

SAFETY DATA SHEET



Molub-Alloy 777-2 ES

Section 1. Identification

Product name Molub-Alloy 777-2 ES
SDS no. 464072
Code 464072-US17

Relevant identified uses of the substance or mixture and uses advised against

Product use Grease for industrial applications
For specific application advice see appropriate Technical Data Sheet or consult our company representative.

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EMERGENCY SPILL INFORMATION:

Section 2. Hazards identification

Classification of the substance or mixture SKIN SENSITISATION - Category 1

GHS label elements

Hazard pictograms



Signal word

Warning

Hazard statements

H317 - May cause an allergic skin reaction.

Precautionary statements

Prevention

P280 - Wear protective gloves.
P261 - Avoid breathing dust.
P272 - Contaminated work clothing should not be allowed out of the workplace.

Response

P362 + P364 - Take off contaminated clothing and wash it before reuse.
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 - If skin irritation or rash occurs: Get medical attention.

Storage

Not applicable.

Disposal

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Routes of entry

Dermal contact. Eye contact. Inhalation.

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Section 2. Hazards identification

Other hazards which do not result in classification

Defatting to the skin.

Note: High Pressure Applications

Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency.

See 'Notes to physician' under First-Aid Measures, Section 4 of this Safety Data Sheet.

Section 3. Composition/information on ingredients

Substance/mixture

Mixture

Highly refined base oil and additives. Thickening agent.

Ingredient name	CAS number	%
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	≥25 - ≤50
Residual oils (petroleum), solvent refined	64742-01-4	≥25 - ≤50
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	≥10 - ≤25
calcium carbonate	471-34-1	≤3
5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione	72676-55-2	<2.5
Molybdenum disulphide	1317-33-5	≤3

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

Inhalation

If inhaled, remove to fresh air. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Get medical attention if symptoms occur.

Skin contact

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Wash clothing before reuse. Clean shoes thoroughly before reuse. In the event of any complaints or symptoms, avoid further exposure. Get medical attention.

Ingestion

Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Get medical attention if adverse health effects persist or are severe.

Most important symptoms/effects, acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician

Treatment should in general be symptomatic and directed to relieving any effects. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Note: High Pressure Applications

Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discoloured and extremely painful with extensive subcutaneous necrosis.

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Section 4. First aid measures

Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimise tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.

Specific treatments

No specific treatment.

Protection of first-aiders

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use water fog, alcohol resistant foam, dry chemical or carbon dioxide extinguisher or spray.

Unsuitable extinguishing media

Do not use water jet.

Specific hazards arising from the chemical

No specific fire or explosion hazard.

Hazardous thermal decomposition products

☑ Combustion products may include the following:
metal oxide/oxides
carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide)
sulphur oxides (SO, SO₂, etc.)
nitrogen oxides (NO, NO₂ etc.)

Special protective actions for fire-fighters

No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.

Special protective equipment for fire-fighters

Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.

For emergency responders

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Small spill

Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

Large spill

Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Avoid creating dusty conditions and prevent wind dispersal. If emergency personnel are unavailable, contain spilt material. Suction or scoop the spill into appropriate disposal or recycling vessels, then cover spill area with oil absorbent. Dispose of via a licensed waste disposal contractor. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep away from heat and direct sunlight. Keep container tightly closed and sealed until ready for use. Store and use only in equipment/containers designed for use with this product. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Ministry of Health (Viet Nam). TWA: 5 mg/m ³ 8 hours. Issued/Revised: 10/2002 Form: Mist STEL: 10 mg/m ³ 15 minutes. Issued/Revised: 10/2002 Form: Mist
Residual oils (petroleum), solvent refined	Ministry of Health (Viet Nam). TWA: 5 mg/m ³ 8 hours. Issued/Revised: 10/2002 Form: Mist STEL: 10 mg/m ³ 15 minutes. Issued/Revised: 10/2002 Form: Mist
Distillates (petroleum), hydrotreated heavy naphthenic	Ministry of Health (Viet Nam). TWA: 5 mg/m ³ 8 hours. Issued/Revised: 10/2002 Form: Mist STEL: 10 mg/m ³ 15 minutes. Issued/Revised: 10/2002 Form: Mist
calcium carbonate	Ministry of Health (Viet Nam). TWA: 10 mg/m ³ 8 hours. Issued/Revised:

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Molybdenum disulphide

10/2002

ACGIH TLV (United States).

