



better products
cleaner environment

KLEN 1104 **Rust Remover**

Product Description

KLEN 1104 is a powerful rust remover and surface renovator that prepares metal surfaces for refinishing. It is used to treat metal surfaces such as on machinery, tanks, valves, metal sheet, pipes, cooling towers etc. ***KLEN 1104*** is used in marine, automotive and food processing industries and wherever effects of corrosion must be repaired and corroded surfaces must be refinished.

Special Features

- Deep penetrating action- ***KLEN 1104*** penetrates rapidly to cut through grease and rust without pre-cleaning or degreasing. ***KLEN 1104*** removes rust and microscopically etches the metal surfaces for refinishing.
- Economical- ***KLEN 1104***'s highly active formulation saves labour costs.

Directions for Use

Brush On or Dip Tank Method is recommended.

- For light coating of rust, ***KLEN 1104*** can be diluted with up to three parts of water. Brush on rusty surface, then rinse with water before surface can be recoated with paint or other finishing.
- For heavily rusted surfaces, use ***KLEN 1104*** as it is. Repeated brushings may be required for optimal result.
- Dip tank application requires plastic or plastic lined container. ***KLEN 1104*** can be diluted with three parts of water. Dip all rusty metal into container containing ***KLEN 1104*** with a basket. Leave for several minutes. Remove metal parts from container and rinse thoroughly with water before painting or recoating.

Precautions

Corrosive material! Rubber gloves must be worn when handling product. Avoid skin and eye contact. Wash affected areas thoroughly with plenty of soap and water.

SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION				
Product Identifier: KLEN 1104		Supplier: Klenco (Singapore) Pte Ltd. Address: 18 Gul Crescent, Singapore 629527 Department: Chemical Person in Charge: Chemist		
Other means of identification: Rust Remover		Phone: (65) 6862 3388		
Date of SDS: 01 January 2024		Fax: (65) 6861 7575 Email: info@klenco-asia.com Emergency contact: (65) 6862 3388 Ext 249		
Recommended use and restriction on use: KLEN 1104 is used in marine, automotive and food processing industries and wherever effects of corrosion must be repaired and corroded surfaces must be refinished.				
SECTION 2 - HAZARDS IDENTIFICATION				
GHS classification: Acute toxicity: Category 3 Skin corrosion: Category 1; Eye damage: Category 1				
GHS label elements: Pictogram:		Signal word: Danger		
 				
Hazard statements:	H301: Toxic if swallowed. H314: Causes skin burns and eye damage.			
Precaution statements:	P233: Keep container tightly closed. P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.			
SECTION 3 - COMPOSITION/ INFORMATION ON INGREDIENTS				
Chemical Identification	Component & Composition	Chemical Formula	CAS NO.	EC NO.
Hydrochloric Acid	< 20.0 %	HCl	7647-01-0	231-595-7
Hydrofluoric Acid	< 7.0 %	HF	7664-39-3	231-634-8
Nonyl Phenol Ethoxylate	< 3.0 %	C33H60O10	26571-11-9	247-816-5
Water	> 70.0 %	H ₂ O	7732-18-5	231-791-2
SECTION 4 – FIRST AID MEASURES				
Inhalation:	Move to area of fresh air. If breathing has stopped, artificial respiration should be started. Oxygen may be administered if available. Call a physician. Never give anything by mouth to an unconscious person.			
Skin contact:	Wash with large amounts of soap and water. If irritation persists, consult a physician.			
Eye contact:	Flush with cool water for at least 15 minutes. Then consult a physician immediately.			
Ingestion:	Induce vomiting. Dilute by drinking water. Call a physician immediately.			
Notes to Physicians:	Treatment should be directed at preventing absorption, administering to symptoms (if they occur), and providing supportive therapy.			
SECTION 5 – FIRE-FIGHTING MEASURES				
Suitable fire-extinguishing media:	Water, dry chemical, fog and foam.			
Specific hazards arising from the chemical:	Burning can produce carbon dioxide, carbon monoxide and possibly irritating fumes.			
Special protective actions for fire fighters:	Fire fighters may be exposed to the products of combustion should wear a self-contained breathing apparatus with full protective equipment.			
SECTION 6 - ACCIDENTIAL RELEASE MEASURE				
Personal precautions, protective equipment, and emergency measures: Use proper protective equipment (chemical protection suit, gloves, goggles, mask, etc).				
Environmental precautions: Chemical substance should not be released into the environment (water, soil).				
Methods and materials for containment and cleaning up: Safely stop discharge. Contain material, as necessary, with dike or barrier. Stop material from contaminating soil or from entering sewers or bodies of water. Provide optimum ventilation. Use Soda Ash to cover spillage to prevent run-off. Carbon dioxide will be released upon reaction with spillage. Cover spills with absorbent clay, sawdust, inert material, soda ash, slaked lime and place in closed chemical waste containers. Dispose of according to applicable local, state and federal regulations.				
SECTION 7 - HANDLING AND STORAGE				
Precaution for safe handling: Handle all containers carefully. Do not throw or roll on the ground to prevent damage to containers. No other special precautions are needed for this product, as it is a mixture. Follow good manufacturing and handling practices. Wash thoroughly after handling, especially before eating and drinking, Wash contaminated goggles, face-shield, and gloves. Launder contaminated clothing before re-use.				
Conditions for safe storage, including any incompatibilities: This product is a very corrosive liquid. Store in a cool, dry, well-ventilated area at room temperature. Keep away from strong alkalis and oxidizing agents, especially chlorine releasing agents. Do not re-use empty container for food, clothing or products for human or animal consumption or where skin contact can occur.				

