



Material Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: PHOS-CHEK® WD881 FIRE SUPPRESSANT FOAM CONCENTRATE
Reference Number: AST10045
Date: March 15, 2004

Company/Undertaking Identification:

Worldwide Hqts
ASTARIS LLC
622 Emerson Road - Suite 500
St. Louis, Missouri 63141

Europe Hqts
ASTARIS S.r.l.
Via Brescia 26
20063 Cernusco Sul Naviglio MI
Milan, Italy

Emergency telephone

In Europe call +39 (0)3 568 5123
In USA call CHEMTREC: 1 800 424 9300
In Canada call CANUTEC: 1 613 996 6666
Outside North America call CHEMTREC: 1 703 527 3887

General Information: + 39 (0)3 568 5123 (Europe)
1 800 244 6169 (Worldwide)

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS No.</u>	<u>% by weight</u>
Alpha-olefin Sulfonate Solution	----	60 - 100
2,4-pentanediol, 2-methyl-	107-41-5	10 - 30
1-dodecanol	112-53-8	1 - 5
d-limonene	5989-27-5	1 - 5

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance and Odor: Golden brown liquid with an odor similar to orange blossoms

WARNING STATEMENTS

WARNING!
CAUSES EYE IRRITATION
MAY CAUSE SKIN & RESPIRATORY TRACT IRRITATION

POTENTIAL HEALTH EFFECTS

Likely Routes of Exposure: Skin contact and inhalation
EYE CONTACT: This product causes severe eye irritation based on toxicity studies.
SKIN CONTACT: This product may cause skin irritation based on toxicity studies.
INHALATION: This product may cause irritation to the nose and upper respiratory system based on component supplier information.

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INGESTION: This product is no more than slightly toxic. Significant adverse health effects are not expected to develop if only small amounts (less than a mouthful) are swallowed.

Refer to Section 11 for toxicological information.

4. FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water for at least 15 minutes. If easy to do, remove any contact lenses. Get medical attention. Remove material from skin, eyes and clothing.

IF ON SKIN, immediately flush with plenty of water. Remove contaminated clothing. Get medical attention if irritation persists. Wash clothing before reuse.

IF INHALED, remove to fresh air. Immediate first aid is not likely to be required, if breathing. If breathing is difficult give oxygen. If not breathing, give artificial respiration. Get medical attention.

IF SWALLOWED, immediate first aid is not likely to be required. A physician or Poison Control Center can be contacted for advice.

5. FIRE FIGHTING MEASURES

FLASH POINT: Not combustible

EXTINGUISHING MEDIA: Not applicable

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known

SPECIAL FIRE FIGHTING PROCEDURES IN ENCLOSED AREAS:

Phos-Chek® WD-881 Solutions: There are no special hazards associated with dilute foam solutions as used for fire fighting.

Phos-Chek® WD-881 Concentrate: If the concentrate becomes involved in a fire, fire fighters and others exposed to products of combustion should wear self-contained breathing apparatus and protective clothing. Equipment should be thoroughly cleaned after use.

6. ACCIDENTAL RELEASE MEASURES

Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with an inert material and then place in a chemical waste container. Flush residual spill area with water.

Refer to Section 13 for disposal information and Sections 14 and 15 for reportable quantity information.

7. HANDLING AND STORAGE

HANDLING

Avoid contact with eyes, skin and clothing.

Avoid breathing vapor or mist.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

STORAGE: Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed. The reuse of this material's container for non-industrial purposes is prohibited and any reuse must be in consideration of the data provided in the MSDS.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Where there is significant potential for eye contact, wear chemical goggles and have eye flushing equipment available.

SKIN PROTECTION: Wear appropriate protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove for given application. Wear face shield and chemical resistant clothing such as a rubber apron when splashing is likely. Wash contaminated skin promptly. Launder contaminated clothing and clean protective equipment before reuse. Wash thoroughly after handling.

RESPIRATORY PROTECTION: Avoid breathing vapor or mist. Use NIOSH/MSHA approved respiratory protection equipment (full facepiece recommended) when airborne exposure limits are exceeded (see below). Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 CFR 1910.134.

