

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: BOILER-RITE DESCALER

CHEMICAL FAMILY: INORGANIC ACID

LAST REVISED: 2/27/90

PHYSICAL HAZARD: REACTIVE

HEALTH HAZARD: CORROSIVE

PRODUCT NUMBER: DMN0036

HAZARD RATINGS: HEALTH: 3

FLAMMABILITY: 0

REACTIVITY: 2

Damon Industries, Inc.
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0 = Insignificant 3 = Serious

1 = Slight 4 = Severe

2 = Moderate

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D.O.T. HAZARD CLASS: CORROSIVE MATERIAL

--- SECTION 2 -- HAZARDOUS INGREDIENTS ---

INGREDIENT	CAS NO.	PERCENT	TWA	STEL	CEILING
HYDROGEN CHLORIDE	7647-01-0	28%	-	-	5 ppm

THE BALANCE OF INGREDIENTS ARE NOT CONSIDERED HAZARDOUS UNDER CFR 29 1910.1200.

----- SECTION 3 -- PHYSICAL DATA -----

BOILING POINT: 230° F.	SPECIFIC GRAVITY: 1.15
VAPOR PRESSURE: 28mm Hg	PERCENT VOLATILES: 100%
VAPOR DENSITY: 1.2	EVAPORATION RATE: 2.0 (WATER=1)
SOLUBILITY IN WATER: COMPLETE	pH: 1.0 ± 0.5

APPEARANCE AND ODOR: BLUE LIQUID WITH ACIDIC ODOR.

-- SECTION 4 -- FIRE AND EXPLOSION DATA --

FLASH POINT: NONE	LOWER EXPLOSIVE LIMIT: NOT APPLICABLE
	UPPER EXPLOSIVE LIMIT: NOT APPLICABLE

EXTINGUISHING MEDIA: WATER FOG. AVOID CARBONATE DRY POWDER DUE TO REACTIVITY.
SPECIAL FIRE FIGHTING PROCEDURES: MAY FORM TOXIC MATERIALS; HYDROGEN CHLORIDE, ACID FUMES, ETC. USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS: CONTACT WITH REACTIVE METALS WILL RELEASE EXPLOSIVE HYDROGEN GAS WHICH CAN FORM EXPLOSIVE MIXTURES WITH AIR.

----- SECTION 5 -- REACTIVITY DATA -----

STABILITY: STABLE
INCOMPATIBILITY: ALKALIS SUCH AS CAUSTIC SODA CAUSTIC POTASH, ETC., OXIDIZERS AND MOST METALS.
HAZARDOUS DECOMPOSITION PRODUCTS: CONTACT WITH REACTIVE METALS WILL RELEASE EXPLOSIVE HYDROGEN GAS.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

----- SECTION 6 -- HEALTH HAZARD DATA -----

THRESHOLD LIMIT VALUE (TLV): NONE KNOWN (SEE INDIVIDUAL INGREDIENTS).

PRIMARY ROUTES OF ENTRY: X THROUGH SKIN X INHALATION X INGESTION

EFFECTS OF OVEREXPOSURE:

EYES - CAUSES SEVERE DAMAGE AND MAY CAUSE BLINDNESS VERY RAPIDLY.
SKIN - CAUSES BURNS, POSSIBLE DEEP ULCERATIONS.
INHALATION - OF MIST OR FUMES CAN CAUSE DAMAGE TO NASAL AND RESPIRATORY PASSAGES.
SWALLOWING - RESULTS IN SEVERE DAMAGE TO MUCOUS MEMBRANES AND DEEP TISSUES, CAN RESULT IN DEATH ON PENETRATION TO VITAL AREAS.

FIRST AID PROCEDURES:

EYE CONTACT: IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES, LIFTING UPPER AND LOWER LIDS OCCASIONALLY. GET IMMEDIATE MEDICAL ATTENTION. IF PHYSICIAN IS NOT IMMEDIATELY AVAILABLE, CONTINUE FLUSHING WITH WATER. DO NOT USE CHEMICAL ANTIDOTE.

