



**Machine Detergent**

## DESCRIPTION

**Valor Machine Detergent** is a concentrated, chlorinated dishwashing powder for use in industrial dishwashing machines using a central feed system.

Specially formulated for use in soft and hard water, **Valor Machine Detergent** provides a unique blend of detergents to give sparkling clean dishes, cutlery, glasses, plasticware, pots and pans. This product is suitable for use in all types of mechanical dishwashers.

## SPECIAL INFORMATION

**Valor Machine Detergent** is a Canadian Food Inspection Agency (CFIA) approved product for use in registered food processing plants.

Do not mix **Valor Machine Detergent** with acid products (a toxic chlorine gas could result). **Valor Machine Detergent** should not be used for manual cleaning.

## DIRECTIONS

**Valor Machine Detergent** can be added manually or by using the electronic detergent controller. Best results are achieved with the water temperature between 70°C - 80°C (160°F - 175°F).

Please consult your *M-chem* representative for specific feeding recommendations to meet your particular needs.

## PHYSICAL DATA

Appearance	Powder
Color	White
Foam	None
Odor	Mild, slight chlorine
pH (3.1%)	12.0 -13.0
Chlorine %	0.9 minimum

# MATERIAL SAFETY DATA SHEET

## SECTION 1 – PRODUCT/MANUFACTURER'S IDENTITY

Product Name: **VALOR MACHINE DETERGENT**

WHMIS CODE: E, D2B

Product Use: *Chlorinated dish detergent.*

Proper Shipping Name: N/A

Hazard Class: N/A

UN Number: N/A

### HMIS

3	Health
0	Flammability
0	Reactivity
B	Personal

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### EMERGENCY PHONE

Canada: Canutec 613-996-6666  
U.S.A.: Chemtrec 800-424-9300

A=Goggles, B=Goggles & Gloves  
C=Goggles, Gloves and Apron

ABBREVIATION KEY: N/A=Not Applicable, N/E=Not Established, N/D=Not Determined, > =Greater Than

## SECTION 2 – HAZARDOUS INGREDIENTS INFORMATION

INGREDIENT	CAS NO.	RANGE %	PEL	TLV
<b>SODIUM METASILICATE</b>	6834-92-0	15.0-30.0	N/A	No Tox Data
LD50 (oral rat) 622 mg/kg				
LD50 (dermal) No Data				
LC50 No Data				
<b>SODIUM CARBONATE</b>	497-19-8	40.0-60.0	15 mg/m3	10 mg/m3
LD50 (oral rat) 2800 mg/kg				
LD50 (dermal) No Data				
LC50 No Data				
<b>SODIUM DICHLOROISOCYANURATE</b>	2893-78-9	1.0-5.0	No Data	No Data
LD50 (oral rat) 7400 mg/kg				
LD50 (dermal) Not Available				
LC50 Not Available				

## SECTION 3 – PHYSICAL DATA

**Color and Odor:** Off-white, slight chlorine odor.      **Boiling Point:** N/D      **Vapor Pressure (mm HG):** N/D      **pH:** 12.0-13.0 @ 3.1% solution.  
**Physical State:** Powder.      **Melting Point:** N/A      **Vapor Density:** N/D      **Specific Gravity:** Powder.  
**Coeff. Water/Oil Dist:** Greater than 1.0      **Evaporation Rate:** N/D      **Solubility in Water:** Soluble      **Odor Threshold:** No Data

## SECTION 4 – FIRE AND EXPLOSION HAZARD DATA

**Flash Point and Method:** Non-flammable.      **Sensitivity to Mechanical Impact:** None.      **Conditions of Flammability:** None.  
**Flammable Limits:** None known.      **Sensitivity to Static Discharge:** None.      **Auto ignition Temperature:** None known.  
**Extinguishing Media:** Water, dry chemical, foam or carbon dioxide. Use extinguishing media suitable for surrounding fires.  
**Unusual Fire and Explosion Hazards:** Decomposes at higher temperatures to produce toxic chlorine gases.  
**Hazardous Combustion Products:** Decomposition may produce oxides of carbon and phosphorus, and may liberate toxic chlorine gas.  
**Special Fire Fighting:** Wear full protective equipment, including a NIOSH/MSHA approved, self-contained breathing apparatus for fire fighting situations. Use water spray to cool all nearby fire exposed surfaces.

## SECTION 5 – REACTIVITY DATA

**Chemical Stability:** Stable under normal storage conditions, but can be unstable in the presence of excessive heat.  
**Hazardous Polymerization:** Will not Occur.  
**Incompatibility (material to avoid):** Strong acids, reducing agents, ammonia solutions, organic compounds.  
**Hazardous Decomposition Products:** Decomposition may produce oxides of carbon and phosphorus, and may liberate toxic chlorine gas.

## SECTION 6 – TOXICOLOGICAL DATA

**Exposure Limits:** See Section 2 under Hazardous Ingredient.      **Routes of Entry:** Skin and eye contact, inhalation.  
**Irritancy of Product:** Corrosive to skin, eyes and respiratory system.      **Carcinogenicity:** None known.  
**Sensitization:** None known.      **Mutagenicity:** None known.  
**Name of Toxicological Synergistic Product:** None known.      **Reproductive Toxicity:** None known.  
**Teratogenicity:** None known.  
**Effects of Chronic Exposure:** Prolonged or repeated exposure may cause skin damage or dermatitis, respiratory disorder or lung damage.  
**Effects of Acute Exposure to Product:** Product exposure may burn eyes and irritate or burn skin. Inhaling vapors or mists may cause respiratory discomfort such as breathing problems, burning, coughing, etc. Ingestion may cause gastrointestinal and abdominal discomfort.

## SECTION 7 – PREVENTATIVE AND CONTROL MEASURES

**Respiratory Protection:** Normally not required. However, use a NIOSH/MSHA approved dust respirator if product dust is generated.  
**Ventilation:** Good general ventilation or local exhaust ventilation for spraying and misting in confined areas.  
**Protective Gloves:** Normally not required. Use natural or synthetic rubber gloves for handling.  
**Eye Protection:** Safety goggles or glasses.  
**Protective Clothing and Equipment:** Long sleeve coveralls. Eye wash recommended in the immediate work area.  
**Storage and Handling Procedures:** Store in a cool, dry place away from incompatible materials. Keep container closed when not in use. Do not mix with any other chemicals. Avoid contact with skin, eyes and clothing. Use good industrial hygiene. Store at temperatures below 30°C (86°F).  
**Disposal Procedures for Spills or Leaks:** Wear protective equipment. Sweep up material and dispose of into a sealed, clean dry waste container. Keep material away from sewers.  
**Waste Disposal Method:** Reuse if possible, or otherwise dispose recovered material in accordance with all local, Provincial or Federal Regulations.  
**Special Shipping Information:** Store at temperatures below 30°C (86°F).

## SECTION 8 – EMERGENCY FIRST AID PROCEDURES

**First Aid:**  
If swallowed, give plenty of clean water to drink to dilute product. Do not induce vomiting. Call a Physician. In case of contact with eyes, flush with clean water for 15 minutes. Get medical attention. For contact with skin, wash with clean water and rinse well. If irritation occurs or persists, get medical attention.

## PREPARATION DATA

PREPARED BY: Technical Service / Regulatory Division      PHONE: 604-526-5655      LAST UPDATE: 07/04/11  
THE INFORMATION PROVIDED IN THIS MATERIAL SAFETY DATA SHEET HAS BEEN OBTAINED FROM CURRENT SOURCES AND IS BELIEVED TO BE RELIABLE