MATERIAL SAFETY DATA SHEET

TISONA 2

Product Code : 0569
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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION

Product : TISONA 2
Product Code : 0569

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REVISION CHANGES

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients present at or above 0.1 wt % (classified as toxic or very toxic) or 1 wt % (classified as harmful, irritant or corrosive).

HAZARDOUS INGREDIENT
APPROXIMATE CONCENTRATION

None

The chemical identity of some or all of the ingredients is confidential business information and is being withheld. In the event of a medical emergency, compositional information will be provided to medical staff.

3. HAZARD IDENTIFICATION

This product a grease is a mixture of base oils, clay and additives It is of low oral and dermal toxicity and under normal conditions of use should present no significant health hazards. However, in common with most mineral oils, prolonged and repeated skin contact may cause dermatitis. Handling precautions should be strictly observed.

4. FIRST AID

INHALATION

In case case of adverse exposure to vapours, mists and/or fumes formed at elevated temperatures or by mechanical agitation, immediately remove from further exposure. Administer artificial respiration if breathing is irregular or has stopped. Get prompt medical attention.

SKIN CONTACT : Flush with large amount of water. Use soap if available. Remove severely contaminated clothings and launder before reuse. If irritation persists seek medical attention. If the material is injected under the skin from misuse of high pressure greasing equipment, immediately contact physician.

EYE CONTACT : Rinse immediately with plenty of water until irritation subsides. If irritation persists, obtain medical advice.

INGESTION : If swallowed, DO NOT induce vomiting; keep at rest and call a physician

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Foam, dry chemical powder, carbon dioxide.

FIRE AND EXPLOSION HAZARDS
Combustible material, low hazard. The product can form flammable mixtures or can burn only on heating above the flash point. However, minor contamination by hydrocarbons of higher volatility may increase the hazard.

SPECIAL FIRE-FIGHTING PROCEDURES
Water fog or spray, to cool fire-exposed surface (e.g. containers) and to protect personnel, should be used by personnel trained in fire fighting.

Cut off "fuel" ; depending on circumstances, either allow the fire to burn out under controlled conditions or use foam or dry chemical powder to extinguish the fire.

Respiratory and eye protection equipment required for fire fighting personnel exposed to fumes or smoke.

HAZARDOUS COMBUSTION PRODUCTS
Smoke, and carbon monoxide may be formed in the event of incomplete combustion. Oxides of Carbon, Nitrogen, Sulphur, will also be formed.

6. ACCIDENTAL RELEASE MEASURES PERSONAL PRECAUTIONS : See Section 8. LAND SPILL :

Shut off source taking normal safety precautions. Prevent liquid from entering sewers, water course of low lying areas; advise the relevant authorities if it has, or if it contaminates soil/vegetation. Take measures to minimize the effects on ground water.

Recover by skimming or pumping using explosion-proof equipment, or contain spilled liquid with booms, sand, or other suitable absorbent and remove mechanically into containers.

If necessary, dispose of adsorbed residues as direct in Section 13.

WATER SPILL :
Confine the spill immediately with booms. Warn other shipping. Notify port and other relevant authorities. Remove from the surface by skimming or with suitable absorbents. Disperse the residue in unconfined waters, if permitted by local authorities and environmental agencies.

7. HANDLING AND STORAGE

Storage the product in cool, well ventilated surroundings, well away from source of ignition. Provide suitable mechanical equipment for the safe handling of drums and heavy packages. Electrical equipment and fitting must comply with local regulations regarding fire prevention with this class of product.

LOAD/UNLOAD TEMPERATURE, ^{0}C	:	Ambient to max. 60^{0}C
STORAGE TEMPERATURE, ^{0}C	:	Ambient to max. 60^{0}C
SPECIAL PRECAUTIONS	:	Keep containers closed when not in use Prevent small spills and leakages to avoid slip hazard.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMIT
5 mg/m^3 for oil mists (TWA, 8h - workday) recommended based upon the ACGIH TLV (Analyses according to US NIOSH Method 5026, NIOSH Manual of Analytical Methods, 3rd Ed.).

PERSONAL PROTECTION
In open systems where contact is likely, wear safety goggles, chemical-resistant overalls, and chemically impervious gloves.

Where only incidental contact is likely, wear safety glasses with side shields. No other special precautions are necessary provided skin/eye contact is avoided.