TWA: 10 mg/m³, (as Mo) 8 hours. Issued/
Revised: 2/2001 Form: Inhalable fraction
TWA: 3 mg/m³, (as Mo) 8 hours. Issued/
Revised: 2/2001 Form: Respirable fraction

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.

The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety glasses with side shields.

Skin protection

Hand protection

Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Nitrile gloves. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Skin protection

Use of protective clothing is good industrial practice.

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when

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Section 8. Exposure controls/personal protection

cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. For protection against metal working fluids, respiratory protection that is classified as "resistant to oil" (class R) or oil proof (class P) should be selected where appropriate. Depending on the level of airborne contaminants, an air-purifying, half-mask respirator (with HEPA filter) including disposable (P- or R-series) (for oil mists less than 50mg/m³), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m³). Where organic vapours are a potential hazard during metalworking operations, a combination particulate and organic vapour filter may be necessary. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state	Grease
Colour	Grey. [Dark]
Odour	Mild.
Odour threshold	Not available.
pH	Not applicable.
Melting point/freezing point	Not available.
Boiling point, initial boiling point, and boiling range	Not available.
Flash point	Open cup: 260°C (500°F) [Cleveland]
Evaporation rate	Not available.
Flammability	Not available.
Lower and upper explosion limit/flammability limit	Not applicable.
Vapour pressure	Not available.
Relative vapour density	Not applicable.
Density	<1000 kg/m ³ (<1 g/cm ³) at 25°C
Relative density	Not available.
Solubility	insoluble in water.
Partition coefficient: n-octanol/water	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	Not available.
Particle characteristics	
Median particle size	Not available.

Section 10. Stability and reactivity

Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.
Conditions to avoid	No specific data.
Incompatible materials	Reactive or incompatible with the following materials: oxidising materials, acids and alkalis.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Aspiration hazard

Not available.

Information on likely routes of exposure Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects

Eye contact

No known significant effects or critical hazards.

Inhalation

Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact

Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.

Ingestion

No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact

No specific data.

Inhalation

No specific data.

Skin contact

Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Ingestion

No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects

Not available.

Potential delayed effects

Not available.

Long term exposure

Potential immediate effects

Not available.

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Section 11. Toxicological information

Potential delayed effects	Not available.
<u>Potential chronic health effects</u>	
General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Environmental effects No known significant effects or critical hazards.

Persistence and degradability

Not expected to be rapidly degradable.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{oc}) Not available.

Mobility Grease insoluble in water.

Other adverse effects No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

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Section 14. Transport information

	IMDG	IATA
UN number	Not regulated.	Not regulated.
UN proper shipping name	-	-
Transport hazard class(es)	-	-
Packing group	-	-
Environmental hazards	No.	No.
Additional information	-	-

Special precautions for user Not available.

Transport in bulk according to IMO instruments Not available.

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product No known specific national and/or regional regulations applicable to this product (including its ingredients).

[Decree No. 113/2017/ND-CP - Chemicals to be declared](#) Applicable

[Decree No. 113/2017/ND-CP - Chemicals requiring a chemical incident prevention and response plan](#)

Ingredient name	%	Reportable quantity
<input checked="" type="checkbox"/> ethylene oxide	≤0.1	Reportable quantity: 5000 kg
<input type="checkbox"/> propylene oxide	≤0.1	Reportable quantity: 5000 kg

Toxic classification (TCVN 3164-79) Not classified as hazardous.

[Chemical Weapon Convention List Schedules I, II & III Chemicals](#)

International lists

Australia inventory (AIC) All components are listed or exempted.

Canada inventory All components are listed or exempted.

China inventory (IECSC) All components are listed or exempted.

REACH Status For the REACH status of this product please consult your company contact, as identified in Section 1.

Japan inventory (CSCL) All components are listed or exempted.

Korea inventory (KECI) All components are listed or exempted.

Philippines inventory (PICCS) At least one component is not listed.

Taiwan Chemical Substances Inventory (TCSI) All components are listed or exempted.

United States inventory (TSCA 8b) All components are active or exempted.

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Section 16. Other information

History

Date of issue/ Date of revision	30 June 2022
Date of previous issue	10/9/2020
Prepared by	Product Stewardship
Key to abbreviations	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations Varies = may contain one or more of the following 64741-88-4, 64741-89-5, 64741-95-3, 64741-96-4, 64742-01-4, 64742-44-5, 64742-45-6, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-57-0, 64742-58-1, 64742-62-7, 64742-63-8, 64742-65-0, 64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1

✔ Indicates information that has changed from previously issued version.

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.

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