



Date:	09/29/08	MSDS No:
Supersedes:		
Trade Name:		
Sizes:	All	

MATERIAL SAFETY DATA SHEET

SECTION I – IDENTIFICATION

Manufacturer/Supplier: Dial Manufacturing, Inc. 25 S. 51st Avenue Phoenix, Arizona 85043 Tel. No.: (602) 278-1100	Product Name:	HEAVY DUTY D-SCALE
	Product Type:	Evaporative Cooler Descalant
	Product Number:	5242 (Quart) / 5244 (Gallon)
	Classification:	HMIS HEALTH: 2 - Moderate Hazard
		FLAMMABILITY: 0 - Minimal Hazard
		REACTIVITY: 0 - Minimal Hazard
		SPECIAL: 0 - Minimal Hazard

SECTION II – HAZARDOUS INGREDIENTS

Composition contains no hazardous ingredients.

SECTION III – PHYSICAL & CHEMICAL PROPERTIES

Appearance & Color:	Clear, light blue color	Boiling Point (estimated):	>212°F / >100°C
Odor:	Little or no odor	Vapor Pressure (estimated):	20mm @ 72°F / 22°C
Physical State:	Liquid	Vapor Density (Air=1):	>1
pH of Concentrate:	<1	Evaporation Rate (BuAc = 1):	<1
Specific Gravity:	1.03, 8.5 lbs./US Gallon	Volatile Percent (estimated):	72°
Viscosity:	Not Established	Freezing Point (estimated):	<32°F / 0°C
Solubility in Water:	100°		

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	None	Explosion Limits:	None
Auto Ignition:	None	Flammability Class (defined by OSHA):	Non-Combustible
Combustion Products:	At flame temperatures the product residues will emit toxic fumes of carbon oxides and nitrogen oxides. May, under prolonged high temperature, also give off noxious fumes.		
Extinguishing Media:	Use media appropriate for packaging and surroundings.		
Unusual Fire and Explosion Hazards:	Spilled product may present slippery conditions. Take suitable care with footing		
Special Precautions:	Avoid personal contact with the product.		
Fire Fighting Procedures:	Use bunker gear and self-contained breathing apparatus (SCBA)		

SECTION V – FIRST AID PROCEDURES

Eyes:	Remove any contact lens and immediately flush eyes with water for 15 minutes. Lift upper and lower eyelids to aid flushing. Get immediate medical attention.
Skin:	Immediately flush the skin with ample amounts of water. Remove contaminated clothing and launder before reusing. If irritation persists, seek medical help.
Ingestion:	Do not induce vomiting. Give ample amounts (one glass for children and two for adults) of water, Milk of Magnesia or milk and call a physician.
Inhalation:	If liquid is aspirated into the lungs, remove to fresh air. If not breathing, give artificial respiration. Get immediate medical help.

SECTION VI – HEALTH HAZARD DATA

Primary Routes of Entry:	Eye and Skin.	
Physical Hazard:	None established.	
Summary of Health Hazards:	Avoid contact of eyes or mucous membranes, which will cause irritation.	
Acute Exposure:	Eyes:	Splashing into the eye can cause effects of pain and irritation
	Skin:	Contact may cause mild irritation. (Based on an OECD test of a main product component)
	Ingestion:	May cause pain, nausea and vomiting.
	Inhalation of Vapor:	Not expected to cause difficulty. Avoid inhalation of mists, which can cause harm.

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Chronic Exposure:	Skin:	Prolonged contact may cause irritation.
	Carcinogenicity Listings::	NTP: None, IARC: None, OSHA: None, ACGIH: None.
Signs and Symptoms of Overexposure:	Irritation of the eyes and mucous membranes, redness and pain.	
Medical Conditions Aggravated by Exposure:	Dermatitis may be aggravated depending on the amount and duration of contact.	
SECTION VII – STABILITY & REACTIVITY DATA		
Stability:	Stable	
Conditions to Avoid:	Extreme and prolonged heat that will cause hydrolysis with the reduction of product effectiveness.	
Incompatibility:	Avoid galvanized metals that may produce explosive mixtures of hydrogen and air.	
Hazardous Decomposition:	Not expected under normal conditions.	
Hazardous Polymerization:	Will not occur.	
SECTION IX – EXPOSURE CONTROLS		
Procedures for Clean-Up:		
For Small Spills:	Treat with soda and flush with water.	
For Large Spills:	Dike spill with sand or soil and recover reusable product. Neutralize the area with soda ash and place solids in a waste container. Wash area with water.	
Personal Precautions:	See Section 9 for personal protective equipment recommendations. Avoid personal contact.	
Environmental Precautions:	Avoid discharge of large amounts to any waterway or low area.	
SECTION VIII – ACCIDENTAL RELEASE MEASURES		
Engineering Controls:	Adequate general ventilation and control of any possible mist generation. Otherwise, no special controls.	
Personal Protection:		
Ventilation:	No special requirements under normal conditions.	
Respiration:	Not required under normal conditions.	
Eye Protection:	Splash-proof goggles or eyewear recommended.	
Gloves:	Rubber gloves for extensive use.	
Ingestion:	Do not ingest. Do not use when handling food.	
Exposure Limit Guideline:	This product has no established exposure limits.	
SECTION X – HANDLING & STORAGE		
Safe Handling and Hygienic Practices:	Do not mix with other cleaners. Wash any contacted skin.	
Storage Requirements:	Do not store in metal containers, especially aluminum. Storage in certain metal containers at temperatures above 60° C (140° F) may result in hydrogen gas evolution. Store below 48° C (118° F) and above freezing.	
SECTION XI – TOXICITY DATA		
Information for this MSDS came from component data and from manufacturing experience.		
SECTION XII – ECOLOGICAL DATA		
Although not determined, we believe that based on the component data this product is environmentally acceptable.		
SECTION XIII – DISPOSAL CONSIDERATIONS		
RCRA Classification:	This product has been evaluated for RCRA characteristics and does meet the criteria of the hazardous corrosive class, D002, if discarded in its purchased form.	
Volatile Organic Compound (VOC) Content:	None.	
Special Instructions:	Neutralize waste fluids with soda ash and discharge into a waste treatment system according to local, State and Federal Regulations.	
SECTION XIV – TRANSPORTATION DATA		
DOT Labeling:	Not Required	Hazard Class:
Proper Shipping Name:		ID Number:

SECTION XV – REGULATORY INFORMATION

OSHA Compliance:	This MSDS prepared according to the 29 CFR 1919.1200 and ANSI Z400.1 Standards for the preparation of Material Safety Data Sheets. These standards meet the requirements of the WHMIS Format Standard.
TSCA:	Although components of this product find listing under the Toxic Substance Control Act (TSCA), this blended product is exempt from import/transport declarations.
SARA Title III:	The product in its normal packaging form is exempt under SARA Section 311 and 312 of the Superfund and Reauthorization Act of 1986 (Title III) as defined by the EPA Hazard Categories.
CERCLA, State & Local Planning (Reporting Qualities):	Not Required.
State Right-To-Know Compliance:	Not Required.

Notice: All information appearing herein is based upon data obtained from the manufacturers of the components used in this formulation and/or recognized technical sources. While the information is believed to be correct, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.