



Section 1: Identification of the Material and Supplier

Product Name: Comet

Other Names: Mixture of alkaline salts containing sodium metasilicate.

Proper shipping name (ADG Code): Disodium trioxosilicate mixture.

Recommended use: As a detergent mixture for dishwashing machines.
Use as directed on the product label.

Supplier: DASCO Pty. Ltd.,
ABN: 14 004 581 113
24 - 26 Helen Street, HEIDELBERG HEIGHTS VIC 3081
Tel: (03) 9459 7004 (business hours)
Fax: (03) 9459 9200

Emergency Phone Numbers:
Transport/Fire Emergency: 000 (Emergency services)
Medical Emergency: 131126 (Poisons Information Centre)

Section 2: Hazards Identification

Classified as hazardous according to criteria of Worksafe Australia.

Dangerous goods.

Risk Phrases: R: 34 Causes burns.
R: 37 Irritating to respiratory system.

Safety Phrases: S: 1/2 Keep locked up and out of the reach of children.
S: 13 Keep away from food, drink and animal feeding stuffs.
S: 24/25 Avoid contact with skin and eyes.
S: 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S: 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Section 3: Composition/Information on Ingredients

Ingredients:

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| Sodium carbonate anhydrous | [497-19-8] | 30 - 60 % |
| Sodium metasilicate pentahydrate | [10213-79-3] | 10 - 30 % |
| Other ingredients deemed not to be hazardous | | to 100 % |
| Available chlorine | [7782-50-5] | 2.48 % |

Section 4: First Aid Measures

For advice, contact a Poisons Information Centre (Phone 131 126) or a doctor.

Swallowed: If swallowed, do NOT induce vomiting.

Skin: If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

Eyes: If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Center or a doctor, or for at least 15 minutes.

Inhaled: Remove from exposure.

First Aid facilities:

Mandatory: Eye wash. Hand wash basin.

Recommended: Emergency shower if handling industrial quantities.

Advice to Doctor:

Caustic, alkaline mixture containing a moderate proportion of sodium metasilicate and a low proportion of a chlorinating agent. May cause burns to skin and eyes. Irritating to the respiratory system. Contact Poisons Information Centre.

Aggravated medical conditions:

Persons with compromised respiratory function may be more susceptible to inhalation exposure.

Section 5: Fire Fighting Measures

HAZCHEM Code: 2 X

Extinguishant: Water fog or fine water spray.

Risk of violent reaction or explosion: No.

Products of combustion: Oxides of phosphorus, oxides of carbon, hydrogen chloride.

Protective Equipment: Full protective clothing including breathing apparatus and protective gloves.

Section 6: Accidental Release Measures

Emergency Procedures:

Contain.

For large spills:

Contain spillage using sand or earth. Transfer both liquids and solids to suitable container. Treat residues as for small spillages.

For small spills:

If local regulations permit, mop up with plenty of water and run to waste, diluting greatly with running water. Otherwise transfer to suitable container and arrange removal by disposals company.

Section 7: Handling and Storage

Precautions for safe handling:

Avoid contact with skin and eyes.

Keep away from acids, aluminium, tin, zinc and galvanised iron.

Conditions for safe storage:

Store in a cool, dry, well ventilated place, out of reach of children. Store in original container. Large quantities should be stored in dangerous goods store. Keep container tightly closed. Keep away from acids, moisture and active metals (such as aluminium, tin, zinc). Protect from physical damage. Clean up all spills promptly; avoid secondary accidents.

Incompatibles:

Acids, active metals - especially in the presence of moisture.

Section 8: Exposure Controls/Personal Protection

National Exposure Standards:

ES-TWA: Chlorine 1 ppm, 3 mg/m³

ES-STEL: None assigned.

ES-PEAK: Chlorine 1 ppm, 3 mg/m³

Notations: None.

[Peak] indicates a ceiling concentration which should not be exceeded, even momentarily.

Biological Limit Values: No data found.

Engineering Controls:

Do not use aluminium, tin, zinc or galvanised iron as materials of construction

Ensure adequate ventilation (same as outdoors) when using.

If handling industrial quantities, or if vapour/dust risk exists, consider local mechanical exhaust/extraction to keep airborne contamination as low as possible, and at least below the TLV.

Personal Protective Equipment:

Avoid contact with skin and eyes. Avoid breathing vapours.

Personal protection to be selected from those recommended below, as appropriate to mode of use, quantity handled and degree of hazard:-

Normal Use:

Eye/face protection

Gloves, rubber or plastic.

Industrial Quantities:

Face shield or safety glasses

Gloves, rubber or plastic

Plastic apron, sleeves and boots

Impervious overalls.

Section 9: Physical and Chemical Properties

Appearance: White, granular powder.
Odour: Slight smell of chlorine.
pH: About 11.5
Vapour Pressure: No data.
Vapour Density: No data.
Boiling Point: No data.
Melting Point: No data.
Volatiles: About 2.5 % as available chlorine.
Volatile Organic Compounds (VOC): Nil.
Evaporation Rate: Not applicable.
Solubilities: Soluble in water.
Specific Gravity/Density: No data.
Flash Point: None.
Flammable Limits: None.
Dust Explosion: Will not occur.
Auto-ignition Temperature: No data.

