

MATERIAL SAFETY DATA SHEET

Page 1 of 4

Product Name: **SEALXPERT® STEEL REPAIR LIQUID-HARDENER**
MSDS No: 173

Revision No: 0

Issued by: Yogesh
Issue Date: 15 October 2015

Section 1 – Company Details

Company Name: SealXpert Products
Address: 60 Kaki Bukit Place #09-11 Eunos Techpark
Singapore 415979

Tel: +65 6742 4992/6742 4998
Fax: +65 6749 6916
Email: mailbox@sealxpert.com

Section 2 – Composition

Ingredient	CAS NO.	Content (Wt%)
Aliphatic Amines	No Da ta	47.5-52.5
Triethylenetetramine	112-24-3	23.7-26.2
Benzyl alcohol	100-51-6	23.7-26.2

Section 3 – Hazardous Identification

Route of exposure: Eyes. Skin. Inhalation. Ingestion.

Potential health effects:

Eye: Corrosive. Will cause eye burns, permanent tissue damage, and blindness.

Skin: Corrosive causes severe skin burns. May cause permanent skin damage. Allergic reactions are possible.
May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.

Inhalation: May cause severe respiratory system irritation. May cause respiratory sensitization with asthma –like symptoms in susceptible individuals.

Ingestion: Harmful if swallowed. Corrosive to the gastrointestinal tract.

Chronic health effects: Prolonged skin contact cause s burns. Repeated or prolonged inhalation may cause toxic effects.

Signs/Symptoms: Depending on solution concentration, material may be corrosive to skin, mucous membranes and eyes. Vapors may cause respiratory irritation.

Target organs: Eyes. Skin. Respiratory system. Digestive system.

Aggravation of pre-existing conditions: Individuals with pre-existing skin disorders, asthma , allergies or known sensitization may be more susceptible to the effects of this product.

Section 4 – First Aid Measures

Eye contact: Immediately flush eye(s) with plenty of water. Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour

Skin contact: Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Initiate and maintain continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Ingestion: If swallowed, do not induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Other first aid: Eye disease Skin disorders and allergies Neurological disorders.

MATERIAL SAFETY DATA SHEET

Page 2 of 4

Product Name: **SEALXPERT® STEEL REPAIR LIQUID-HARDENER**
MSDS No: 173

Revision No: 0

Issued by: Yogesh
Issue Date: 15 October 2015

Section 5 – Fire Fighting Measures

Firefighting instructions: Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.

Suitable extinguishing media: Alcohol resistant foam , carbon dioxide , dry chemical, dry sand, and limestone powder

Unsuitable extinguishing media: Water or foam may cause frothing.

Protective equipment: As in any fire, wear Self-Contained Breathing Apparatus (SC BA), MSHA/NIOSH (approved or equivalent) and full protective gear.

Hazardous combustion byproducts: Burning produces noxious and toxic fumes.

Unusual fire hazards: May generate ammonia gas. May generate toxic nitrogen oxide gases. Use of water may result in the formation of very toxic aqueous solutions. Incomplete combustion may form carbon monoxide. Downstream personnel must be evacuated.

Section 6 – Accidental Release Measures

Personnel precautions: Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.

Environmental precautions: Avoid runoff into storm sewers, ditches, and waterways.

Spill cleanup measures: Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue. Corrosive. Avoid personal contact and breathing vapors or mists. Ventilate area. Use proper personal protective equipment as listed in Section 8.

Other precautions: Pump or shovel to storage /salvage vessels.

Section 7 – Handling and Storage

Handling: Use with adequate ventilation. Avoid breathing vapor, aerosol or mist. Avoid contact with eyes and skin. Do not reuse containers without proper cleaning or reconditioning. When using, do not eat, drink or smoke.

Storage: Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use. Do not store in re active metal containers. Keep away from acids, oxidizers.

Special handling procedures: Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product.

Hygiene practices: Wash thoroughly after handling.

Section 8 – Exposure Controls / Personal Protection

Eye protection: Wear appropriate protective glasses or splash goggles.

Skin protection: Chemical-resistant gloves and chemical goggles, face -shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.

