

I. Product and Supplier Information

Product Name: NLR202

MSDS Number: NLR202

Product Number: NA

Publication Date: Apr. 14, 2004

Product Synonyms: Membrane cleaner

Chemical Family or Formula: Water solution of alkaline salts and detergents.

Supplier: Dunwell New Logic (Asia Pacific) Ltd. Phone: (852) – 23910371
 8 Wang Lee Street
 Yuen Long Industrial Estate
 Hong Kong

II. Composition and Information on Ingredients

CAS #	SARA 313	Material or Component	%	RQ#	Exposure Limits		
					TWA*	STEL*	WEEL*
27323-41-7	No	Triethanolamine dodecylbenzene sulfona	<10	1000	Not established		NE

Product also contains alkaline salts and non regulated detergents which may contribute to eye and skin irritation. No component is listed in "Threshold and Biological Exposure Indices for 2004" from ACGIH except as noted above. Components listed in Title III Sec. 313(EPCRA) are indicated by "Yes" above.

*TWA= Time Weighted Average; STEL= Short Term Exposure Limit; WEEL=Workplace Employee Exposure Level. NE= Not Established

III. Hazards Identification

OSHA Hazard Classification: Eye irritant, skin irritant

Routes of Entry: Inhalation, skin, eyes, ingestion

Chemical Interactions: Chelator for many polyvalent metal ions.

Medical Conditions Aggravated:

None know. Ingestion will chelate calcium in teeth and bones, weakening them.

Human Threshold Response Data

Odor Threshold: Not established

Irritation Threshold: Not established

Hazard Category Classifications and Ratings

Hazard Categories:	Health	Fire	Pressure	Reactivity	Reference
Immediate	Yes	No	No	No	49 CFR 171.8, OSHA 29 CFR 1910.1200 and SARA 302/311/312/313.
Delayed	No	No	No	No	
HMIS Hazard Ratings: Health 1 Fire 0 Instability 0 Other B (Glasses, gloves)					
NFPA 704 Hazard Rating: Health 1 Flammability 0 Reactivity 0 Special NA					
Hazard Ratings: Least: 0 Slight: 1 Moderate: 2 High: 3 Extreme: 4					

Immediate (Acute) Health Effects

Inhalation Toxicity:

Not expected to be toxic by inhalation.

Inhalation Irritation:

Moderately irritating to the eyes, nose, throat, and lungs.

Skin Contact:

Skin contact may cause minor irritation consisting of transient redness and/or swelling.

Skin Absorption:

No significant adverse effects to health would be expected to occur from incidental dermal contact.

Eye Contact

Contact may cause moderate irritation consisting of transient redness, swelling, and mucous membrane discharge to the conjunctiva.

Ingestion Irritation:

Irritation may result. Note: Chronic ingestion will chelate calcium in teeth and bones, weakening them.

Ingestion Toxicity:

See Sec. 11 for animal toxicological results.

Acute Target Organ Toxicity:

Eyes, skin, mucous membranes, respiratory tract

Prolonged (Chronic) Health Effects

Carcinogenicity:

This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

Reproductive and Developmental Toxicity:

No reproductive or developmental risk to humans is expected from exposure to this product.

See Sec. 11 for animal study results.

Sensitization:

No sensitizing effects known.

Inhalation:

No information.

Skin contact:

Repeated or prolonged dermal contact may cause defatting of skin and/or dermatitis.

Skin Absorption:

No information.

Ingestion:

Chronic ingestion will chelate calcium in teeth and bones, weakening them.

Chronic Target Organ Toxicity:

No data.

Supplemental Health Hazard Information:

No additional health hazard information available.

IV. First Aid

Inhalation:

IF INHALED: Remove individual to fresh air. Seek medical attention.

Skin Contact:

IF ON SKIN: Flush skin with water, rinse thoroughly.

Eyes:

IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids apart. Call a physician immediately.

Ingestion:

IF SWALLOWED: Immediately drink water to dilute. Consult a physician if symptoms develop. Never give anything by mouth to an unconscious person.

V. Fire Fighting Measures

Flammability Summary (OSHA):

Non flammable water solution.

Flammable Properties

Flash Point None

Autoignition Temperature: Not applicable

Upper Flammable/Explosive Limit, % in air: Not applicable

Lower Flammable/Explosive Limit, % in air: Not applicable

Fire/Explosion Hazards: Material will not ignite or burn.

Extinguishing Media:

Not Applicable. Choose extinguishing media suitable for surrounding materials.

Fire Fighting Instructions:

In case of fire, use fire fighting equipment appropriate to the cause of the fire.

Hazardous Combustion Products:

Will produce oxides of carbon, nitrogen and sulfur if evaporated and burned.

VI. Accidental Release Measures

Personal Protection for Emergency Situations:

Wear Protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Spill Mitigation Procedures

Air Release:

Not a likely scenario, nor source of personnel hazard.

Water Release:

This material is soluble in water. Contain all liquid for treatment and/or disposal.

Notify all downstream users of possible contamination.