SKIN CONTACT: IMMEDIATELY FLUSH EXPOSED AREA WITH WATER FOR AT LEAST 15 MINUTES, GET MEDICAL ATTENTION. REMOVE CONTAMINATED CLOTHING IMMEDIATELY. LAUNDRER CLOTHING BEFORE REUSE. DISCARD CONTAMINATED SHOES.

INHALATION: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM AND GET MEDICAL ATTENTION.

INGESTION: DO NOT INDUCE VOMITING. VOMITING WILL CAUSE FURTHER DAMAGE TO THE THROAT. DILUTE BY GIVING WATER OR MILK. TREAT FOR SHOCK BY KEEPING WARM AND QUIET. GET MEDICAL ATTENTION IMMEDIATELY. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

----- **SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES** -----

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

STORE SEPARATE FROM ALKALIS, OXIDIZERS AND REACTIVE METALS. STORE IN COOL, WELL VENTILATED AREA. REMOVE LEAKING CONTAINERS.

ADDITION TO WATER GENERATES HEAT WHICH CAN RESULT IN VIOLENT BOILING AND SPATTERING. ALWAYS ADD SLOWLY AND IN SMALL AMOUNTS. NEVER USE HOT WATER. ALWAYS ADD ACID TO WATER.

EMPTY CONTAINERS RETAIN PRODUCT RESIDUE AND MAY BE HAZARDOUS. OBSERVE ALL PRECAUTIONS GIVEN IN THIS DATA SHEET.

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL: WIPE OR MOP UP. RINSE WITH AN ALKALINE CLEANER OR A SOLUTION OF SODIUM BICARBONATE OR SODIUM CARBONATE (SODA ASH) TO NEUTRALIZE..

LARGE SPILL: COVER SPILLS WITH SODIUM BICARBONATE OR A SODIUM CARBONATE (SODA ASH) AND SLAKED LIME MIXTURE (50-50). FLUSH TO DRAIN OR SEWER WITH LARGE EXCESS OF WATER. RINSE CONTAMINATED AREA WITH SODA ASH OR ALKALINE CLEANER SOLUTION.

WASTE DISPOSAL METHOD:

SMALL SPILL: FLUSH DOWN DRAIN WITH LARGE AMOUNTS OF WATER.

LARGE SPILL: NEUTRALIZE TO pH 7 BY ADDING SLOWLY TO LARGE VOLUME OF AGITATED SOLUTION OF SODA ASH AND SLAKED LIME. WASH TO SEWER WITH A LARGE EXCESS OF WATER.

---- **SECTION 8 - PROTECTIVE EQUIPMENT** ----

RESPIRATORY PROTECTION: IF TLV OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, AN OSHA APPROVED BREATHING APPARATUS OR RESPIRATOR SHOULD BE USED.

VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL) AND/OR LOCAL EXHAUST VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS: NEOPRENE OR NATURAL RUBBER.

EYE PROTECTION: CHEMICAL SPLASH GOGGLES, FACE SHIELD OR SAFETY GLASSES IN COMPLIANCE WITH OSHA REGULATIONS.

OTHER PROTECTIVE EQUIPMENT: WEAR IMPERVIOUS CLOTHING OR APRON, AND BOOTS. AN EYEWASH STATION AND SAFETY SHOWER SHOULD BE LOCATED NEARBY AND READY FOR USE.

---- **SECTION 313 SUPPLIER NOTIFICATION** ----

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of CFR 372:

<u>CHEMICAL NAME</u>	<u>CAS#</u>	<u>% BY WEIGHT</u>	<u>LBS/GAL (If sold by gallons)</u>
HYDROCHLORIC ACID	7647-01-0	28%	2.7

This information must be included in all MSDSs that are copied and distributed for this product.

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.