

Safety Data Sheet

According to OSHA HCS 2012 (29 CFR 1910.1200)



Section 1: Identification

Product Identifier: 50750-204 Formula VI (Dial Part Numbers: 5218 – 5225 – 5231)
Synonyms: Evaporative Cooler Descalant Concentrate
Recommended Use: Evaporative Cooler Cleaner
Emergency Health and Safety Number: INFOTRAC 800-535-5053

Distributor: Dial Manufacturing, Inc. 25 S. 51st Avenue Phoenix, AZ 85043	SDS Information: Phone: 602-278-1100 Email: URL: www.dialmfg.com	Customer Service: U.S.: 1-800-350-3425
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Section 2: Hazards Identification

GHS05 Classification: Corrosion
Met. Corr. 1 H290 May be corrosive to metals.
Eye Dam. 1 H318 Causes serious eye damage.



GHS07 Classification: Acute Tox. 4 H302 Harmful if swallowed.



Classification according to Directive 67/548/EEC or Directive 1999/45/EC
Not applicable.

Information concerning particular hazards for human and environment:
The product has to be labeled due to the calculation procedure of international guidelines.

Classification System:
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

Label elements:

Labeling according to EU guidelines

Observe the general safety regulations when handling chemicals. The product has been classified and marked in accordance with directives on hazardous materials.

Safety phrases:

Keep locked up and out of the reach of children.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable protective clothing, gloves and eye/face protection.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Dispose of this material and its container to hazardous or special waste collection point.

Classification system:

NFPA ratings (scale 0-4)



Health = 2
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0-4)

HEALTH	2
FIRE	0
REACTIVITY	0

Health = 2
Fire = 0
Reactivity = 0

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Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable
vPvB: Not applicable

Section 3: Composition / Information on ingredients

Chemical characterization: Mixtures

Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous Components	% by Wt.
Urea Monohydrochloride	0-15%

Section 4: First Aid Measures

Eye Contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.

Skin Contact: Flush contaminated skin with plenty of water. Continue to rinse for at least 20 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Ingestion: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Information for doctor:

Most important symptoms and effects, both acute and delayed

Eye Contact: Causes serious eye damage
Inhalation: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin Contact: Causes mild skin irritation
Ingestion: Harmful if swallowed. Irritating to mouth, throat and stomach

Indication of any immediate medical attention and special treatment needed

Notes to Physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Specific Treatments: No specific treatment Protection of First Aiders: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Section 5: Fire-Fighting Measures

Extinguishing Media

Suitable extinguishing agents: Use an extinguishing agent suitable for the surrounding fire.

Special hazards arising from the substance or mixture: At temperatures above 60 °C/140°F acid action on most metals may release hydrogen, a highly flammable and explosive gas.

Advice for firefighters: No special measures are required.

Protective equipment: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up:

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

Section 7: Handling and Storage

Handling: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Information about protection against explosions and fires: Store in tightly closed, original container away from flame or other ignition source.

Conditions for safe storage, including any incompatibilities

Storage - Requirements to be met by storerooms and receptacles: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Specific end use(s): No further relevant information available.

Section 8: Exposure Controls / Personal Protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Exposure controls: Occupational Exposure Limits: None

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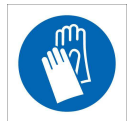
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Engineering Controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.



Eye/Face Protection: Tightly Sealed Goggles. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.



Skin Protection: Protective Gloves. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Material of gloves: Chemical-resistant, impervious gloves complying with an approved standard

Breathing Equipment: Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Other Protective Equipment: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

General Hygiene Conditions: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 9: Physical and Chemical Properties

Physical State:	Fluid	Color:	Light Blue
Odor:	Acidic	Odor Threshold:	Not determined
pH value at 20° C (68° F):	<1	Flash Point:	Not applicable
Melting Point (deg. F):	Not determined	Boiling Point or Boiling Range:	100° C (212° F)
Decomposition Temperature:	Not determined	Flammability (solid, gas):	Non-Flammable
Autoignition Temperature:	Product is not self-igniting.	Danger of Explosion:	No explosion hazard
Lower Explosion Limit:	Not determined	Upper Explosion Limit:	Not determined
Vapor Pressure (mm Hg):	Not determined	Vapor Density (air=1):	Not determined
Relative Density:	8.59 lbs/gal	Evaporation rate:	(BuAc=1) <.01
Solubility in Water:	Fully miscible	Partition Coefficient (n-octanol/water):	Not determined
Dynamic Viscosity:	Not determined	Kinematic Viscosity:	Not determined

Section 10: Stability and Reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical Stability: Stable.

