MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **Chemz Nickel Anti-Seize Paste**

Product Code: **7443 & 7445**

Recommended Use: Anti-Seize suitable for stainless steel to prevent seizure of components

Supplier: **Chemz Ltd**
PO Box 8895
Havelock North
New Zealand
Telephone Number: +64 6 877 9690
Emergency Telephone: 111
New Zealand Poisons Centre: 0800 764 766 (0800POISON)
Australian Poisons Centre: 13 1126 (from anywhere in Australia)

2. HAZARDS IDENTIFICATION

This product is classified as Non Hazardous.

Risk Phrases: Not Hazardous - No criteria found.
Safety Phrases: S25. Avoid contact with eyes.
UN Number: None allocated

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS No	Conc,%	TWA (mg/m3)	STEL (mg/m3)
Oil, mineral	8012-95-1	>90	5 (mist)	not set
Zinc alkyl di thiophosphate	68649-42-3	<1.5	not set	not set
Benzenamine, N-phenyl-	68411-46-1	<1	not set	not set
Zinc naphthenate	12001-85-3	<1	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (Phone New Zealand 0 800 764766) or a doctor.

Inhalation: First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.
Skin Contact: Gently blot away excess liquid. Irritation is unlikely. However, if irritation does occur, flush with lukewarm, gently flowing water for 5 minutes or until chemical is removed.
Eye Contact: Quickly and gently blot material from eyes. No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.

Medical attention and special treatment:
Treat symptomatically.

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5. FIRE FIGHTING MEASURES

Fire and Explosion Hazards: The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. This product is classified as a C2 combustible product. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.
Fire decomposition products from this product are likely to be irritating if inhaled.

Extinguishing Media: Suitable extinguishing media are carbon dioxide, dry chemical, foam, water fog.
Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade.
Flash point: >200°C, Open cup
Upper Flammability Limit: No data.
Lower Flammability Limit: No data.
Autoignition temperature: >250°C (ASTM E 659) This temperature may be significantly lower under particular
conditions (slow oxidation on finely divided materials).
Flammability Class: C2

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures:
No special emergency procedure are required with this porduct

Methods and materials for containment and clean up:
Minor spills do not normally need any special cleanup measures. In the event of a major spill,
prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Suitable materials for protective clothing include nitrile, neoprene. Eye/face protective equipment should comprise as a minimum, protective glasses and, preferably, goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product.
This material may be suitable for approved landfill. Ensure legality of
disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

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7. HANDLING AND STORAGE

Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check
Section 8 of this MSDS for details of personal protective measures, and make sure that those measures are followed.
The measures detailed below under "Storage" should be followed during handling in order to minimise risks to
persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible
materials listed in Section 10.

Storage: Store packages of this product in a cool place. Make sure that containers of this product are kept tightly closed. Keep containers dry and away from water. Make sure that the product does not come into contact with substances listed under “incompatibilities” section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging – there may be further storage instructions on the label

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

The following Australian Standards will provide general advice regarding safety clothing and equipment: Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

SWA Exposure Limits TWA (mg/m$_3$) STEL (mg/m$_3$)

Oil, mineral 5 (mist) not set

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

Eye Protection: Eye protection is not normally necessary when this product is being used. However, if in doubt, wear suitable protective glasses or goggles.

Skin Protection: The information at hand indicates that this product is not harmful and that normally no special skin protection is necessary. However, we suggest that you routinely avoid contact with all chemical products and that you wear suitable gloves (preferably elbow-length) when skin contact is likely.

Protective Material Types: We suggest that protective clothing be made from the following materials: nitrile, neoprene.

Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Description & colour:	Blue coloured pasty grease.
Odour:	Characteristic odour.
Boiling Point:	Not available.
Freezing/Melting Point:	No specific data. Greasy solid at normal temperatures.
Volatiles:	Nil at 100°C.
Vapour Pressure:	Nil at normal ambient temperatures.
Vapour Density:	No data.
Specific Gravity:	0.900 at 15°C
Water Solubility:	Insoluble.
pH:	No data.
Volatility:	Nil at normal ambient temperatures.
Odour Threshold:	No data.
Evaporation Rate:	No data.
Coeff Oil/water Distribution:	Log Pow >6 at 20°C
Viscosity:	No data.
Autoignition temp:	>250°C (ASTM E 659)

10. STABILITY AND REACTIVITY

Reactivity: This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.
Conditions to Avoid: This product should be kept in a cool place, preferably below 30°C. Keep containers tightly closed. Containers should be kept dry.
Incompatibilities: strong oxidising agents.
Fire Decomposition: Combustion forms carbon dioxide, and if incomplete, carbon monoxide, various hydrocarbons, aldehydes and smoke. Water is also formed. Small quantities of oxides of nitrogen, sulfur, zinc and phosphorus. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.
Polymerisation: This product will not undergo polymerisation reactions.

11. TOXICOLOGICAL INFORMATION

Local Effects:

Target Organs: There is no data to hand indicating any particular target organs.
During use in engines, contamination of oil with low levels of combustion products occurs.
Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous
exposure. Brief or intermittent skin contact with used oil is not expected to have serious effects in human if the oil is
thoroughly removed by washing with soap and water.
To our knowledge, the product does not cause aggravated sensitivity.

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12. ECOLOGICAL INFORMATION

No experimental information about the finished product. However the "mineral oil" fraction of the new product is intrinsically biodegradable. This product is unlikely to be mobile in soils.
There is a slow loss by evaporation in air. The product is insoluble; it spreads on the surface of water. Given its physical and chemical characteristics, the product generally shows low soil mobility.

Zinc alkyl dithiophosphate
EC_{50} *Daphnia magna* (48h) 1 - 1.5 mg/L
LC_{50} *Pimephales promelas* (static) (96h) 1.0-5.0 mg/L
LC_{50} *Pimephales promelas* (semi-static) (96h) 10.0-35.0 mg/L

13. DISPOSAL CONSIDERATIONS

Disposal: This product may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. If neither of these options is suitable, consider controlled incineration, or landfill.

14. TRANSPORT INFORMATION

ADG Code: This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

15. REGULATORY INFORMATION

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations

16. OTHER INFORMATION

For further copies of this sheet or other product information contact Chemz LTD.
Reason(s) for Issue:
Revised Primary MSDS
Change to Poisons Requirements
This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Chemz Limited cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. If clarification or further information is needed, the user should contact their Chemz representative or Chemz Limited at the contact details on page 1. Chemz Limited's responsibility for the material as sold is subject to the terms and conditions of sale.