SAFETY DATA SHEET



Section 1. Identification

Product name Almaredge 420

468792 SDS#

Code 468792-US03

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

Product use Metalworking fluid - soluble.

For specific application advice see appropriate Technical Data Sheet or consult our

company representative.

BP Lubricants USA Inc. Supplier

1500 Valley Road Wayne, NJ 07470

Telephone: +1-888-CASTROL

EMERGENCY HEALTH

INFORMATION:

+1-800-447-8735

EMERGENCY SPILL +1-800-424-9300 (CHEMTREC USA)

INFORMATION: +1-703-527-3887 (CHEMTREC outside the US)

Section 2. Hazards identification

OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard

(29 CFR 1910.1200).

Classification of the

substance or mixture

EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms



Signal word Warning

Hazard statements Causes serious eye irritation.

Precautionary statements

Prevention Wear eye or face protection. Wash hands thoroughly after handling.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if Response

present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage Not applicable. **Disposal** Not applicable.

Hazards not otherwise

classified

Defatting to the skin.

Product code 468792-US03 Page: 1/10 Product name Almaredge 420

Section 3. Composition/information on ingredients

Substance/mixture

Mixture

Highly refined mineral oil, emulsifiers and additives.

| Ingredient name | % | CAS number |
|---|-----------|------------|
| vistillates (petroleum), hydrotreated heavy naphthenic | ≥50 - ≤75 | 64742-52-5 |
| sulfonic acids, petroleum, sodium salts | ≤10 | 68608-26-4 |
| (2-methoxymethylethoxy)propanol | ≤3 | 34590-94-8 |
| Oleic acid, ethoxylated | ≤3 | 9004-96-0 |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | ≤3 | 64742-65-0 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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 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.

Skin contact Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove

contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur. If skin irritation or rash occurs:

Get medical advice/attention.

Inhalation If inhaled, remove to fresh air. Get medical attention if symptoms occur.

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. Wash out mouth with water if person is

and get medical attention immediately. Wash out mouth with water if person is conscious. Get medical attention if adverse health effects persist or are severe.

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.

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 physicianTreatment should in general be symptomatic and directed to relieving any effects.

Specific treatments No specific treatment.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

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

extinguisher or spray.

Unsuitable extinguishing

media

media

Do not use water jet.

Specific hazards arising

from the chemical

In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion

Combustion products may include the following: metal oxide/oxides

products

carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide)

sulfur oxides (SO, SO₂ etc.)

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Section 5. Fire-fighting measures

Special protective actions for fire-fighters

Special protective equipment 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.

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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.

For emergency responders

Entry into a confined space or poorly ventilated area contaminated with vapor, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For non-emergency personnel".

Environmental precautions

Avoid dispersal of spilled 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 materials for containment and cleaning up

Small spill

Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilled product. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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. Avoid contact of spilled material and runoff with soil and surface waterways. Avoid prolonged or repeated contact with skin. During metal working, solid particles from workpieces or tools will contaminate the fluid and may cause abrasions of the skin. Where such abrasions result in a penetration of the skin, first aid treatment should be applied as soon as reasonably possible. The presence of certain metals in the workpiece or tool, such as chromium, cobalt and nickel, can contaminate the metalworking fluid and as a result may induce allergic skin reactions. Evaporation of water from soluble cutting fluids during use may lead to an increase in concentration which may result in the development of skin conditions due to irritation and defatting. It is important to monitor fluid strength on a regular basis with a refractometer and maintain it at the recommended concentration. Lubricants from other sources and other contaminants should be minimized. Swarf and other debris should be removed. To maintain optimum performance and minimize bacterial spoilage, machine tool coolant systems should be cleaned on a regular basis.

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. Contaminated work clothing should not be allowed out of the workplace. See also Section 8 for additional information on hygiene measures.

