SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	**AF Moly 2**
Other means of identification	Not available.
Recommended use	Not available.
Recommended restrictions	None known.
Manufacturer information	Irving Blending & Packaging PO Box 1169 Saint John, NB E2L 4E6 CA Phone: 1.800.574.5823 Emergency Phone: 1.800.424.9300 (CHEMTREC)
Supplier	See above.

2. Hazards Identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
WHMIS 2015 defined hazards	Not classified
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)	None known
WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)	None known
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Benzenamine, N-phenyl-		122-39-4	0.1-1*
Molybdenum disulfide		1317-33-5	5-10*
Zinc dialkyl dithiophosphate		68457-79-4	0.1-1*

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments	US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200. *CANADA GHS: The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First Aid Measures

Inhalation	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Skin contact	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.

Eye contact	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
Ingestion	Rinse mouth. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious or is convulsing. Obtain medical attention.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat patient symptomatically.
General information	If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
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.
Hazardous combustion products	May include and are not limited to: Oxides of sulfur. Oxides of phosphorus.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. 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. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters.

7. Handling and Storage

Precautions for safe handling	Avoid prolonged exposure. Wash thoroughly after handling. Observe good industrial hygiene practices. Use good industrial hygiene practices in handling this material. When using do not eat or drink.
Conditions for safe storage, including any incompatibilities	Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children.

8. Exposure Controls/Personal Protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Benzenamine, N-phenyl- (CAS 122-39-4)	TWA	10 mg/m3	
Molybdenum disulfide (CAS 1317-33-5)	TWA	3 mg/m3	Respirable.
		10 mg/m3	Total

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Benzenamine, N-phenyl- (CAS 122-39-4)	TWA	10 mg/m3	
Molybdenum disulfide (CAS 1317-33-5)	TWA	3 mg/m3	Respirable.
		10 mg/m3	Inhalable

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Benzenamine, N-phenyl- (CAS 122-39-4)	TWA	10 mg/m3	
Molybdenum disulfide (CAS 1317-33-5)	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Benzenamine, N-phenyl- (CAS 122-39-4)	TWA	10 mg/m3	
Molybdenum disulfide (CAS 1317-33-5)	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value
Benzenamine, N-phenyl- (CAS 122-39-4)	TWA	10 mg/m3
Molybdenum disulfide (CAS 1317-33-5)	TWA	10 mg/m3

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

Components	Type	Value	Form
Molybdenum disulfide (CAS 1317-33-5)	PEL	15 mg/m3	Total dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Benzenamine, N-phenyl- (CAS 122-39-4)	TWA	10 mg/m3	
Molybdenum disulfide (CAS 1317-33-5)	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Benzenamine, N-phenyl- (CAS 122-39-4)	TWA	10 mg/m3

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

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Confirm with a reputable supplier first.

Other Wear appropriate chemical resistant clothing. As required by employer code.

Respiratory protection Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).

Thermal hazards Wear appropriate thermal protective clothing, when necessary. Not applicable.

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. When using do not eat or drink.

9. Physical and Chemical Properties

Appearance	Semi-solid
Physical state	Solid.
Form	Semi-solid
Color	dark grey
Odor	Petroleum
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	640.4 °F (338 °C)
Pour point	Not available.
Specific gravity	Not available.
Partition coefficient (n-octanol/water)	Not available.
Flash point	491.0 °F (255.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
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	Not available.
Vapor density	Not available.
Relative density	1.0995 g/cm3 @ 20°C
Solubility(ies)	Not available.
Auto-ignition temperature	> 599 °F (> 315 °C)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and Reactivity

Reactivity	This product may react with strong oxidizing agents.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Do not mix with other chemicals.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of sulfur. Oxides of phosphorus.

11. Toxicological Information

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Information on likely routes of exposure	
Ingestion	May cause stomach distress, nausea or vomiting.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.

Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Components	**Species**	**Test Results**
Benzenamine, N-phenyl- (CAS 122-39-4)		
Acute		
Dermal		
LD50	Not available	
Inhalation		
LC50	Not available	
Oral		
LD50	Gerbil; Hamster; Rat	> 800 mg/kg, ECHA
		600 mg/kg, ECHA
	Guinea pig	300 mg/kg, HSDB
	Mouse	1750 mg/kg, HSDB
	Rat	1120 mg/kg, Sigma Aldrich
		2 g/kg, HSDB
Molybdenum disulfide (CAS 1317-33-5)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, CCOHS
Inhalation		
LC50	Rat	> 2820 mg/m³, 4 hours, CCOHS
		> 2.8 mg/l/4h, CCOHS
Oral		
LD50	Rat	> 2000 mg/kg, CCOHS
Zinc dialkyl dithiophosphate (CAS 68457-79-4)		
Acute		
Dermal		
LD50	Rat	3160 mg/kg
Oral		
LD50	Rat	1830 mg/kg

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Exposure minutes	Not available.
Erythema value	Not available.
Oedema value	Not available.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Corneal opacity value	Not available.
Iris lesion value	Not available.
Conjunctival reddening value	Not available.
Conjunctival oedema value	Not available.
Recover days	Not available.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	See below.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not listed.

Reproductive toxicity	Possible reproductive hazard.
Teratogenicity	Not available.
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.

12. Ecological Information

Ecotoxicity See below

Ecotoxicological data

Components		Species	Test Results
Benzenamine, N-phenyl- (CAS 122-39-4)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.27 - 0.36 mg/L, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	3.471 - 4.141 mg/L, 96 hours
Zinc dialkyl dithiophosphate (CAS 68457-79-4)			
Crustacea	EC50	Daphnia	5 mg/L, 48 Hours

Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Mobility in general	Not 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.
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	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

Transport of Dangerous Goods (TDG) Proof of Classification	Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Canada CEPA Schedule I: Listed substance

Zinc dialkyl dithiophosphate (CAS 68457-79-4) Listed.

Canada Priority Substances List (Second List): Listed substance

Zinc dialkyl dithiophosphate (CAS 68457-79-4) Listed.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

WHMIS 2015 Exemptions Not applicable

US federal regulations

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Zinc dialkyl dithiophosphate (CAS 68457-79-4) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Zinc dialkyl dithiophosphate	68457-79-4	0.1-1*

Other federal regulations

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

Not regulated.

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

Not regulated.

US state regulations See below

US - California Hazardous Substances (Director's): Listed substance

Benzenamine, N-phenyl- (CAS 122-39-4) Listed.
Molybdenum disulfide (CAS 1317-33-5) Listed.
Zinc dialkyl dithiophosphate (CAS 68457-79-4) Listed.

US - Illinois Chemical Safety Act: Listed substance

Zinc dialkyl dithiophosphate (CAS 68457-79-4)

US - Louisiana Spill Reporting: Listed substance

Zinc dialkyl dithiophosphate (CAS 68457-79-4) Listed.

US - Michigan Critical Materials Register: Parameter number

Zinc dialkyl dithiophosphate (CAS 68457-79-4)

US - Minnesota Haz Subs: Listed substance

Benzenamine, N-phenyl- (CAS 122-39-4) Listed.
Molybdenum disulfide (CAS 1317-33-5) Listed.

US - Texas Effects Screening Levels: Listed substance

Benzenamine, N-phenyl- (CAS 122-39-4) Listed.
Molybdenum disulfide (CAS 1317-33-5) Listed.
Zinc dialkyl dithiophosphate (CAS 68457-79-4) Listed.

US. Massachusetts RTK - Substance List

Benzenamine, N-phenyl- (CAS 122-39-4)
Molybdenum disulfide (CAS 1317-33-5)

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

Benzenamine, N-phenyl- (CAS 122-39-4)
Zinc dialkyl dithiophosphate (CAS 68457-79-4)

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

Benzenamine, N-phenyl- (CAS 122-39-4)
Zinc dialkyl dithiophosphate (CAS 68457-79-4)

US. Rhode Island RTK

Benzenamine, N-phenyl- (CAS 122-39-4)

US. California Proposition 65

Not Listed.

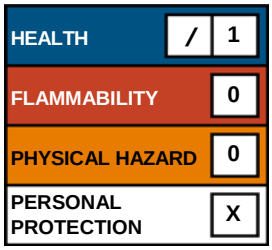
Inventory status

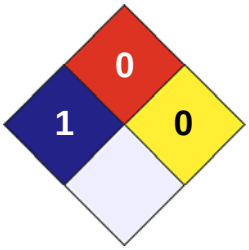
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0





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Prepared by Dell Tech Laboratories Ltd. Phone: (519) 858-5021

Other information For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.