SAFETY DATA SHEET

Product Name: Finish Quantum

HEALTH · HYGIENE · HOME

Section 1 - Identification of The Material and Supplier

Product Name: **Finish Quantum**

Product Type: Detergent for use in domestic automatic dishwashers.

SDS Number: **D8230249-v1.1**

Formulation No: **#8182454; #8213925; #8213945; #8213946; #8230794**

Product Use: Consumer use.

Supplier Details:

Australia: Reckitt Benckiser (Australia) Pty Limited
ABN: 17 003 274 655
680 George Street, Sydney NSW 2000
Tel: +61 2 9857 2000

New Zealand: Reckitt Benckiser (New Zealand) Limited
2 Fred Thomas Drive, Takapuna, Auckland, New Zealand 0622
Tel: +64 9 484 1400

Poisons Information Centre: **Australia: Phone 131 126**
New Zealand: 0800 764 766 or 0800 POISON

Section 2 - Hazards Identification

Statement of Hazardous Nature

This product is classified as: Xi, Irritating. N, Dangerous to the environment. Hazardous according to the criteria of SWA.

Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

GHS Signal word: WARNING

HAZARD STATEMENT:

H319: Causes serious eye irritation.

PREVENTION

P103: Read label before use.
P102: Keep out of reach of children.
P101: If medical advice is needed, have product container or label at hand.
P280: Wear eye or face protection.
P264: Wash hands thoroughly after handling.

RESPONSE

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+313: If eye irritation persists, get medical advice/attention.

DISPOSAL

P501: Dispose of small quantities and empty containers by wrapping with paper and putting in garbage. For larger quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service.

Emergency Overview

Physical Description & Colour: White, blue, yellow, green and red solid tablets.
Odour: Characteristic fragrance.
Major Health Hazards: Causes serious eye irritation.

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc,%
Sodium carbonate	497-19-8	10-15
Disodium carbonate, compound with hydrogen peroxide (2:3)	15630-89-4	10-15

(1-hydroxyethylidene) bisphosphonic acid, sodium salt	29329-71-3	<2.5
Subtilisin	9014-01-1	<0.25
Alcohols, C12-18, ethoxylated and propoxylated	69227-21-0	<0.25
Various non-hazardous ingredients	secret	to 100

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

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.

Skin Contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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 10 minutes. Get medical attention.

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.

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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Most important symptoms and effects, both acute and delayed

Potential acute health effects

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion : Irritating to mouth, throat and stomach.

Skin contact : No known significant effects or critical hazards.

Eye contact : Causes serious eye irritation.

Over-exposure signs/symptoms

Eye contact : Symptoms may include pain, irritation, watering and redness.

Skin contact : No specific data.

Ingestion : No specific data.

Inhalation No specific data.

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.

Section 5 - Fire Fighting Measures

Extinguishing media

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

Unsuitable extinguishing media: None known

Special hazards arising from the substance or mixture

Hazards from the substance or mixture: Material will produce a vigorous reaction under conditions of shock, pressure or high temperature.

Hazardous thermal decomposition products: Decomposition products may include carbon monoxide, carbon dioxide, nitrogen oxides, sulphur oxides, phosphorus oxides and metal oxides.

Advice for firefighters

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. First move people out of line-of-sight of the scene and away from windows. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Do not fight fire when it reaches the material. Withdraw from fire and let it burn.

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

Section 6 - Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental Precautions: Avoid dispersal of spilt 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:

Small spill: Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill: Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

Reference to Other Sections: **See Section 1 for emergency contact information**
See Section 8 for information on appropriate personal protective equipment
See Section 13 for additional waste treatment information

Section 7 - Handling and Storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene: 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. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Storage: Store between the following temperatures: 5 to 30°C. Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. 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.

