

# Material Safety Data Sheet

Hazard Rating:	NFPA	CODE TRANSLATION
Health:	2	0 = Minimal Hazard
Flammability:	2	1 = Slight Hazard
Reactivity:	0	2 = Moderate Hazard
Special:		3 = Severe Hazard
		4 = Extreme Hazard

## FORMULA 7350 SERIES

### SECTION I: IDENTIFICATION

Effective Date: 9/30/86  
Name and Address:

THE KEELER COMPANY  
318 HENDEL STREET  
SHILLINGTON, PA 19607

Revised: SEPTEMBER 30, 2003  
Phone: (610) 775-1505  
Emergency Phone: CHEMTREC (800) 424-9300

Chemical Name: NOT APPLICABLE

Synonyms: N.A.

D.O.T. Shipping Name: CORROSIVE LIQUID, N.O.S.

D.O.T. Hazard Class: 8

ID No.: UN-1760

Formula: SEE SECTION II

Chemical Family: ALKYL ALKANOLAMINES

Packing Group: PG-II

(ERG-60)

### SECTION II: INGREDIENTS

A. Hazardous Ingredients	CAS NO.	%	TLV
ALKYL ALKANOLAMINES <sup>1</sup>		40-60	SEE BELOW

NOTE<sup>1</sup>: FORMULATIONS IN THIS SERIES OF PRODUCTS CONTAIN ONE OR MORE OF THE FOLLOWING AMINES ALL OF WHICH HAVE SIMILAR HAZARDS:

1. DIETHYLAMINOETHANOL, C <sub>6</sub> H <sub>15</sub> NO:	100-37-8	2ppm(skin)
2. CYCLOHEXYLAMINE, C <sub>6</sub> H <sub>13</sub> N:	108-91-8	10ppm(skin)
3. MORPHOLINE, C <sub>4</sub> H <sub>9</sub> NO:	110-91-8 <sup>2</sup>	20ppm(skin)

NOTE<sup>2</sup>: FORMULA 7350-F DOES NOT CONTAIN ANY MORPHOLINE AND IS REGISTERED WITH THE USDA FOR USE IN STEAM BOILERS. SEE PRODUCT DATA SHEET.

B. Other Ingredients	%*	TLV
ORGANIC CHELATING ESTER	L	NONE ESTAB

\*Legend: L=<1%; M=1-10%; H=>10%

### SECTION III: PHYSICAL PROPERTIES

Boiling Point: >212°F  
Percent Volatile (volume): 100  
Vapor Pressure (mm Hg): 1.4-10(as amines)  
Vapor Density (air=1): 3-4(as amines)  
Appearance and Odor: CLEAR COLORLESS LIQUID WITH TYPICAL AMINE ODOR

Specific Gravity: 0.93-0.97  
pH (undiluted): >12  
Solubility in Water: COMPLETE  
Evaporation Rate (water=1): 1.0

### SECTION IV: FIRE AND EXPLOSION HAZARD DATA

Flash Point (method used): >100°F (as solution)TAG CLOSED CUP  
Flammable Limits in Air, LOWER: >1.8% (min. amine); UPPER: >10.8%(min. amine)

Extinguishing Media: WATER SPRAY, WATER FOG, CO<sub>2</sub>, DRY CHEMICAL OR FOAM.

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Special Fire Fighting Procedures: FIREFIGHTERS SHOULD WEAR NORMAL PROTECTIVE EQUIPMENT. SELF-CONTAINED BREATHING APPARATUS IS RECOMMENDED FOR CONFINED AREAS.

Unusual Fire or Explosion Hazards: NONE KNOWN

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### SECTION V: HEALTH HAZARD DATA

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A. TLV and Source: CALCULATED >20ppm (ACGIH, 1983).

B. Effects of a Single Overexposure by:

1. Ingestion: MODERATELY TOXIC BY INGESTION. MAY CAUSE NAUSEA, VOMITING, ABDOMINAL PAIN AND COLLAPSE.
2. Inhalation: CAUSES NAUSEA AND VOMITING. HIGH CONCENTRATIONS MAY BE IRRITATING TO THE UPPER RESPIRATORY TRACT.
3. Skin Contact: PROLONGED CONTACT WILL CAUSE IRRITATION OR BURNS. PROLONGED OR EXTENSIVE CONTACT MAY RESULT IN ABSORPTION OF HARMFUL AMOUNTS.
4. Eye Contact: CAUSES SEVERE IRRITATION OR BURNS AND INTENSE PAIN. MAY CAUSE IRREVERSIBLE DAMAGE OR BLINDNESS.

