiration hazard

This product is not harmful if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

The following ecological assessment is based on the available ecotoxicity information of the product's components.

Acute toxicity to the aquatic environment

Toxicity to fish: LC50 (96h): > 100 mg/l (OECD Guideline 203, static)

Toxicity to aquatic invertebrates: LC50 (96h): > 100 mg/l (OECD Guideline 203, static)

Toxicity to algae: LC50 (96h): > 100 mg/l (OECD Guideline 203, static)

This product is not toxic/harmful to aquatic life.

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13. DISPOSAL CONSIDERATIONS

Description of waste residues and information on their safe handling & methods of disposal

Dispose of the product through licensed hazardous waste collectors under Singapore regulations. Provide the hazardous waste collector the sufficient information on the various hazards of this product.

Disposal of any contaminated packaging

Dried material can be disposed off in authorized landfill site in accordance to national regulations. Container should be recycled after cleaning or dispose of the container through licensed hazardous waste collectors under Singapore regulations. Provide the hazardous waste collector the sufficient information on the various hazards of this product in this container.

14. TRANSPORT INFORMATION

Land Transport (ADR/RID):

Shipping Name: PHOSPHORIC ACID, SOLUTION
UN #: 1805
Hazard Class: 8
Packing Group: III

Label:



Air Transport (IATA/ICAO):

Shipping Name: PHOSPHORIC ACID, SOLUTION
UN #: 1805
Hazard Class: 8
Packing Group: III

Label:



Sea transport (IMDG):

Shipping Name: PHOSPHORIC ACID, SOLUTION
UN #: 1805
Hazard Class: 8
Packing Group: III
EmS Number: F-A, S-B
Marine pollutant: No

Label:



15. REGULATORY INFORMATION

Applicable National Regulations

This product is subject to the requirements in the following acts/regulations:

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations
Environmental Protection and Management Act and Environmental Protection and Management
Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives)

International Regulations

This product is classified as hazardous pursuant to the provision set forth in Directives 67/548/EEC and 1999/45/EC and/or EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments.

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16. OTHER INFORMATION

The information and data contained herein are believed to be accurate and reliable; however, it is the user's responsibility to determine suitability of use. Since QUICSEAL Construction Chemicals Pte. Ltd. cannot know all of the uses to which its products may be put or the conditions of use; it makes no warranties concerning the fitness or suitability of its products for a particular use of purpose.

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