Hand protection: Neoprene gloves. Butyl rubber. Nitrile rubber. Impervious gloves.

Respiratory system protection: A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Other Protective: Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.

MATERIAL SAFETY DATA SHEET

Page 3 of 4

Product Name: **SEALXPERT® STEEL REPAIR LIQUID-HARDENER**
MSDS No: 173

Revision No: 0

Issued by: Yogesh
Issue Date: 15 October 2015

Section 9 – Physical and Chemical Characteristics

Physical state appearance:	Liquid.
Color:	Amber.
Odor:	Amine odor.
Boiling point:	421 °F (216 °C)
Melting point:	Not determined.
Specific gravity:	0.97 at 70 °F (21.1 °C)
Solubility:	Completely miscible.
Vapor density:	Not determined.
Vapor pressure:	4.31 mm Hg at 70 °F (21.1 °C)
Percent volatile:	Not determined.
Evaporation rate:	Not determined.
pH:	Alkaline
Viscosity:	200 - 400 mPa.s at 70 °F (21.1 °C)
Flash point:	>200°F (93.3°C)
Lower flammable /Explosive limit:	Not determined.
Upper flammable /Explosive limit:	Not determined.
Auto ignition temperature:	Not determined.
VOC Content:	Not determined.
Percent solids by weight:	100

Section 10 – Stability and Reactivity

Stability:	Stable under normal temperatures and pressures
Hazardous polymer:	Not reported.
Incompatibility materials:	Oxidizing agents, mineral acids, organic acids (i.e. acetic acid, citric acid, etc.), sodium hypochlorite, reactive metals (e.g. sodium, calcium, zinc, etc.), materials reactive with hydroxyl compounds. Product slowly corrodes copper, aluminium, zinc and galvanized surfaces. Reactions with peroxides may result in violent decomposition of peroxide possibly creating an explosion.
Conditions to avoid:	Extreme heats, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions. Product may slowly corrode copper, aluminum, zinc and galvanized surfaces.
Special decomposition products:	Nitric acid, Oxides of carbon and nitrogen, aldehydes and ammonia. Nitrogen oxide can react with water vapors to form corrosive nitric acid. Flammable hydrocarbon fragments.

Section 11 – Toxicological Information

Health hazard:	Refer to section 3
Sensitization:	Not known
Mutagenicity:	Not known
Procreation transmissibility:	Not known
Carcinogenicity:	Not known
Other health hazard information:	Unavailable

Section 12 – Ecological Information

Eco-toxicity:	No eco-toxicity data was found for the product.
Environmental fate:	No environmental information found for this product.

Section 13 – Disposal Considerations

Special instructions: Observe all federal, state and local laws and regulations.

Section 14 – Transportation Information

Transportation:	Not classified as Dangerous Goods according to Singapore Code for Transport of Dangerous Goods by Road, Rail and Air.
-----------------	---

MATERIAL SAFETY DATA SHEET

Page 4 of 4

Product Name: **SEALXPERT® STEEL REPAIR LIQUID-HARDENER**
MSDS No: 173

Revision No: 0

Issued by: Yogesh
Issue Date: 15 October 2015

Section 15 – Regulatory Information

Observe the governmental or local regulations to use the product safely.

Section 16 – Other Information

Discard contaminated clothing immediately. Maintain clean equipment and work areas. Avoid inhalation of fumes. Wipe up spills immediately.

Warning to users:

This data sheet completes the technical notices but does not supersede them. The information contained in it is grounded to the statement of our knowledge of the product concerned at the publishing date.

Moreover, user's attention should be drawn on the possible risks incurred when a product is used for other purposes than those for which it has been designed. It does not stop in any case the user knowing and following the whole regulatory texts related to his activity. He will be the sole responsible of the precautions related to the use of the products he knows.

The aim of the whole regulatory prescriptions mentioned is to help the receiver to fulfill his duties when using the product. This list must not be considered as exhaustive. It does not stop the user from making sure that he complies with the written obligations other than those previously cited and which rule the fact of keeping and using the product for which he is the sole responsible person.