Possibility of Hazardous Reactions: No dangerous reactions known.

Conditions to Avoid: No specific data.

Incompatible Materials: Reactive or incompatible with the following materials: oxidizing materials. This material may be extremely hazardous in contact with chlorates and nitrates. Contact with hypochlorites (eg. Chlorine bleach, sulfides or cyanides) will liberate toxic gases. Contact with alkaline materials (eg. Aqua ammonia) will generate heat.

Hazardous Decomposition Products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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Section 11: Toxicological Information

Component	Oral LD50	Dermal LD50	Inhalation LC50
Oral	1120.9 mg/kg (rat)	No Data	No Data

Primary irritant effect:

On the skin: Mild skin Irritant (OECD 404)

On the eye: Eye Corrosive (OECD 405)

Sensitization: No sensitizing effects known.

Carcinogenic categories

IARC (International Agency for Research on Cancer): None of the ingredients is listed.

NTP (National Toxicology Program): None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration): None of the ingredients is listed.

Section 12: Ecological Information

Toxicity:

Ingredient Name: Organic acid salt Result: Acute LC50 7'1 mg/L Species: Ceriodaphnia dubia Exposure: 48hrs

Ingredient Name: Organic acid salt Result: Acute LCO >142mg/L Species: Rainbow Trout Exposure: 96hrs

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Additional ecological information:

General notes: Biodegradable

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects: No further relevant information available

Section 13: Disposal Considerations

Waste Treatment Methods/Recommendation: Biodegradable. This product has been evaluated for RCRA characteristics and does not meet the criteria for a hazardous waste, if discarded in its purchased form.

Uncleaned Packagings/Recommendation: Neutralize waste fluids with soda ash. The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14: Transport Information

UN-Number

DOT, ADN: not regulated

IMDG, IATA: 1760

UN proper shipping name

DOT, ADN: not regulated

IMDG, IATA: Corrosive liquid N.O.S (urea monohydrochloride)

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Transport hazard class (es)

DOT, ADN:

Class: not regulated

IMDG, IATA:

Class: 8
not regulated

Packing group

DOT: not regulated

IMDG, IATA: III

Environmental hazards:

Marine pollutant: No

Special precautions for user

not applicable

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

Not applicable

Transport/Additional information:

DOT Exempt under DOT 49 CFR 173.154 (d). This material is corrosive to aluminum only. Not corrosive to mild steel and skin

IMDG This material is corrosive to aluminum only. Not corrosive to mild steel and skin

IATA This material is corrosive to aluminum only. Not corrosive to mild steel and skin

UN "Model Regulation": --

Section 15: Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture.

SARA

Section 355 (extremely hazardous substances)	Section 313 (Specific toxic chemical listing)	TSCA (Toxic Substances Control Act)
None of the ingredients is listed.	None of the ingredients is listed.	None of the ingredients is listed.

Proposition 65 – Chemicals known to cause:

Cancer	Reproductive Toxicity for Females	Reproductive Toxicity for Males	Developmental Toxicity
None of the ingredients is listed.	None of the ingredients is listed.	None of the ingredients is listed.	None of the ingredients is listed.

Carcinogenic Categories:

EPA (Environmental Protection Agency)	TLV (Threshold Limit Value established by ACGIH)	NIOSH-CA (National Institute for Occupational Safety and Health)
None of the ingredients is listed.	None of the ingredients is listed.	None of the ingredients is listed.

Product related hazard information:

Observe the general safety regulations when handling chemicals. The product has been classified and marked in accordance with directives on hazardous materials.

Safety phrases:

Keep locked up and out of the reach of children. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Dispose of this material and its container to hazardous or special waste collection point

Chemical safety assessment: A Chemical Safety Assessment has not been carried out

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Section 16: Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

MSDS Abbreviations

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Met. Corr. 1: Corrosive to metals, Hazard Category 1

Acute Tox. 4: Acute toxicity, Hazard Category 4

Eye Dam. 1: Serious eye damage/eye irritation. Hazard Category 1

REVISED	REPLACES
01-June-15	--