Other Information:

Slightly hygroscopic, may absorb moisture from the air.
Highly alkaline mixture. May react vigorously or violently with acids, generating carbon dioxide (a simple asphyxiant) and chlorine (a toxic gas). Corrosive to active metals (such as aluminium, tin and zinc) in the presence of moisture, generating hydrogen (a flammable gas). May react with strong oxidising agents. Spillages will be slippery when wet.

Section 10: Stability and Reactivity

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: Incompatible materials.

Incompatible Materials: Acids, oxidising agents, reducing agents, active metals.

Hazardous Decomposition Products: Chlorine and hydrogen chloride, oxides of phosphorus.

Hazardous Reactions: Will react vigorously or violently with acids generating carbon dioxide and chlorine.
Corrosive to active metals in the presence of moisture, generating hydrogen.

Section 11: Toxicological Information

Health Effects:

No data available for the mixture. Information presented relates to individual ingredients.

| | | |
|-----------------|----------------------------------|---|
| Acute: | Swallowed: | Corrosive if swallowed. May cause nausea, vomiting, severe irritation and abdominal pain, ulceration and/or bleeding from the stomach, duodenum and small intestine. May cause electrolyte disturbances. May cause shock and collapse. |
| | Skin: | May cause irritation and skin burns, especially when wet. Will have a degreasing effect on the skin. |
| | Eyes: | May cause severe irritation and possible eye burns. Risk of permanent injury. |
| | Inhaled: | Inhaled dust will irritate the upper respiratory system. May cause a burning pain in the nose and throat, coughing, wheezing and shortness of breath. Risk of delayed onset pulmonary oedema (build-up of fluid in the lungs). Inhalation of traces of chlorine vapour may cause irritation, cough and sore throat. Aspiration of the mixture into the lungs during swallowing or vomiting may cause serious lung injury. |
| Chronic: | | Repeated skin contact may lead to irritation, dermatitic effects and possible sensitisation. Prolonged or repeated inhalation of dust may lead to nosebleeds, nasal congestion, erosion of the teeth, perforation of the nasal septum, chest pain and bronchitis. Chronic exposure to low levels of chlorine vapour may cause chloracne. |
| LD50: | Sodium carbonate anhydrous | 4,090 mg/kg oral, rat. |
| | Other ingredient # 1 | 3,120 mg/kg oral, rat. |
| | Sodium metasilicate pentahydrate | 1,153 mg/kg oral, rat. |
| LC50: | Sodium carbonate anhydrous | 2,300 mg/m ³ /2 hours, rat. |

Section 12: Ecological Information

| | |
|---|---|
| Ecotoxicity: | May be harmful to aquatic organisms. |
| Persistence and degradability: | The surfactant used in this product is not considered to be readily biodegradable. |
| Mobility: | Readily transported by water. |
| Environmental Fate: | No data. |
| Bioaccumulative potential: | No data. |
| Other adverse environmental effects: | Contains a moderate proportion of phosphate. May contribute to the formation of algal bloom. |

Section 13: Disposal Considerations

The generator of any wastes from this product is responsible for its proper classification, transport and disposal.

Consult appropriate local and State regulations.

Disposal methods and containers:

Avoid disposal to natural waters or the environment.
Do not use metal containers.

Special precautions for landfill or incineration:

Not suitable for incineration.
May not be suitable for some landfill sites.

Section 14: Transport Information

| | |
|--------------------------------------|--|
| UN Number: | UN 3253 |
| UN Proper shipping name: | Disodium trioxosilicate mixture. |
| Class and subsidiary risk: | 8 Corrosive. |
| Packaging group: | III |
| Special precautions for user: | Do not store or transport with dangerous goods of classes 1, 4.3, 5.1, 5.2, 7, acids, foodstuff and foodstuff empties. |
| HAZCHEM Code: | 2 X |
| Material for export: | Regulated. Refer to IMO/IMDG and IATA/ICAO . |

Section 15: Regulatory Information

Poisons (SUSDP): S5 Alkaline salts with pH > 11.5
In dishwashing machine products, add, to the poisons heading,
the cautionary statement: "BURNS SKIN AND THROAT".

Dangerous Goods: Yes. UN 3253 8/III 2 X.

Carcinogen: **Australia** **IARC** **NTP** **RTECS**
No. No. No. No.

Agricultural and Veterinary Chemicals Act: Not applicable.

Australian Inventory of Chemical Substances (AICS): Listed.

Other National/International Regulations: No data.

Section 16: Other information

Date of MSDS update: September 2009
Complete review and re-write of all sections.

Abbreviations:

NOHSC - National Occupational Health and Safety Commission.
ACGIH - American Conference of Governmental Industrial Hygienists.
IARC - International Agency for Research on Cancer (France).
NTP - National Toxicology Program (USA).
RTECS - Registry of Toxic Effects of Chemical Substances.

Literature references:

Available Sources of Data:

National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [2011(2003)] - NOHSC.
Australian Dangerous Goods Code.
Standard for the Uniform Scheduling of Drugs and Poisons - AHMAC.
Exposure Standards for Atmospheric Contaminants in the Occupational Environment [1003]- NOHSC.
List of Designated Hazardous Substances [10005] - NOHSC.
Merck Index - Merck Inc.
Sax's Dangerous Properties of Industrial Materials - Lewis.
Handbook of Toxic and Hazardous Chemicals and Carcinogens - Sittig.
Handbook of Reactive Chemical Hazards - Bretherick.
Hawley's Condensed Chemical Dictionary - Wiley Interscience.
AUSREG's Chemical Data Package for PCs - AUSREG Consultancy.