Land Release:

Create a dike or trench to contain materials. Absorb spill with inert material (e.g., dry sand, earth or commercial absorbent), then place in a chemical waste container. Decontaminate all clothing and the Spill area using a detergent and flush with large amounts of water. Contain all contaminated water for Disposal and/or treatment.

Additional Spill Information:

Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response

Personal protection equipment prior to the start of any response. Evacuate all non-essential personnel.

Dispose of spill residues per guidelines under Section XIII, Disposal Considerations.

VII. Handling and Storage

Handling:

Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash

With water. Avoid breathing mist.

Storage

No safety restrictions.

Shelf Life Limitations:

See label or certificate of analysis for shelf life if applicable.

Incompatible Materials for Storage:

Storage in original containers is preferred.

VIII. Exposure Controls and Personal Protection

Ventilation:

General exhaust ventilation is likely to be sufficient for general worker safety and comfort.

Protective Equipment for Routine Use of Product

Respiratory Protection:

Respiratory Protection not normally needed since volatility and toxicity are low. If vapors, mists or aerosols are generated, wear a NIOSH approved respirator.

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Eyes: Use chemical goggles.

Protective Clothing Type: Impervious

Exposure Limit Data: See Section II

IX. Physical Data

Physical State: Liquid

Color: Water white

Odor: None

Molecular Weight: Not Applicable for a solution.

PH (@ 25 Deg. C): Alkaline

Octano/Water Coeff: No data

Solubility in Water: Completely miscible

Bulk Density: Not applicable

Specific Gravity: > 1

Phosphorous %: None

Vapor Density (Air = 1): Not applicable

Vapor Pressure: (@ 25 Deg. C) No Data

Evaporation Rate (WATER = 1) Not applicable

Volatiles % by vol : Approx. 80% water

Boiling Point: Close to 100°C

Freezing Point: Close to 0°C

X. Stability and Reactivity**Stability and Reactivity Summary:**

Stable under normal conditions.

Reactive Properties:

Sensitivity to mechanical shock: None

Hazardous Polymerization: Will not occur

Conditions to Avoid: None known.

Chemical Incompatibility: None known.

Hazardous Decomposition Products Oxides of carbon, nitrogen and sulphur if burned.

Decomposition Temperature: No data

Product May Be Unstable At Temperature Above: No data

XI. Toxicological Information**Component Animal Toxicology**

No information found for such a dilute solution of these materials.

Irritation of skin: No information.

Irritation of eyes: No information.

Inhalation LC50 value: No information.

Skin Irritation:

This material is expected to be slightly irritating.

Eye Irritation:

This material is expected to be moderately to severely irritating.

Reproductive and Developmental Toxicity:

No reproductive or developmental risk to humans is expected from exposure to this product.

Sub acute to chronic toxicity:

Animal studies with EDTA salts such as herein contained have reported convulsions, weight loss, liver, liver, kidney, urethra and bladder changes. Fetotoxicity and developmental abnormalities have also been reported from studies on animals.

To the best of our knowledge the acute and chronic toxicity of this material is not fully known.

Carcinogenicity:

This chemical is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA.

XII. Ecological Information

Ecological Toxicity Values:

No data.

Do not allow material to be released to the environment without proper governmental permits.

XIII. Disposal Considerations

Care must be taken to prevent environmental contamination from the use of this material.

The user of this material has the responsibility to dispose of unused material, residues and containers

In compliance with all local, state and federal laws.

Waste Disposal Summary:

If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D.

Potential US EPA Waste Codes:

Not applicable

Disposal Methods:

As a non hazardous liquid waste, it should be disposed of in accordance with local, state and federal

Regulations by incineration.

Components subjects to land ban restrictions:

No components subject to land ban restrictions.

XIV. Transportation Information

Proper shipping Name, Hazard Class, UN/NA Number Packing Group, Emergency Response Guide Number

Not regulated

Labels required per 49 CFR 172.101

None

Size for "Limited quantity" per 49 CFR 173. 150-. 155:

Not applicable

Reportable Quantity ("RQ") per 49 CFR 172.101:

None or not possible in one non-bulk package

Aircraft – Passenger:

Not applicable

Aircraft – Cargo

Not applicable

Vessel stowage- Location:

Not applicable

Vessel stowage- Other (49 CFR 176.84):

Not applicable

XV. Regulatory Information

UNITED STATES:

Toxic Substances Control Act (TSCA):

The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

Pesticide acceptance indication: US EPA Registration Number:

Not applicable

Superfund Amendments and Reauthorization Act (SARA) Title III:

See Section III of this MSDS.

Hazard Categories Sections 311/312 (40 CFR 370.2):

Health:

Acute
Chronic
Physical: None
Emergency Planning & Community Right to know (40 CFR 355, App. A):
Extremely Hazardous Substance Section 302 – Threshold Planning Quantity:
Not applicable
Reportable Quantity (40 CFR 302.4):
None Listed
State Right-to-Know Regulations Status of Ingredients
No data.

XVI. Additional Information

MSDS REVISION STATUS:
THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS