

1. Identification

Product identifier High Temperature Nickel Anti-Seize Lubricant

Other means of identification

FIR No. 174332

Recommended use Anti-seize lubricant

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Supplier

Company Name Ford Motor Company

Address Attention: MSDS Information, P.O. Box 1899
Dearborn, Michigan 48121
USA

Telephone 1-800-392-3673

MSDS Information 1-800-448-2063
msds@brownart.com

Emergency telephone numbers

Poison Control Center: USA and Canada: 1-800-959-3673
INFOTRAC (Transportation): USA and Canada 1-800-535-5053

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Serious eye damage/eye irritation Category 2A
Sensitization, skin Category 1

Environmental hazards Hazardous to the aquatic environment, long-term hazard Category 4

OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement May cause an allergic skin reaction. Causes serious eye irritation. May cause long lasting harmful effects to aquatic life.

Precautionary statement

Prevention Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves. Wear eye/face protection.

Response If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Wash contaminated clothing before reuse.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) May cause irritation of respiratory tract. May be irritating to the skin. May be harmful if inhaled.

Supplemental information None.

3. Composition/information on ingredients**Mixtures**

Chemical name	Common name and synonyms	CAS number	%
Distillates (petroleum), hydrotreated heavy naphthenic		64742-52-5	50 - < 60
GRAPHITE		7782-42-5	10 - < 20
NICKEL		7440-02-0	10 - < 20
ALUMINIUM		7429-90-5	1 - < 3

Specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician immediately. Rinse mouth. Do not induce vomiting.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Dry sand.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire. Carbon dioxide (CO ₂).
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid contact with eyes, skin, and clothing. Avoid inhalation of vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling

Avoid contact with eyes, skin, and clothing. Avoid breathing vapor. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
ALUMINIUM (CAS 7429-90-5)	PEL	5 mg/m ³	Respirable dust.
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	PEL	15 mg/m ³	Total dust.
		5 mg/m ³	Mist.
GRAPHITE (CAS 7782-42-5)	PEL	2000 mg/m ³	Respirable fraction.
		500 ppm	
NICKEL (CAS 7440-02-0)	PEL	5 mg/m ³	Total dust.
		1 mg/m ³	

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value
GRAPHITE (CAS 7782-42-5)	TWA	15 mppcf

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
ALUMINIUM (CAS 7429-90-5)	TWA	1 mg/m ³	Respirable fraction.
GRAPHITE (CAS 7782-42-5)	TWA	2 mg/m ³	Respirable fraction.
NICKEL (CAS 7440-02-0)	TWA	1.5 mg/m ³	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
ALUMINIUM (CAS 7429-90-5)	TWA	5 mg/m ³	Respirable.
		5 mg/m ³	Welding fume or pyrophoric powder.
		10 mg/m ³	Total
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	STEL	10 mg/m ³	Mist.
GRAPHITE (CAS 7782-42-5)	TWA	5 mg/m ³	Mist.
	TWA	2.5 mg/m ³	Respirable.
NICKEL (CAS 7440-02-0)	TWA	0.015 mg/m ³	

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Provide eyewash station. Use adequate ventilation to control airborne concentrations below the exposure limits/guidelines. If user operations generate a vapor, dust and/or mist, use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits/guidelines.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection	
Hand protection	Suitable chemical protective gloves should be worn when the potential exists for prolonged or repeated skin exposure. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Neoprene gloves are recommended. Nitrile gloves are recommended.
Other	Wear appropriate chemical resistant clothing. Wear appropriate chemical resistant clothing if applicable.
Respiratory protection	If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of OSHA Respiratory Protection Standard 29 CFR 1910.134 and/or Canadian Standard CSA Z94.4.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state	Solid.
Form	Paste.
Color	Grey.
Odor	Hydrocarbon-like.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	> 199.4 °F (> 93.0 °C) ASTM D56
Evaporation rate	< 1 (BuAc=1)
Flammability (solid, gas)	Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.

Vapor pressure	< 5 mm Hg
Vapor pressure temp.	69.8 °F (21 °C)
Vapor density	> 1 (AIR=1)
Relative density	1.1
Relative density temperature	39.2 °F (4 °C)
Solubility(ies)	
Solubility (water)	NEGLIGIBLE
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Kinematic viscosity	800000 cSt
Kinematic viscosity temperature	104 °F (40 °C)

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong acids. Chlorine. Strong oxidizing agents.
Hazardous decomposition products	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Zinc oxide. Sulfur oxides. Formaldehyde.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful. Dust may irritate respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin contact	May cause an allergic skin reaction. May be irritating to the skin.
Eye contact	Causes serious eye irritation.
Ingestion	May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity May cause an allergic skin reaction. May cause respiratory irritation. May irritate eyes and skin.

Components	Species	Calculated/Test Results
------------	---------	-------------------------

GRAPHITE (CAS 7782-42-5)

Acute

Oral

LD50

Rat

> 10000 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Risk of cancer cannot be excluded with prolonged exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

NICKEL (CAS 7440-02-0)

2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

NICKEL (CAS 7440-02-0)

Known To Be Human Carcinogen.

Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity May cause long lasting harmful effects to aquatic life.

Ecotoxicity

Components		Species	Calculated/Test Results
ALUMINIUM (CAS 7429-90-5)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.16 mg/l, 96 hours
NICKEL (CAS 7440-02-0)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	2.923 mg/l, 96 hours
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available.		
Mobility in soil	No data available.		
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

<Unspecified>

Not regulated as dangerous goods.

IATA

<Unspecified>

Not regulated as dangerous goods.

IMDG

<Unspecified>

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

NICKEL (CAS 7440-02-0)

Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
NICKEL	7440-02-0	10 - < 20
ALUMINIUM	7429-90-5	1 - < 3

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

NICKEL (CAS 7440-02-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

ALUMINIUM (CAS 7429-90-5)

Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)

GRAPHITE (CAS 7782-42-5)

NICKEL (CAS 7440-02-0)

US. New Jersey Worker and Community Right-to-Know Act

ALUMINIUM (CAS 7429-90-5)

GRAPHITE (CAS 7782-42-5)

NICKEL (CAS 7440-02-0)

US. Pennsylvania Worker and Community Right-to-Know Law

ALUMINIUM (CAS 7429-90-5)

GRAPHITE (CAS 7782-42-5)

NICKEL (CAS 7440-02-0)

US. Rhode Island RTK

ALUMINIUM (CAS 7429-90-5)

NICKEL (CAS 7440-02-0)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

International Inventories

All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

16. Other information, including date of preparation or last revision

Issue date 06-01-2015
Version # 01
HMIS® ratings Health: 2
Flammability: 1
Physical hazard: 0
NFPA ratings Health: 2
Flammability: 1
Instability: 0

**Preparation Information and
Disclaimer**

This document was prepared by FCSD-Toxicology, Ford Motor Company, Diagnostic Service Center II, 1800 Fairlane Drive, Allen Park, MI 48101, USA, based in part on information provided by the manufacturer. The information on this data sheet represents our current data and is accurate to the best of our knowledge as to the proper handling of this product under normal conditions and in accordance with the application specified on the packaging and/or technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user. To the extent that there are any differences between this product's Safety Data Sheet (SDS) and the consumer packaged product labels, the SDS should be followed.

Part number(s)

XL-2