Do not store above the following temperature: 40°C

Recommended Storage Temperature for 3 weeks: <40°C

Recommended Storage Temperature for up to 6 weeks: <30°C

Recommended Storage Temperature for over 6 weeks: <30°C

Specific end use(s)

Recommendations : Washing and cleaning product. Consumer uses.

Industrial sector specific solutions: Not available.

Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

SWA Exposure Limits TWA (mg/m^3) STEL (mg/m^3)

Exposure limits have not been established by SWA for this product.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Engineering Controls Ventilation: If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Engineering controls may be required to control the primary or secondary risks associated with this product. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene Measures: 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: 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: safety glasses with side-shields.

Skin protection:

Hand protection: 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.

Body Protection: 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.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Use a properly fitted, particulate filter 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.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	White, blue, yellow, green and red solid tablets.
Odour:	Characteristic fragrance.
pH:	9.9 (10% w/w aqueous mixture).
Freezing/Melting Point:	No specific data. Solid at normal temperatures.
Boiling Point:	Not available.
Flash Point:	>100°C

Volatiles:	No data.
Vapour Pressure:	No data.
Vapour Density:	Not applicable.
Relative density:	No data.
Water Solubility:	Soluble.
Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	Not applicable.
Coeff Oil/water Distribution:	No data
Viscosity:	Not applicable.
Autoignition temp:	No data.
Explosive Properties:	No data.
Oxidising Properties:	No data.

Section 10 - Stability and Reactivity

Reactivity: Hazardous reactions or instability may occur under certain conditions of storage or use. Conditions may include shock, friction and high temperature. These reactions may cause an explosion. Risk of exothermic decomposition at elevated temperatures, contact with other substances (such as acids, heavy-metal compounds or amines), friction or shock.
Conditions to Avoid: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Avoid shock and friction.
Incompatibilities: Acids, heavy metal compounds, amines.
Fire Decomposition: Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death. May form nitrogen oxides, sulphur oxides, phosphorus oxides and metal oxides.
Polymerisation: This product will not undergo polymerisation reactions.

Section 11 - Toxicological Information

Acute toxicity

Product/Ingredient Name	Result	Species	Dose	Exposure
sodium carbonate	LD_{50} Dermal	Rabbit	>2000 mg/kg	
	LD_{50} Oral	Rat	2800 mg/kg	
disodium carbonate, compound with hydrogen peroxide (2:3)	LD_{50} Oral	Rat	1034 mg/kg	
(1-hydroxyethylidene) bisphosphonic acid, sodium salt	LD_{50} Oral	Rat	1100 mg/kg	
subtilisin	LD_{50} Oral	Rat	1800 mg/kg	

Acute toxicity Estimates:

Route	ATE value
Oral	7562.2 mg/kg

Irritation/Corrosion:

Product/Ingredient Name	Result	Species	Score	Exposure	Observation
sodium carbonate	Eyes - Mild irritant	Rabbit		0.5 min 100 mg	
	Eyes - Moderate irritant	Rabbit		24 hr 100 mg	
subtilisin	Eyes - Moderate irritant	Rabbit		3 mg	

Inhalation: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin Contact: No known significant effects or critical hazards.
Eye Contact: Causes serious eye irritation.
Ingestion: Irritating to mouth, throat and stomach.

Sensitisation: No known effect according to our database.
Mutagenicity: No known effect according to our database.
Reproductive toxicity: No known effect according to our database.
Teratogenicity: No known effect according to our database.
Specific target organ toxicity (single exposure):
Subtilisin: Category 3 (respiratory tract irritation).
Specific target organ toxicity (repeated exposure):
No known effect according to our database.
Aspiration hazard: No known effect according to our database.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available.
Potential delayed effects: Not available.

Long term exposure:

Potential immediate effects: Not available.
Potential delayed effects: Not available.

