



KAOAMIN 18 MTO

QUIMI-KAO, S. A de C.V.

QK-0830380

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I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	KAOAMIN 18 MTO
MSDS ID	380
Manufacturer Information	
QUIMIKAO S.A.DE C.V	
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FOR ALL TRANSPORTATION ACCIDENTS,
call Chemtrec at 800-424-9300 or 703-527-3887 for international collect calls

II. COMPOSITION/INFORMATION ON INGREDIENTS

Components	%WT	CAS#
Morpholine	≈ 25%	110-91-8

If this table is blank, then this product does not contain any regulated substances.

Component Information/Information on Non-Hazardous Components this product is hazardous under DOT 49 CFR 172.101, and the manufacturer's determination.

- See Section VIII for exposure guidelines and Section XV for State Right to Know Information

III. HAZARDS IDENTIFICATION

Flammable liquid	
FLASH POINT	Close cup 37 °C
Label information	CORROSIVE, FLAMMABLE.

Hazardous Material Identification System (HMIS) Rating:

HEALTH	2	FLAMMABILITY	3
REACTIVITY	0	PERSONAL PROTECTION	See Section 8

Potential Health Effects

Eye	Severely corrosive to the eyes.
Skin Contact	Severely corrosive to the skin.
Ingestion	This product is harmful if swallowed, and cause damage to mucous membranes.
Inhalation	Severely corrosive to the respiratory system.

Target Organs

Chronic Effects: No known significant effects or critical hazards.
Carcinogenicity: See Section XI.

IV. FIRST AID MEASURES

EYES:	Flush eyes with plenty of water for a minimum of 15 minutes, and seek medical attention.
SKIN:	Remove all contaminated clothing. Flush skin with plenty of water for a minimum 15 minutes. Seek medical advice. Dispose of contaminated clothing as hazardous material waste. (see the section 13).
INGESTION:	If the material is swallowed, get immediate medical attention or advice.
INHALATION:	Remove person to fresh air and seek medical attention. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

NOTES TO PHYSICIAN:

This product is slightly soluble in water and will adhere to skin. The manufacturer successfully uses 2% acetic acid in water to neutralize the product on SKIN ONLY. (NOTE: Higher concentrations of acetic acid may generate heat during neutralization. Symptoms of exposure may or may not be immediately apparent. They include burning sensation, coughing, laryngitis, shortness of breath, headache, nausea and vomiting.



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V. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

UPPER EXPLOSION LIMIT:	11.2 AS PERCENTAGE VOLUMEN IN AIR
LOWER EXPLOSION LIMIT:	1.4 AS PERCENTAGE VOLUMEN IN AIR
Auto Ignition:	not available.
Rate of Burning :	Not available.

GENERAL FIRE HAZARDS : Flammable Product.

Irritating and/or toxic gases may be emitted upon the product's decomposition.

HAZARDOUS PRODUCTS OF COMBUSTION: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons nitrogen oxides.

EXTINGUISHING MEDIA:

Foam (preferred), water. Dry chemical or carbon dioxide for small fires. AFFF for large fires.

FIRE FIGHTING INSTRUCTIONS:

Cool fire exposed tank/container surfaces with water spray. Fight fire from upwind position. Wear self-contained breathing apparatus and full protective equipment.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATING:

HEALTH	2	FLAMMABILITY	3
REACTIVITY	0	Special	N/A

VI. ACCIDENTAL RELEASE MEASURES

FOR ALL TRANSPORTATION ACCIDENTS, call Chemtrec at 800-424-9300 or 703-527-3887 for international collect calls.

Review FIRE FIGHTING MEASURES(Section 5) and EXPOSURE CONTROLS/PERSONAL(Section 8) before proceeding with cleanup. Use appropriate personal protective equipment during cleanup.

SMALL SPILL (Immediately contact emergency personnel)

Containment Techniques	Dike the spilled material, where this is possible.
Cleanup Procedures	Collect spilled material with an inert absorbent such as sand or vermiculite. Place in properly labeled closed container.
Equipment/Container	Shovel the material into waste container.
Other Emergency Advice	Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment. Do not touch or walk through spilled material.

LARGE SPILL (Immediately contact emergency personnel)

Containment Techniques	Dike the spilled material, where this is possible.
Cleanup Procedures	Collect spilled material with an inert absorbent such as sand / vermiculite.
Equipment/Container	Shovel the material into waste container.
Other Emergency Advice	Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment. Do not touch or walk through spilled material.

Evacuation Procedure: Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill area to prevent people from entering.

VII. HANDLING AND STORAGE

Handling:	Prevent breathing vapors or mist. Do not get this material in your eyes, on your skin, or on your clothing.
Storage:	Keep away from heat, sparks and flame. Keep this material in a cool, well-ventilated place. Dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

A. General product information.

This product is hazardous. Handling this chemical without proper personal protection equipment and other exposure controls may result in injury.

B.- Component exposure Limits.

No ACGIH, NIOSH or OSHA exposure guidelines listed for this product's components.

ENGINEERING CONTROLS:

Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces.

