

SAFETY DATA SHEET

Finish Quantum
Lemon

HEALTH • HYGIENE • HOME

1. Product and company identification

Product name : Finish Quantum
Lemon

Distributed by : Reckitt Benckiser (Canada) Inc.
1680 Tech Avenue, Unit #2
Mississauga, Ontario L4W 5S9
CANADA
Telephone: +1 905 283 7000

Emergency telephone number (Medical) : 1-800-338-6167

Emergency telephone number (Transport) : 1-800-424-9300 (U.S. & Canada) CHEMTREC
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887

Website: : <http://www.rbnainfo.com>

Product use : Detergent for use in domestic automatic dishwashers

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.

This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.

SDS # : D8391491 v1.0

Formulation # : FF3090918 v3.0

UPC Code / Sizes : Doypack or tub

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Washing and Cleaning Products Consumer use

2. Hazards identification

Classification of the substance or mixture : SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms :



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2. Hazards identification

Signal word	: Warning
Hazard statements	: Causes skin irritation. Causes serious eye irritation.
<u>Precautionary statements</u>	
General	: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	: Wear protective gloves. Wear eye or face protection. Wash thoroughly after handling.
Response	: Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.
Storage	: Not applicable.
Disposal	: Not applicable.
Supplemental label elements	: None known.
Hazards not otherwise classified	: None known.

3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
sodium carbonate	10 - 30	497-19-8
Alcohols, C12-14, ethoxylated propoxylated	10 - 30	68439-51-0
disodium carbonate, compound with hydrogen peroxide (2:3)	5 - 10	15630-89-4
tetrasodium (1-hydroxyethylidene)bisphosphonate	0.1 - 1	3794-83-0
Subtilisin	0.1 - 1	9014-01-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Description of necessary 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 10 minutes. Get medical attention.
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.

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4. First aid measures

- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- 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.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

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5. Fire-fighting measures

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
 nitrogen oxides
 sulfur oxides
 metal oxide/oxides
- 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. No action shall be taken involving any personal risk or without suitable training.
- 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.

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 spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized 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 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 materials for containment and cleaning up

- Small spill** : Move containers from spill area. 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 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. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

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. 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.

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7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store between the following temperatures: 5 to 30°C (41 to 86°F). Daily average of 30 °C. 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. See Section 10 for incompatible materials before handling or use.

8. Exposure controls/personal protection

Control

Occupational exposure limits

Not applicable.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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.

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. 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: chemical splash goggles.

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 : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

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9. Physical and chemical properties

Appearance

Physical state	: Solid. [Pouch]
Color	: Yellow. Red. White.
Odor	: Not available.
Odor threshold	: Not available.
pH	: 9.7 to 10.5 [Conc. (% w/w): 10%]
Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Not available.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: Not available.
Solubility	: Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
SADT	: >55°C (>131°F)
	Heat of reaction: <300 J/g
Viscosity	: Not available.

Aerosol product

10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable. Do not expose to temperatures exceeding 50 °C/122 °F.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Keep away from heat and direct sunlight. Protect from moisture.
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Alcohols, C12-14, ethoxylated propoxylated tetrasodium (1-hydroxyethylidene) bisphosphonate	LD50 Oral	Rat	2001 mg/kg	-
	LD50 Dermal	Rabbit - Male, Female	2001 mg/kg	-
Subtilisin sodium carbonate disodium carbonate, compound with hydrogen peroxide (2:3)	LD50 Oral	Rat	940 mg/kg	-
	LD50 Oral	Rat	3700 mg/kg	-
	LD50 Oral	Rat	2800 mg/kg	-
	LD50 Oral	Rat	1034 mg/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Subtilisin sodium carbonate	Eyes - Moderate irritant	Rabbit	-	3 milligrams	-
	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-

Conclusion/Summary

- Skin** : Based on Calculation Method: Causes skin irritation.
- Eyes** : Based on Calculation Method: Causes serious eye irritation.
- Respiratory** : Based on available data, the classification criteria are not met.

Sensitization

Not available.

Conclusion/Summary

- Respiratory** : Based on available data, the classification criteria are not met.

Mutagenicity

Not available.

Conclusion/Summary

- : Based on available data, the classification criteria are not met.

Carcinogenicity

Not available.

Conclusion/Summary

- : Based on available data, the classification criteria are not met.

Reproductive toxicity

Not available.

Conclusion/Summary

- : Based on available data, the classification criteria are not met.

Teratogenicity

Not available.