SECTION 8 - EXPOSURE CONTROLS/ PERSONAL PROTECTION	
Control parameters/ Occupational exposure limits:	ACGIH - TLV: Provide suitable personal protective equipment and/or ventilation to maintain exposure below TLV levels.
Appropriate engineering control measures:	Local exhaust ventilation is usually required, when vapours, mist, or dusts can be released.
Personal Protection:	Use the protective equipment such as rubber/PVC gloves; protective glasses if splashing is anticipated.
SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES	
Appearance & Odour:	Brown liquid with Pungent Odour.
Solubility in water:	Complete.
Boiling Point:	100 °C
Specific Gravity:	1.130 +/- 0.005 g/cm ³
PH:	0.5 +/- 0.5
Flash Point (T.C.C.):	None to boiling Flammable Limits - Upper: Not applicable Lower: Not applicable
Vapour Pressure:	Not determined
Vapour Density:	Not determined
SECTION 10 - STABILITY AND REACTIVITY	
Reactivity/ In compatible materials:	Strong Alkalis and Oxidizing materials.
Chemical stability:	Stable under normal temperature and pressure.
Possibility of hazardous reaction:	Will not occur.
Condition to avoid:	Not applicable
SECTION 11 – TOXICOLOGICAL INFORMATION	
Acute toxicity: Oral:	Ingestion of high amount of product is fatal.
Skin or eye irritation:	This product contains Acidic material that will cause burns and damage to eyes and/or skin.
SECTION 12 – ECOLOGICAL INFORMATION	
Toxicity:	Concentrations with a pH value of 6.0 or lower especially in fresh water may be fatal to fish and other aquatic organism. Can cause damage to aquatic plants and vegetation.
Persistence and degradability:	Product degrades readily by reaction of carbon dioxide in the air as well as decomposition by microorganism.
Bioaccumulative potential:	It is soluble in water and does not bio-accumulate.
SECTION 13 – DISPOSAL CONSIDERATIONS	
Disposal method:	Dispose of in an approved waste facility according to local regulations. It is recommended that an alternative be selected according to the following order of preference, based upon environmental acceptability: (1) Re-cycle or rework, if feasible (2) Incinerate at an authorized facility (3) Treat at an acceptable waste treatment facility.
SECTION 14 – TRANSPORT INFORMATION	
This material is non-regulated and no special requirement is necessary. HS Code: 34024290	
SECTION 15 – REGULATORY INFORMATION	
International regulation:	
Classification:	This product contains Hydrochloric Acid as an ingredient that is classified as Corrosive under EC Classification.
Risk phrases:	R28 Very toxic if swallowed. R34 Causes burns.
Safety phrases:	S07 Keep container tightly closed. S18 Handle and open container with care. S50 Do not mix with oxidizing materials.
SECTION 16 – OTHER INFORMATION	
Hazard Rating: HMIS (Hazardous Materials Information System)	
HEALTH: 2	
FLAMMABILITY: 0	
REACTIVITY: 2	
0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Extreme	

NOTICE: SDS is correct at date of publication. It is not necessarily fully adequate for every circumstance, nor to be confused with or followed in violation of applicable laws or insurance requirements. Health hazards and effects of over-exposure apply only to negligent handling or misuse of product in its concentrated form (as supplied); and not routine exposure to diluted product under normal use. No warranty, express or implied, of merchantability, fitness or accuracy of data is made; as such the vendor assumes no responsibility for injury or damages resulting from use of this product.