C. Effects of Repeated Overexposures: OTHER THAN SHORT TERM EFFECTS, NONE KNOWN.

D. Emergency and First Aid Procedures for:

1. Ingestion: DRINK SEVERAL GLASSES OF VEGETABLE OIL, MILK, OR WATER. DO NOT INDUCE VOMITING NOR GIVE ANYTHING TO AN UNCONSCIOUS PERSON. GET IMMEDIATE MEDICAL ATTENTION.
2. Inhalation: REMOVE VICTIM TO FRESH AIR. GET MEDICAL ATTENTION IF SYMPTOMS PERSIST.
3. Skin Contact: WASH WITH SOAP AND WATER IMMEDIATELY. REMOVE CONTAMINATED CLOTHING AND LAUNDRY BEFORE REUSE. DISCARD CONTAMINATED SHOES. GET MEDICAL ATTENTION IF SEVERE REDNESS OR BURNS ARE CAUSED.
4. Eye Contact: IMMEDIATELY FLUSH WITH CLEAR WATER FOR 15 MINUTES AND GET MEDICAL ATTENTION.

E. Other Health Information: NONE KNOWN

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### SECTION VI: PERSONNEL PROTECTION DATA

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Respiratory Protection: NOT NORMALLY REQUIRED UNLESS USED IN CONFINED AREAS.  
Ventilation: NORMAL VENTILATION SATISFACTORY. MECHANICAL MAY BE REQUIRED TO KEEP CONCENTRATION BELOW MAXIMUM EXPOSURE LIMITS IN CONFINED AREAS.

Protective Gloves: RUBBER OR PLASTIC  
Eye Protection: GOGGLES AND FACE SHIELD OR MONOGOGGLES.

Other Protective Equipment: EYEWASH STATION AND SAFETY SHOWER IN AREA OF USE. WORKERS SHOULD WEAR RUBBER APRON AND BOOTS.

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### SECTION VII: REACTIVITY DATA

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- A. Product Stability: STABLE  
Conditions to Avoid: NONE KNOWN
- B. Incompatibility: CONCENTRATED ACIDS OR OXIDIZING AGENTS
- C. Hazardous Combustion or Decomposition Products: OXIDES OF CARBON AND NITROGEN WILL BE RELEASED IF WATER IS EVAPORATED BY THE HEAT OF A FIRE AND THE MATERIAL IS BURNED.
- D. Hazardous Polymerization: WILL NOT OCCUR  
Conditions to Avoid: NONE KNOWN

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### SECTION VIII: ENVIRONMENTAL DATA

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- A. Spill or Leak Procedures: SMALL SPILLS MAY BE FLUSHED WITH COPIOUS QUANTITIES OF WATER, PREFERABLY TO A SANITARY SEWER OR WASTE TREATMENT FACILITY. LARGER SPILLS SHOULD BE DIKED TO PREVENT RUNOFF AND THEN PUMPED INTO SUITABLE CONTAINERS FOR DISPOSAL.
- B. Waste Disposal: SMALL QUANTITIES MAY BE DILUTED WITH WATER AND FLUSHED TO A SANITARY SEWER. THE PREFERRED METHOD FOR LARGER QUANTITIES IS INCINERATION. OBEY ALL FEDERAL, STATE OR LOCAL REGULATIONS.
- C. Other Environmental Data: THIS PRODUCT IS TOXIC TO FISH. SPILLS OR WASTE MATERIAL MUST NOT ENTER NATURAL WATERWAYS.

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### SECTION IX: SPECIAL PRECAUTIONS

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- A. Handling and Storage: STORE IN A COOL DRY PLACE. KEEP CONTAINERS TIGHTLY CLOSED WHEN NOT IN USE.
- B. Other Precautions: THIS PRODUCT HAS BEEN DESIGNED FOR USE IN SPECIFIC TYPES OF BOILER WATER SYSTEMS AND SHOULD BE USED ONLY IN ACCORDANCE WITH THE INSTRUCTIONS PROVIDED BY THE TECHNICAL REPRESENTATIVE SERVICING THE FACILITY. THE PRODUCT CONTAINS ONLY FDA APPROVED INGREDIENTS FOR USE IN BOILERS WHERE STEAM CAN CONTACT FOOD OR EDIBLE PRODUCTS. FORMULA 7350-F IS USDA REGISTERED.

The data contained in this Material Safety Data Sheet has been prepared based upon an evaluation of the ingredients contained in the product, their concentration in the product and potential interactions. The information is offered in good faith and is believed to be accurate. It is furnished to the customer who is urged to study it carefully to become aware of hazards, if any, in the storage, handling, use and disposal of the product; and to insure his employees are properly informed and advised of all safety precautions required. The information is furnished to comply with the "Occupational Safety and Health Act" (OSHA) hazard communication regulation [Rule 29 CFR 1910.1220 (g) (2)]. Use or dissemination of all or part of this information for any other purpose is not permitted.