Conclusion/Summary

- : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

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11. Toxicological information

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

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.

Potential chronic health effects

Not available.

- Conclusion/Summary** : Based on available data, the classification criteria are not met.
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

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(CAN)

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11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
FIL,FINSH,SU CAN FDOX LEMON	3906.5	4464.2	N/A	N/A	N/A
sodium carbonate	2800	N/A	N/A	N/A	N/A
Alcohols, C12-14, ethoxylated propoxylated	2001	N/A	N/A	N/A	N/A
disodium carbonate, compound with hydrogen peroxide (2:3)	1034	N/A	N/A	N/A	N/A
tetrasodium (1-hydroxyethylidene)bisphosphonate	940	2001	N/A	N/A	N/A
Subtilisin	3700	N/A	N/A	N/A	N/A

12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Subtilisin	Acute EC50 23.78 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
sodium carbonate	Acute EC50 242000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute LC50 176000 µg/l Fresh water	Crustaceans - Amphipoda	48 hours
	Acute LC50 265000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 300000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
disodium carbonate, compound with hydrogen peroxide (2:3)	Acute EC50 4.9 mg/l	Daphnia - Daphnia Pulex	48 hours

Conclusion/Summary : Based on available data, the classification criteria are not met.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
tetrasodium (1-hydroxyethylidene) bisphosphonate	-3	71	low
Subtilisin	-3.1	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

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13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times 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 emptied 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.

14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

Additional information

Special precautions for user : For long distance transport of bulk material or shrunk pallet take into consideration sections 7 and 10. **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

15. Regulatory information

U.S. Federal regulations :

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

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15. Regulatory information

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A

Composition/information on ingredients

Name	%	Classification
sodium carbonate	10 - 30	EYE IRRITATION - Category 2A
Alcohols, C12-14, ethoxylated propoxylated	10 - 30	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A
disodium carbonate, compound with hydrogen peroxide (2:3)	5 - 10	OXIDIZING SOLIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 SERIOUS EYE DAMAGE - Category 1
tetrasodium (1-hydroxyethylidene) bisphosphonate	0.1 - 1	ACUTE TOXICITY (oral) - Category 4
Subtilisin	0.1 - 1	COMBUSTIBLE DUSTS SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 RESPIRATORY SENSITIZATION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

State regulations

Massachusetts : The following components are listed: SODIUM SULFATE (SOLUTION)

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : The following components are listed: SODIUM SULFATE (SOLUTION)

California Prop. 65

 This product does not require a Safe Harbor warning under California Prop. 65.

Label elements

CCCR

Signal word : CAUTION

Hazard statements : IRRITANT
HARMFUL IF SWALLOWED OR PUT IN MOUTH. MAY IRRITATE EYES

Precautionary measures : DO NOT ingest. DO NOT get in eyes.
KEEP OUT OF REACH OF CHILDREN

Additional information / Recommendations

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15. Regulatory information

- Additional information** : Contains Sodium Percarbonate, Sodium Carbonate, non-ionic surfactants and Enzymes. Contains less than 0.5% phosphorous by weight. Contains no sodium tripolyphosphate. Contains fragrance allergens (Limonene, Geraniol). If swallowed, call a poison control center or doctor immediately. Have person drink a glass of water if able to swallow. DO NOT give anything to an unconscious person. Do not induce vomiting. If in eyes, immediately rinse eyes with water. Remove any contact lenses if present and continue rinsing for 15 minutes. If irritation persists, get medical attention. If on skin rinse well with water.
- Recommendations** : Keep container fully closed and out of sight of children. DO NOT let children handle tabs. Tabs can burst if children put them in mouth or play with them. Never leave any tabs out of container. Avoid breaking tabs.
- Recommendations** : NOTICE: PRODUCT MAY POSE A CHOKING HAZARD TO CHILDREN UNDER 3 YEARS OF AGE.

16. Other information

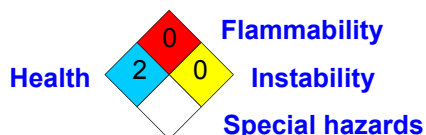
Hazardous Material Information System (U.S.A.)

Health	/	2
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



NFPA (30B) aerosol Flammability Not applicable

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

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16. Other information

Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations
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Date of previous issue	: No previous validation
Version	: 1.0
Prepared by	: Reckitt Benckiser India Ltd Plot No 48 Sector - 32 Institutional Area Gurgaon, Haryana India - 122001

✔ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



RB is a member of the CSPA Product Care Product Stewardship Program.