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Section 7. Handling and storage

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 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

Not suitable

Prolonged exposure to elevated temperature

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|---|---|
| Distillates (petroleum), hydrotreated heavy naphthenic | ACGIH TLV (United States). [Mineral Oil, pure, highly and severely refined] TWA: 5 mg/m³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction OSHA PEL (United States). [Oil mist, mineral] TWA: 5 mg/m³ 8 hours. Issued/Revised: 6/1993 |
| sulfonic acids, petroleum, sodium salts | None. |
| (2-methoxymethylethoxy)propanol | ACGIH TLV (United States). [(2-Methoxymethylethoxy)propanol] Absorbed through skin. TWA: 606 mg/m³ 8 hours. Issued/Revised: 9/1994 STEL: 150 ppm 15 minutes. Issued/Revised: 9/1994 STEL: 909 mg/m³ 15 minutes. Issued/Revised: 9/1994 OSHA PEL (United States). Absorbed through skin. TWA: 100 ppm 8 hours. Issued/Revised: 6/1993 TWA: 600 mg/m³ 8 hours. Issued/Revised: 6/1993 ACGIH TLV (United States). [dipropylene glycol methyl ether] TWA: 50 ppm 8 hours. Issued/Revised: 1/2022 |
| Oleic acid, ethoxylated | None. |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | ACGIH TLV (United States). [Mineral Oil, pure, highly and severely refined] TWA: 5 mg/m³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction OSHA PEL (United States). [Oil mist, mineral] TWA: 5 mg/m³ 8 hours. Issued/Revised: 6/1993 |

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Biological exposure indices

No exposure indices known.

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Section 8. Exposure controls/personal protection

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Undiluted fluid: Chemical goggles.

Diluted fluid: Safety glasses with side shields.

Skin protection

Hand protection

Wear suitable gloves. Undiluted fluid: Wear chemical resistant gloves. Recommended: nitrile gloves.

Diluted fluid: Wear protective gloves if prolonged or repeated contact is likely. 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.

Body 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 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.

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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 Liquid. Color Amber. Odor Mild.

Odor threshold Not available.

pН 8.5 [Conc. (% w/w): 5%]

Melting point/freezing point **Boiling point, initial boiling** point, and boiling range

Not available. Not available.

Flash point Closed cup: >100°C (>212°F) [Estimated. Water content interferes with flash point

determination.]

Evaporation rate Not available. **Flammability** Lower and upper explosion limit/flammability limit

Not available. Not available.

Vapor pressure

| | Vapor Pressure at 20°C | | Vapor pressure at 50°C | | | |
|---|------------------------|-----------|------------------------|----------|-----|--------|
| Ingredient name | mm Hg | kPa | Method | mm Hg | kPa | Method |
| instillates (petroleum), hydrotreated heavy naphthenic | <0.07501 | <0.01 | ASTM D 5191 | | | |
| Water | 17.5 | 2.3 | | | | |
| Tall oil | 0.000029 | 0.0000039 | | | | |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | <0.07501 | <0.01 | ASTM D 5191 | | | |

Relative vapor density Not available.

Density <1000 kg/m³ (<1 g/cm³) at 15.6°C

Solubility(ies)

| Media | Result |
|-------|----------------------|
| water | Emulsifies in water. |

Partition coefficient: n-

octanol/water

Not applicable.

Auto-ignition temperature

| Ingredient name | °C | °F | Method |
|---------------------------------|-----|-------|---------|
| (2-methoxymethylethoxy)propanol | 207 | 404.6 | EU A.15 |

Decomposition temperature

Not available.

Viscosity

Kinematic: 42 mm²/s (42 cSt) at 40°C

VOC 98.1 g/l

Particle characteristics

Median particle size Not applicable.

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 polymerization will not occur.

Product name Product code 468792-US03 Almaredge 420 Page: 6/10

Section 10. Stability and reactivity

Conditions to avoid Avoid excessive heat.

Incompatible materials Reactive or incompatible with the following materials: oxidizing materials.

Slightly reactive or incompatible with the following materials: acids.

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

Name Result

Distillates (petroleum), hydrotreated heavy naphthenic ASPIRATION HAZARD - Category 1

Information on the likely

routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact Causes serious eye irritation.

Skin contact No known significant effects or critical hazards.

Inhalation Vapor inhalation under ambient conditions is not normally a problem due to low vapor

pressure.

