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Safety Data Sheet

1. Identification of the Substance/Preparation and of the Company

Product Name NEOVAC MR-200A

Product Code 00025

Manufacturer MORESCO Corporation.

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Customer Center

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Recommended Use and

Vacuum Pump Oil

Restrictions on Use

2. Hazard Identification

GHS Classification:

Physical Hazards Not applicable to the GHS Classification

Health Hazards Not applicable to the GHS Classification

Environmental Hazards Not applicable to the GHS Classification

Hazardous to Aquatic Environment

Label Elements:

Pictograms/Symbols None Signal Word None

Hazard Statements None

Precautionary Statements [Prevention]

None

[Response]

None [Storage]

None

[Disposal]

None



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Composition/Information on Ingredients 3.

Distinction between Substance and Mixture: Mixture

Chemical Name/Generic Name: Petro-hydrocarbons, Lubricating oil additive

Chemical Formula: Not identified

Ingredient and Concentration Lubricating base oil Approx. 99%

> Lubricating oil additive Approx. 1%

First-Aid Measures

Inhalation: Remove victim to fresh air and let him rinse mouth thoroughly with water.

Wrapping a blanket and the like around him to keep warm for a rest, call a

doctor/physician immediately.

Skin Contact: Rinse skin with soap and water.

Immediately rinse eyes with clean water for at least 15 minutes. Remove Eye Contact:

contact lenses if present. Continue rinsing. If eye irritation persists, get medical

attention.

Ingestion: Call a doctor/physician immediately. Do not induce vomiting.

If affected, the mouth should be rinsed out thoroughly with water.

Expected Acute and If swallowed, may suffer from diarrhea and vomiting.

Delayed Symptoms, and May cause inflammation if in eyes. Most Important Symptoms/ May cause inflammation if on skin. Effects: May feel unwell if mist is inhaled.

Fire-Fighting Measures

Suitable Extinguishing Media Foggy reinforcing agent, foam, powder, or carbon dioxide

Unsuitable Extinguishing Media Jet water

Specific Hazards A fire may cause irritating, corrosive, and/or toxic gas.

Specific Fire-Fighting Measures Shut off the fire source.

> Use powder or carbon dioxide extinguishers at the beginning of fire. It is effective to intercept the air from a big fire with foam

extinguishers. Use of water may cause spreading of fire.

Cool the surrounding facilities with water spray. Evacuate non essential personnel around the fire.

Special Protective Actions for

Fire-Fighting

Wearing protective glasses, protective clothing, and if necessary,

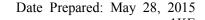
respiratory protective equipment, start to fight fire on the windward

side.

Accidental Release Measures

Personal Precautions, Protective If skin or eye contact is possible, wear protective equipment. If mist

Equipment and Emergency Procedures is produced, wear respiratory protective equipment to avoid





inhalation.

Environmental Precautions Take up as much as possible to avoid soil contamination and water

pollution.

Avoid release to the environment.

Collection/Neutralization Eliminate the source of ignition of the surrounding.

and Methods/Materials for Containment
In the case of a large amount: Dike ahead of liquid spill area to

minimize migration and then sweep into an empty container for disposal in a safe place. After disposal, wash away with plenty of water. In doing so, take care to prevent the high concentration of

wastes from entering public watercourses such as rivers.

In the case of a small amount: Take up into an empty container by absorbing the spill with earth and sand or rags, and furthermore sop

up with rags thoroughly.

Prevention of Secondary Hazards Remove all the ignition sources immediately. (Do not smoke nearby

and keep away from sparks and flames.)

Report to the related organs for help.

7. Handling and Storage

Handling:

Technical Measures

Before repairing machinery with remnant oils on, remove them thoroughly in a safe place. Take precautionary measures against static discharge and wear electro conductive clothing and shoes.

As vapors released from petroleum products are heavier than air, they are liable to stagnate.

Due to it, attention should be paid to ventilation and fire.

Handle at room temperatures, paying attention to moisture and to impurities not to mix with.

If skin or eye contact is possible, wear protective equipment. If mist is produced, wear respiratory protective equipment to avoid inhalation.

Use a pump and the like to take out of container.

Do not suck through a tube.

Do not weld, heat, hole, and cut off the container. Residues may ignite involving explosion.

Local Exhaust Ventilation/
Full Ventilation System

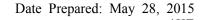
Avoiding Contact

Refer to '8. Exposure Controls/Personal Protection'.

Refer to '10. Stability and Reactivity'.

Precautions for Safe Handling Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.



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Be cautious not to use any naked fire.

As vapors released from petroleum products are heavier than air,

they are liable to stagnate.

Wash hands thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Do not eat, drink or smoke when using this product.

Do not press an empty container. It may explode under pressure.

Do not drink.

Keep out of reach of children.

Storage:

Technical Measures Avoid heat, sparks, flames, and static electricity.

Keep container tightly closed.

Incompatible Materials Refer to '10. Stability and Reactivity'.

Conditions for Safe Storage Store in a well-ventilated area.