Section 12 - Ecological Information

Ecotoxicity:

Product/Ingredient Name	Result	Species	Exposure
sodium carbonate	Acute EC_{50} 242 mg/L Fresh water	Algae - Navicula seminulum	96 hr
	Acute LC_{50} 176 mg/L Fresh water	Crustaceans - Amphipoda	48 hr
	Acute LC_{50} 265 mg/L Fresh water	Daphnia - Daphnia magna	48 hr
	Acute LC_{50} 300 mg/L Fresh water	Fish - Lepomis macrochirus	96 hr
disodium carbonate, compound with hydrogen peroxide (2:3)	Acute EC_{50} 70 mg/L	Algae - Chlorella emersonii	240 hr
	Acute EC_{50} 4.9 mg/L	Daphnia - Daphnia Pulex	48 hr
	Acute LC_{50} 70.7 mg/L	Fish - Pimephales promelas	96 hr
(1-hydroxyethylidene) bisphosphonic acid, sodium salt	Acute EC_{50} >170 mg/L Fresh water	Daphnia - Daphnia magna	96 hr
	Acute LC_{50} >100 mg/L Fresh water	Fish - Salmo gairdneri - Adult	96 hr
Subtilising	Acute EC_{50} 23.78 mg/L Fresh water	Crustaceans – Ceriodaphnia dubia - Neonate	48 hr
Alcohols, C12-18, ethoxylated and propoxylated	Acute EC_{50} 0.1 to 1 mg/L	Aquatic plants	72 hr
	Acute EC_{50} 0.1 to 1 mg/L Fresh water	Daphnia	48 hr
	Acute LC_{50} 0.1 to 1 mg/L Fresh water	Fish - Leuciscus idus	96 hr

Persistence and Degradability: The following components are readily biodegradable: sodium carbonate; Alcohols, C12-18, ethoxylated and propoxylated.

Bioaccumulative Potential:

Product/Ingredient Name	LogPow	BCF	Potential
(1-hydroxyethylidene) bisphosphonic acid, sodium salt	-3.5	71	Low
subtilisin	-3.1		Low

Mobility in Soil: Not available

Other Adverse Effects: No known significant effects or critical hazards.

Section 13 - Disposal Considerations

Dispose of small quantities and empty containers by wrapping with paper and putting in garbage. For larger quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service.

Waste Treatment Methods:

Product:

Methods of Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations. Waste packaging should be recycled.

Hazardous Waste: The classification of the product may meet the criteria for a hazardous waste.

Packaging:

Methods of Disposal: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special Precautions: This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14 - Transport Information

	ADG	IMDG	IATA
UN Number	None allocated	None allocated	None allocated
UN Proper Shipping Name	None allocated	None allocated	None allocated
Transport Hazard Class	None allocated	None allocated	None allocated
Transport Hazard Sub Class	None allocated	None allocated	None allocated
Packing Group	None allocated	None allocated	None allocated
Hazchem code	None allocated	None allocated	None allocated
ADG Special Provisions code	None allocated	None allocated	None allocated
Environmental Hazards			

Packing Instruction: None allocated

Section 15 - Regulatory Information

Poison schedule (Australia): Not scheduled
Australia inventory (AICS): All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
HSNO Approval Number: HSR002530
HSNO Group Standard: Cleaning Products (Subsidiary hazard)
APVMA Approval Number: Not applicable
TGA ARTG:
MedSafe:

Section 16 - Other Information

This SDS contains only safety-related information. For other data see product literature.

Acronyms:

ADG Code Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition)
AICS Australian Inventory of Chemical Substances
SWA Safe Work Australia, formerly ASCC and NOHSC
CAS number Chemical Abstracts Service Registry Number

Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
IARC	International Agency for Research on Cancer
NOS	Not otherwise specified
NTP	National Toxicology Program (USA)
R-Phrase	Risk Phrase
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
UN Number	United Nations Number
Creation Date:	**September, 2016**
This version issued:	**October, 2016** and is valid for 5 years from this date.
Revision comments:	First issue to GHS standard mentioned below.

Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document “Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice” (Feb 2016)