Ingestion No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact Adverse symptoms may include the following:

pain or irritation

watering

redness

Skin contact Adverse symptoms may include the following:

> irritation dryness cracking

Inhalation No specific data. Ingestion No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate Not available.

effects

Potential delayed effects Not available.

Long term exposure

Potential immediate Not available.

effects

Potential delayed effects Not available.

Potential chronic health effects

General No known significant effects or critical hazards. Carcinogenicity No known significant effects or critical hazards. Mutagenicity No known significant effects or critical hazards. No known significant effects or critical hazards. **Teratogenicity Developmental effects** No known significant effects or critical hazards. **Fertility effects** No known significant effects or critical hazards.

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Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

 Route
 ATE value

 Øral
 169924.82 mg/kg

Section 12. Ecological information

Toxicity

No testing has been performed by the manufacturer.

Persistence and degradability

Not expected to be rapidly degradable.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (Koc)

Not available.

Mobility

Liquid. Emulsifies 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 minimized 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 spilled material and runoff and contact with soil, waterways, drains and sewers. Diluted Fluid The spent diluted fluid comprises a relatively stable emulsion. Dispose of via an authorised person/ licensed waste disposal contractor or by other suitable waste treatment techniques (e.g. emulsion splitting, coagulation and filtration) approved by the local authority. Spent fluid should never be disposed of down the drain. The aqueous phase should not be discharged into sewage systems unless provided for by local regulations; the non-aqueous phase should be disposed of as undiluted fluid. Note that separated aqueous solutions or effluents may contain metal salts as well as traces of oil and must be checked for conformity in these respects against consents given by the authorities before disposal. Further treatment may be required.

Section 14. Transport information

Product name Almaredge 420 Product code 468792-US03 Page: 8/10

Language ENGLISH

Section 14. Transport information

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

Special precautions for user Not available.

Transport in bulk according

to IMO instruments

Not available.

Section 15. Regulatory information

U.S. Federal regulations

United States inventory

(TSCA 8b)

All components are active or exempted.

TSCA 5(a)2 final significant new use rules: Glycine, N-(carboxymethyl)-N-[2-[

(carboxymethyl)amino]ethyl]-, sodium salt (1:3)

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification EYE IRRITATION - Category 2A

SARA 313

Form R - Reporting

requirements

This product does not contain any hazardous ingredients at or above regulated

thresholds.

Supplier notification This product does not contain any hazardous ingredients at or above regulated

thresholds.

State regulations

Massachusetts The following components are listed: OIL MIST, MINERAL; DIPROPYLENE GLYCOL

METHYL ETHER; OIL MIST, MINERAL

New Jersey The following components are listed: DIPROPYLENE GLYCOL METHYL ETHER

Pennsylvania The following components are listed: PROPANOL, (2-METHOXYMETHYLETHOXY)-

California Prop. 65

⚠ WARNING: This product can expose you to Diethanolamine, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Other regulations

Australia inventory (AIIC)

Canada inventory

China inventory (IECSC)

Japan inventory (CSCL)

Korea inventory (KECI)

At least one component is not listed.

Product name Almaredge 420 Product code 468792-US03 Page: 9/10

Section 15. Regulatory information

Philippines inventory (PICCS)

Taiwan Chemical Substances Inventory

(TCSI)

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

in Section 1.

Not determined.

Section 16. Other information

National Fire Protection Association (U.S.A.)



History

Date of issue/Date of

revision

Date of previous issue

Prepared by

Key to abbreviations

01/03/2025.

05/20/2024.
Product Stewardship

ACGIH = American Conference of Industrial Hygienists

ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

CAS Number = Chemical Abstracts Service Registry Number

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)

OEL = Occupational Exposure Limit

SDS = Safety Data Sheet STEL = Short term exposure limit TWA = Time weighted average

UN = United Nations

UN Number = United Nations Number, a four digit number assigned by the United

Nations Committee of Experts on the Transport of Dangerous Goods.

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.

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Product name Almaredge 420 Product code 468792-US03 Page: 10/10