PERSONAL PROTECTIVE EQUIPMENT:

EYE/FACE PROTECTION	Wear chemical splash goggles in laboratory and for handling small quantities of the material. Wear a NIOSH approved full-face air purifying apparatus with methyl amine/ammonia cartridge for bulk handling of material or small spills.
HAND PROTECTION	Use chemical-resistant gloves made of material such as butyl rubber or neoprene
SKIN PROTECTION	Normal work clothing (long sleeved shirts and long pants) is recommended.
RESPIRATORY PROTECTION	A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever there may be potential for airborne exposure.

General: ALWAYS use the appropriate personal protective equipment when handling this chemical.

IX. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Colourless to yellowish liquid
ODOR:	Amine
SOLUBILITY IN WATER:	Dispersion at 25°C
pH:	11.5 (100g/L water)
SPECIFIC GRAVITY:	0.872 @ 25°C (77° F)
MELTING POINT (DEGREES C)	- 65°C
Boiling Point:	118 °C
VAPOR PRESSURE:	13 mbar at 20°C

X. STABILITY AND REACTIVITY

CHEMICAL STABILITY:	Stable under normal conditions.
CONDITIONS TO AVOID:	Not contact with iron, steel, copper, bronze and high temperatures
Incompatibility :	Reacts with strong oxidizing agents, strong acids copper, copper alloys, at high temperatures
HAZARDOUS DECOMPOSITION PRODUCTS:	The product is stable.
HAZARDOUS POLYMERIZATION:	Will not occur.

XI. TOXICOLOGICAL INFORMATION

ACUTE EFFECTS	
EYE EFFECTS	Corrosive to eyes.
SKIN EFFECTS	Corrosive to the skin.
ACUTE ORAL EFFECTS (INGESTION)	Harmful if swallowed. May cause burns to mouth, throat and stomach.
ACUTE INHALATION EFFECTS	Corrosive to the respiratory system.
SUBCHRONIC EFFECTS	No known significant effects or critical hazards.
CHRONIC EFFECTS	
MUTAGENICITY	No known significant effects or critical hazards.
TERATOLOGY	No known significant effects or critical hazards.
REPRODUCTIVE AND DEVELOPMENTAL TOXICITY	No known significant effects or critical hazards.
Neurotoxicity:	No known significant effects or critical hazards.

CARCINOGENICITY	Not listed.	
CHEMICAL NAME	DATA	AGENCY IARC/OSHA
No limits established for this product.		

LD50 ORAL for Product 200.....2000... mg/kg rat

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: No known significant effects or critical hazards.
ROUTES OF ENTRY: Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation.

XII. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION	Very toxic to aquatic organisms.
ENVIRONMENTAL INFORMATION	Dangerous for the environment.
BIOLOGICAL OXYGEN DEMAND (BOD5),g/g	None determined
CHEMICAL OXYGEN DEMAND (COD), g/g	None determined

XIII. DISPOSAL CONSIDERATIONS

Waste Description:	The classification of the product may meet the criteria for a hazardous waste.
General Disposal Considerations:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Disposal of Empty Container / Container Rinsate:	Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

XIV. TRANSPORTATION INFORMATION

DOT SHIPPING INFORMATION	
Proper Shipping Name	amines, liquid, corrosive flammable n.o.s.
UN/NA Number	2734
Hazard Class	8, CORROSIVE
Packing Group	II
Secondary Label	3 FLAMMABLE
Emergency Response Guidebook	132


INTERNATIONAL INFORMATION

IATA/ICAO	Class 8, 3 Packing group II
Marine Pollutant	Yes

XV. REGULATORY INFORMATION

US Federal Regulations

A. General Product Information
On TSCA Inventory

B. Component Information
Not available

XVI. ADDITIONAL INFORMATION

TO THE BEST OF THE MANUFACTURER'S KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE. HOWEVER, NEITHER THE MANUFACTURER, NOR ANY OF ITS AFFILIATES, MAKE ANY REPRESENTATIONS OR WARRANTIES (EXPRESSED OR IMPLIED), NOR ASSUMES ANY LIABILITY (INCLUDING LIABILITY FOR ANY DIRECT, INCIDENTAL, CONSEQUENTIAL, OR OTHER DAMAGES) WITH RESPECT TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED HEREIN. SUCH INFORMATION MAY BE (WITHOUT LIMITATION) INVALID IF THE SPECIFIED MATERIAL IS USED IN COMBINATION WITH ANOTHER, IN A PARTICULAR PROCESS, OR UNDER UNUSUAL CONDITIONS. DETERMINATION OF SUITABILITY OF ANY MATERIAL FOR ANY GIVEN PURPOSE IS THE SOLE RESPONSIBILITY OF THE USER WHO ASSUMES ALL RISKS AND RESPONSIBILITY THEREFORE. ALL MATERIALS MAY PRESENT UNKNOWN HAZARDS AND SHOULD BE USED WITH APPROPRIATE CAUTION. THE MANUFACTURER CANNOT AND DOES NOT GUARANTEE THAT THE HAZARDS DESCRIBED HEREIN ARE THE ONLY ONES THAT EXIST.

Key/Legend

Not provided

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Reviewing of this document is responsibility of Safety, Hygiene and Environment Department

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