Store avoiding exposure to direct sunlight.

Store away from oxidizer.

Store locked up.

Materials for Containers/Packaging When replacing the container, use metal or glass container. Some

kinds of resin-treated container may melt.

Use airtight, anti-breakage type containers.

8. Exposure Controls/Personal Protection

Permissible Concentration (Exposure Limit, a biological exposure index):

Japan Society for Occupational Health (2010): 3mg/m³ (mineral oil mist) 1)

ACGIH (2010): TWA 5mg/ m³ (mineral oil mist) ²⁾

Standards for Allowable Density of Hazardous Substances in Labor Operation Air: Not established

Engineering Controls: When mist and vapors are produced, seal off sources or provide exhaust

ventilation. Facilities for rinsing eyes and washing a body are required near the

workplace.

Personal Protective Equipment

Respiratory Protection: Wear appropriate respiratory protection.

Hand Protection: If necessary, wear oil-resistant protective gloves. Eye Protection: If diffusion is possible, wear eye protection.

Skin and Body Protection: If necessary, wear protective clothing and face protection.

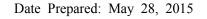
Hygienic Precautions: Wash hands thoroughly after handling.

Regularly inspect protective equipment according to the inspection table of

protective equipment.

Do not eat, drink or smoke when using this product.

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9. Physical and Chemical Properties

Physical State:

Appearance Liquid

Color Light yellow

Odor Slight Oily odor pH Not applicable

Melting/Freezing Point

Not applicable

Boiling Point 195°C/13Pa(0.1mmH)

Flash Point $\geq 250^{\circ} C(COC)$

Explosive Range (Explosive Limits) Upper limit: 7% Lower limit: 1% (estimated value)

Vapor Pressure

Vapor Density (air=1)

No data available

No data available

Specific Gravity (Density)

0.88g/cm³ (15°C)

Solubility

Insoluble in water

Partition Coefficient: n-octanol/water No data available
Auto-ignition Temperature No data available

Pore point $\leq -15^{\circ}$ C

Volatility None (at room temperatures)

10. Stability and Reactivity

Stability Stable

Possibility of Hazardous Reactions Reacts with strong oxidizer.

Conditions to Avoid No data available (Hazardous reactions will not occur under normal

use)

Incompatible Materials Strong oxidizer

Hazardous Decomposition Products None

11. Toxicological Information

Acute Toxicity:

Oral ATEmix(Oral) > 5000mg/kg can be estimated (based on GHS

Classification).

Dermal ATEmix(Dermal)≥5000mg/kg can be estimated (based on GHS

Classification).

Inhalation ATEmix(Inhalation) $\geq 5 \text{mg/L}$ can be estimated (based on GHS)

Classification).

Skin Corrosion/Irritation Information is not classified as Skin Corrosion/Irritation.

Serious Eye Damage/Eye Irritation Information is not classified as Serious Eye Damage/Eye Irritation.

Respiratory or Skin Sensitization Information is not classified as Respiratory or Skin Sensitization.

Germ Cell Mutagenicity Information is not classified as Germ Cell Mutagenicity.

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Carcinogenicity Information is not classified as Carcinogenicity.

Reproductive Toxicity Information is not classified as Reproductive Toxicity.

STOT/Systemic Toxicity - Information is not classified as Specific Target Organ Toxicity/

Single Exposure Systemic Toxicity (Single Exposure).

STOT/Systemic Toxicity – Information is not classified as Specific Target Organ Toxicity/

Repeated Exposure Systemic Toxicity (Repeated Exposure).

Aspiration Hazard Information is not classified as Aspiration Hazard.

12. Ecological Information

Ecotoxicity Information is not classified as Aquatic Toxicity.

Persistence and Degradability

Bioaccumulative Potential

Mobility in Soil

Mobility in Soil

Hazardous to the ozone layer

Other Adverse Effects

No information available

13. Disposal Considerations

Waste Residues Dispose the waste according to national and local regulations.

Do not dump.

Contaminated Containers Contaminated or empty container/packaging are to be disposed according to

and Packaging national and local regulations.

14. Transport Information

International Regulation

UN Classification Not applicable

Special Precautions Load the containers in a manner that they are certain not to result in direct

sunlight exposure, damage, corrosion, leak, while being transported.

Do not place heavy load on top of the container.

15. Regulatory Information

No Information

16. Other Information

References: 1) Recommendation of Occupational Exposure Limits by Japan Society for Occupational Health

2) Thresholds limit values for chemical substances and physical agents and biological exposure indices by ACGIH

3) SDS of raw materials

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- 1. As evaluations on hazards are not necessary satisfactory, special attention should be paid for use.
- 2. This SDS, summarizing matters to be attended to, is required for proper use of the product and is intended for normal use.
- 3. Referring to this SDS, properly use and handle this product on the user's own responsibility.
- 4. The contents of this SDS are based on information available as of today and our knowledge. The information, data, and evaluations herein are not guaranteed, and in addition, may be revised due to revision of laws or knowledge newly obtained.