When concentration in air exceed the occupational exposure limit, and where engineering, work practices, or other means of exposure reduction are not adequate, approved respirators may be required.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE / ODOUR	: SMOOTH AND HOMOGENEOUS, MILD PETROLEUM ODOUR.
DENSITY @ 15°C, g/ml (Average)	: DATA NOT AVAILABLE
BOILING RANGE	: DATA NOT AVAILABLE
VISCOSITY, KINEMATIC @ 40°C, CST	: 460 AVERAGE
(OIL COMPONENT) VAPOUR DENSITY	: GREATER THAN AIR
EVAPORATION RATE	: SLOWER THAN N-BUTYL ACETATE
SOLUBILITY	: SOLUBLE IN HYDROCARBON SOLVENTS, INSOLUBLE IN WATER
pH	: NOT APPLICABLE
FLASH POINT, °C (COC) (OIL COMPONENT)	: 260 MINIMUM
AUTI-IGNITION TEMPERATURE	: DATA NOT AVAILABLE
PARTITION COEFFICIENT n-octanol/water	: DATA NOT AVAILABLE

10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT, ETC) : Stable

CONDITIONS TO AVOID :

Keep away from heat source, open flames and other sources of ignition.

INCOMPATIBLE MATERIALS :

Avoid contact with strong oxidants such as liquid chlorine and concentrated oxygen.

HAZARDOUS DECOMPOSITION PRODUCTS :

Product does not decompose at ambient temperature.

11. TOXICOLOGICAL INFORMATION

EFFECTS OF OVER EXPOSURE :

INHALATION :

Negligible hazard at ambient/normal handling temperatures. Elevated temperatures or mechanical action may form vapours, mists, or fumes which may be irritating to the eyes, nose, throat, and lungs. Avoid breathing vapours, mists, or fumes.

SKIN CONTACT :

Low order of acute toxicity. Frequent or prolonged contact may lead to mild skin irritation. High pressure greasing equipment capable of injecting grease under the skin may have severe health consequences.

EYE CONTACT :

Slightly irritating, but does not injure eye tissue.

INGESTION :

Low order of acute/systemic toxicity.

CHRONIC :

Contains lubricating oil base stocks and additives. Base oils and additives of similar composition have exhibited no carcinogenic activity in laboratory animals.

TOXICITY DATA :

ACUTE :

Based on animal testing data from similar materials and products, the acute toxicity of this product is expected to be

Oral : LD50 > 5000 mg/Kg (Rat)

Dermal : LD50 > 3160 mg/Kg (Rabbit)

Inhalation : LC50 > 5000 mg/M^3 (Rat)

CHRONIC :
Although there is no specific test data on the oil and other components, they are not expected to exhibit carcinogenic potential based upon what is known of the toxicity in general.

12. ECOLOGICAL INFORMATION

In the absence of specific environmental data for this product, this assessment is based on information for general hydrocarbon components found in lubricant mineral oils. Lubricant mineral oils, immediately following a release into the environment, will remain largely on the soil surface, and in water, will remain largely on the water surface. Based on chemical/physical information from the literature for this product category, no harmful effects to terrestrial or aquatic habitats would be expected. This product is expected to be resistant to biodegradation and to persist in the environment.

13. DISPOSAL CONSIDERATIONS

Collect and dispose of waste product at an authorised facility, in conformance with national and local regulations, and in accordance with EEC Directives on the disposal of waste oil and greases.

14. TRANSPORT INFORMATION

USUAL SHIPPING CONTAINERS	: Rail cars, tank trucks, drums.
TRANSPORT TEMPERATURE, ^{0}C	: Ambient to max.60^{0}C

15. REGULATORY INFORMATION

EC DANGEROUS SUBSTANCES/PREPARATIONS CLASSIFICATION :

Not Regulated
Refer to national legislation implementing the EC Directive 91/155/EC.

16. OTHER INFORMATION

PRODUCT TYPE / USES :

Superior non soap high temperature grease for industrial application.

SOURCE OF KEY DATA :

The recommendations presented in this Material Safety Data Sheet were compiled from actual test data (when available), comparison with similar products, component information from suppliers and from recognised codes of goods practice.

The information and recommendations contained herein, to the best of knowledge of Hindustan Petroleum Corporation Limited are brief, accurate and reliable as of the date issued, but are offered without guarantee or warranty. They relate to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Conditions of use of the material are under the control of the user; therefore, it is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his particular use.