



MATERIAL SAFETY DATA SHEET
Penetone® Corporation, 700 Gotham Parkway, Carlstadt, NJ 07072

FORMULA 990™

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SECTION 1 PRODUCT IDENTIFICATION & EMERGENCY INFORMATION

PRODUCT NAME: FORMULA 990
GENERAL USE: Scale and rust remover
PRODUCT DESCRIPTION: Liquid acid cleaner
GENERIC INGREDIENTS: Water, hydrochloric acid, and corrosion inhibitor

**EMERGENCY TELEPHONE NUMBERS: PENETONE 201-567-3000
CHEMTREC 800-424-9300**

SECTION 2 HAZARDOUS INGREDIENT SECTION

This product is hazardous as defined in 29 CFR1910.1200.

OSHA HAZARD: CORROSIVE

OSHA HAZARDOUS INGREDIENTS

| | CAS# | EXPOSURE LIMITS 8 hrs. TWA (ppm) | | Supplier |
|-------------------|-----------|----------------------------------|-----------|----------|
| | | OSHA PEL | ACGIH TLV | |
| Hydrochloric acid | 7647-01-0 | 5 | 5 | --- |

SECTION 3 HEALTH INFORMATION & PROTECTION

EMERGENCY OVERVIEW:
Clear dark brown liquid with pungent odor.
Can be corrosive to skin and eyes.

POTENTIAL HEALTH EFFECTS:

- EYE CONTACT:**
May cause irritation or burns on prolonged contact. Mist may be irritating.
- SKIN CONTACT:**
Frequent or prolonged contact may irritate or dry the skin, cause dermatitis, or cause burns. Skin contact may aggravate an existing dermatitis condition
- INHALATION:**
Inhalation of spray mist may cause irritation or burns to the respiratory tract.
- INGESTION:**
Ingestion can cause burns to the mouth, esophagus, and stomach.

FIRST AID MEASURES:

EYE CONTACT:

Flush eyes with large amounts of water. See physician immediately.

SKIN CONTACT:

Flush skin with large amounts of water. Remove contaminated clothing and launder before reuse. If skin irritation develops or persists, consult physician.

INHALATION:

Remove person to fresh air. Administer oxygen or artificial respiration as needed. Call a physician immediately.

INGESTION:

If swallowed, give plenty of water or milk. DO NOT INDUCE VOMITING. Call a physician immediately.

WORKPLACE EXPOSURE CONTROLS:

PERSONAL PROTECTION:

Splash proof goggles are recommended for all workplace conditions. Rubber gloves should be used. Other protective gear, including splash proof goggles or face shield, rubber boots, aprons, gauntlets, or rain gear should be worn depending on how the product is used.

VENTILATION:

None needed under normal use conditions. If the product is being sprayed, a dust mask or particle respirator is recommended. DO NOT MIST THIS PRODUCT. Use coarse spray only.

SECTION 4 FIRE & EXPLOSION HAZARDS

FLASH POINT: None to boiling point (TCC, COC)

FLAMMABLE LIMITS: Not applicable

AUTOIGNITION TEMPERATURE: Not determined

GENERAL HAZARD:

This is a water based product and presents no unusual hazards in a fire.

FIRE FIGHTING:

Cool containers with water.

HAZARDOUS COMBUSTION PRODUCTS:

Hydrochloric acid vapor may be given off as the product is heated and/or taken to dryness.

SECTION 5 SPILL CONTROL MEASURES

LAND SPILL:

For small spills, use absorbent material such as towels or absorbent powders. Put all material into proper waste disposal container with lid tightly covered. For larger spills, dike spill, recover free liquid, and use absorbent material to dry area. Rinse area with water. Put all material into appropriate waste containers.

WATER SPILL:

Product is water based and water dilutable. Surfactants used in this product are biodegradable. Localized high concentration of product may cause fish kills, but no persistent or long term effects will result. Hydrochloric acid is listed in the Clean Water Act. Check with local environmental regulatory agencies for reporting requirements.

SECTION 6 HANDLING & STORAGE

STORAGE TEMPERATURE, °F: ambient. DO NOT STORE ABOVE 120° F. KEEP FROM FREEZING.

GENERAL: Do not store near strong bases.

SECTION 7 TYPICAL PHYSICAL & CHEMICAL PROPERTIES

BOILING POINT, °F:

about 182

EVAPORATION RATE, Acetone = 1:

equal to water

SOLUBILITY IN WATER:

soluble

SPECIFIC GRAVITY at 75°F:

1.165

ODOR AND APPEARANCE:

clear dark brown liquid with pungent odor

VAPOR PRESSURE, mm Hg at 20°C:

equal to water

VAPOR DENSITY (Air = 1):

not determined

WT% ORGANIC VOLATILES:

none

pH:

<1.0

SECTION 8 REACTIVITY DATA

GENERAL:

This product is stable and hazardous polymerization will not occur.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Strong bases.

SECTION 9 REGULATORY INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT):**PROPER SHIPPING NAME:**

HYDROCHLORIC ACID SOLUTION

HAZARD CLASS: 8**IDENTIFICATION NUMBER:** UN 1789**PACKING GROUP:** PG II**LABEL:** CORROSIVE**FLASH POINT:** none-to-boil**pH:** <1.0**TSCA:** The ingredients in this product are listed on the TSCA inventory.**CERCLA:**

This product contains the following reportable CERCLA material:

Hydrochloric acid CAS# 7647-01-0 RQ = 5000 lbs

Releases exceeding the RQ must be reported to the National Response Center, 800-424-8802, and may be subject to state and local reporting.

RCRA HAZARD CLASS:

D002 Corrosive hazardous waste

SARA TITLE III:

311/312 HAZARD CATEGORIES:

Acute health

313 REPORTABLE INGREDIENTS:

Hydrochloric acid CAS# 7647-01-0 35-40 wt%

CLEAN WATER ACT:

Hydrochloric acid is listed in the Clean Water Act as a hazardous substance.

NEW JERSEY RIGHT-TO-KNOW INFORMATION:

This product contains water (CAS# 7732-18-5) and hydrochloric acid (CAS# 7647-01-0).

CALIFORNIA PROPOSITION 65 INFORMATION:

This product does not contain any chemicals recognized by the state of California to cause cancer and/or birth defects or reproductive harm.

SCAQMD INFORMATION:

Is there a photochemically reactive material present? No
What is the % by volume of photochemically reactive material? 0
What is the VOC content? 0
What is the vapor pressure of VOC's? 0

SECTION 10 NOTES

HAZARD RATING SYSTEMS:

| | HMIS | NFPA |
|--------------|------|------|
| HEALTH | 4 | 4 |
| FLAMMABILITY | 0 | 0 |
| REACTIVITY | 0 | 0 |

KEY
4 = Severe
3 = Serious
2 = Moderate
1 = Slight
0 = Minimal

REVISION SUMMARY:

Change in header

SUPERSEDES ISSUE DATE:

January 19, 1998

FOR ADDITIONAL PRODUCT INFORMATION, CONTACT YOUR SALES ENGINEER
FOR ADDITIONAL HEALTH/SAFETY INFORMATION, CALL 201-567-3000

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