Sector

Safety Data Sheet

Issued: January 14, 1998

SDS No. SN02M013

SHELL DARINA R2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product name: SHELL DARINA R2

Product type: Lubricating grease.

Supplier: Supplier

Address: Add1
Add2

Contact numbers:

Telephone: ContactNo
Telex: ContactTlx
Fax: ContactFax

Emergency telephone number:

EmergencyCover ENT24Hour

2. COMPOSITION/INFORMATION ON INGREDIENTS

Preparation description: A lubricating grease containing highly-refined mineral oils and additives.

Dangerous components/constituents: Contains less than 1% N-phenyl-1-naphthylamine, a substance classified by suppliers as a skin sensitizer (R43).On the basis of available information, the components of this preparation are not expected to impart hazardous properties to this product.

3. HAZARDS IDENTIFICATION

Human health hazards: No specific hazards under normal use conditions. Prolonged or repeated exposure may give rise to dermatitis. Used grease may contain harmful impurities. Contains the following substances for which exposure limits apply: "mineral oil"

Safety hazards: Not classified as flammable, but will burn.

Environmental hazards: Not readily biodegradable. Expected to have a high potential to bioaccumulate.

Other information: Not classified as dangerous for supply or conveyance.

4. FIRST AID MEASURES

Symptoms and effects: Not expected to give rise to an acute hazard under normal conditions of use.

First Aid - Inhalation: Inhalation of any vapours from this product is not likely to present an acute hazard.

First Aid - Skin: Remove contaminated clothing and wash affected skin with soap and water. If persistent irritation occurs, obtain medical attention.

If high pressure injection injuries occur, obtain medical attention immediately.

First Aid - Eye: Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

First Aid - Ingestion: Wash out mouth with water and obtain medical attention. DO NOT INDUCE VOMITING.

Advice to physicians: Treat symptomatically. Aspiration into the lungs may result in chemical pneumonitis. Dermatitis may result from prolonged or repeated exposure.

5. FIRE FIGHTING MEASURES

Specific hazards: Combustion is likely to give rise to a complex mixture of gases and airborne particulates, including carbon monoxide, oxides of sulphur, and unidentified organic and inorganic compounds.

Extinguishing media: Foam and dry chemical powder. Carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media: Water in a jet. Use of Halon extinguishers should be avoided for environmental reasons.

Protective equipment: Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Minimise contact with skin.

Personal protection: Wear impermeable gloves and boots.

Environmental precautions: Prevent from entering into drains, ditches or rivers. Inform local authorities if this cannot be prevented.

Clean-up methods - small spillage: Shovel into a suitable, clearly marked container for disposal or reclamation in accordance with local regulations.

Clean-up methods - large spillage: As for small spills.

7. HANDLING AND STORAGE

Handling: When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Prevent spillages.

Storage: Keep in a cool, dry, well-ventilated place. Use properly labelled and closable containers. Avoid direct sunlight, heat sources, and strong oxidizing agents.

Storage temperature: 0°C minimum to 50°C maximum.

Recommended materials: For containers or container linings, use: mild steel or high density polyethylene.

Unsuitable materials: For containers or container linings, avoid: PVC.

Other information: Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering control measures: Use local exhaust ventilation if there is a risk of inhalation of vapours, mists or aerosols.

Occupational exposure standards: Threshold limit values are given below. Lower exposure limits may apply locally:

Component name	Limit type	Value	Unit	Other information
Oil mist, mineral	8-hour TWA	5	mg/m^3	ACGIH
	15-min STEL	10	mg/m^3	ACGIH

Hygiene measures: Wash hands before eating, drinking, smoking and using the toilet.

Respiratory protection: Not normally required.

Hand protection: PVC or nitrile rubber gloves

Eye protection: Wear safety glasses or full face shield if splashes are likely to occur.

Body protection: Minimise all forms of skin contact. Wear overalls to minimise contamination of personal clothing. Launder overalls and undergarments regularly.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Semi-solid at ambient temperature

Colour: Light brown

Odour: Characteristic mineral oil

Vapour pressure: < 0.5 Pa at

Density: 900 kg/m^3

Vapour density (air=1): > 1

Dropping point: -566

Flash point:

Flammability limit - lower:	1% V/V (typical) (based on mineral oil)
Flammability limit - upper:	10% V/V (typical) (based on mineral oil)
Auto-ignition temperature:	
Solubility in water:	Negligible
n-octanol/water partition coefficient:	Log P_{ow} > 6 (typical)

10. STABILITY/REACTIVITY

Stability:	Stable
Conditions to avoid:	Extremes of temperature and direct sunlight.
Materials to avoid:	Strong oxidizing agents
Hazardous decomposition products:	Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Basis for assessment:	Toxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the toxicology of similar products.
Acute toxicity - oral:	LD_{50} expected to be above 2000 mg/kg
Acute toxicity - dermal:	LD_{50} expected to be above 2000 mg/kg
Eye irritation:	Expected to be slightly irritant.
Skin irritation:	Expected to be slightly irritant.
Respiratory irritation:	If vapours are inhaled, slight irritation of the respiratory tract may occur.
Skin sensitization:	Not expected to be a skin sensitizer.
Carcinogenicity:	Product is based on mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Other components are not known to be associated with carcinogenic effects.
Mutagenicity:	Not considered to be a mutagenic hazard
Other information:	Prolonged and/or repeated contact with this product can result in defatting of the skin, particularly at elevated temperatures. This can lead to irritation and possibly dermatitis, especially under conditions of poor personal hygiene. Skin contact should be minimised. Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal. ALL used grease should be handled with caution and skin contact avoided as far as possible.

12. ECOLOGICAL INFORMATION

Basis for assessment: Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Mobility: Semi-solid under most environmental conditions. Floats on water. If it comes into contact with soil, it will strongly adsorb to soil particles.

Persistence/degradability: Not readily biodegradable.

Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.

Bioaccumulation: Has the potential to bioaccumulate.

Ecotoxicity: Poorly soluble mixture. Product is expected to be practically non-toxic to aquatic organisms, LC/EC_{50} > 100 mg/L. May cause physical fouling of aquatic organisms. (LC/EC_{50} expressed as the nominal amount of product required to prepare aqueous test extract).

Sewage treatment:

13. DISPOSAL CONSIDERATIONS

Waste disposal: Used or waste grease should be recycled or disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the contractor to deal satisfactorily with used grease should be established beforehand. Used or waste grease should not be allowed to contaminate soil or water.

Product disposal: As for waste disposal.

Container disposal: 200 litre drums should be emptied and returned to the supplier or sent to a drum reconditioner without removing or defacing markings or labels.

Non-reusable small metal and plastic containers should be recycled where possible, or disposed of as domestic refuse.

Local legislation:

14. TRANSPORT INFORMATION

Not dangerous for conveyance under UN, IMO, ADR/RID and IATA/ICAO codes.

15. REGULATORY INFORMATION

EC Classification: Not classified as Dangerous under EC criteria

EINECS (EC): All components listed or polymer exempt

TSCA (USA): All components listed.

Other information: For listing on other inventories, eg MITI (Japan), AICS (Australia) and DSL (Canada), please consult suppliers.

16. OTHER INFORMATION

Uses and restrictions: For lubrication of plain and roller bearings.

Technical contact point: TechPoint

Technical contact number:

Telephone: TechNo
Telex: TechTlx
Fax: TechFax

SDS history: Edition No.: 1

First Issue: January 14, 1998

Revised:

Revisions highlighted:

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not be construed as guaranteeing any specific property of the product.