VENTILATION: Provide natural or mechanical ventilation to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult NFPA Standard 91 for design of exhaust systems.

AIRBORNE EXPOSURE LIMITS:

<u>Product/Component</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Phos-Chek WD881	None established	None established
2,4-pentanediol, 2-methyl-	25 ppm ceiling	25 ppm ceiling

Components referred to herein may be regulated by specific Canadian provincial legislation. Please refer to exposure limits legislated for the province in which the substance will be used.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Golden brown liquid
Odor:	Similar to orange blossoms
Solubility in Water:	Forms foam

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

10. STABILITY AND REACTIVITY

STABILITY: Product is stable under normal conditions of storage and handling.

MATERIALS TO AVOID: None known

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, partially oxidized hydrocarbons, smoke and soot.

HAZARDOUS POLYMERIZATION: Will not occur

11. TOXICOLOGICAL INFORMATION

Data from Astaris single-dose (acute) animal studies with this material are given below:

Phos-Chek WD881 Fire Suppressant Foam Concentrate

Oral -	Practically Nontoxic	(Rat LD50, Greater than 5,000 mg/kg)
Skin -	No More Than Slightly Toxic	(Rabbit LD50, Greater than 2,000 mg/kg)

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Eye Irritation -	Severely Irritating	(Rabbit 24-hr 58.0/110.0)
Skin Irritation -	Moderately Irritating	(Rabbit 24-hr 4.8/8.0)

Phos-Chek WD881 Fire Suppressant Foam Solution (1% solution in water)

Oral -	Practically Nontoxic	(Rat LD50, Greater than 5,000 mg/kg)
Skin -	No More Than Slightly Toxic	(Rabbit LD50, Greater than 2,000 mg/kg)
Eye Irritation -	Practically Non-irritating	(Rabbit 24-hr 2.0/110.0)
Skin Irritation -	Moderately Irritating	(Rabbit 4-hr 0.3/8.0)

COMPONENTS

Data from Astaris studies and/or the available scientific literature on the components of this material which have been identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200) are discussed below:

2,4-pentanediol, 2-methyl-

2,4-pentanediol, 2-methyl- is an eye irritant; contact with liquid or mists may cause damage to the eyes which are reported to heal slowly. If ingested and absorbed, central nervous system (CNS) depression may occur as evidenced by giddiness, headache, and dizziness progressing to unconsciousness and death. Organ weight changes and effects on liver and kidney tissues have been reported in rodents in repeat dosing studies. No effects were seen on fertility of male rats following repeat oral dosing.

12. ECOLOGICAL INFORMATION

The following data have been classified using the criteria adopted by the European Economic Community (EEC) for aquatic organism toxicity.

96-hr LC50 Rainbow Trout,	22 mg/l	Harmful
Data from a similar product:		
48-hr LC50 Daphnia Magna,	7.8 mg/l	Toxic
96-hr EC50 selenastrum capricornutum (algae),	7.6 mg/l	Toxic

13. DISPOSAL CONSIDERATIONS

This material when discarded is not a hazardous waste as that term is defined by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. Dispose of by incineration or recycle in accordance with local, state and federal regulations. Consult your attorney or appropriate regulatory officials for information on such disposal.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

IMDG/UN	not hazardous for transportation
ICAO/IATA	not hazardous for transportation
RID/ADR	not hazardous for transportation
Canadian TDG	not hazardous for transportation
US DOT	not hazardous for transportation

15. REGULATORY INFORMATION

TSCA Inventory:	Listed
DSL Inventory:	Listed
WHMIS Classification:	D2(B) - Materials Causing Other Toxic Effects

SARA Hazard Notification

Hazard Categories Under Title III Rules (40 CFR 370): Immediate

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Section 302 Extremely Hazardous Substances: Not Applicable

Section 313 Toxic Chemical(s): Not Applicable

CERCLA Reportable Quantity: Not applicable

California Proposition 65: Not applicable

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation and the MSDS contains all the information required by the Canadian Controlled Products Regulation.

Refer to Section 11 for OSHA/HPA Hazardous Chemical(s) and Section 13 for RCRA classification.

16. OTHER INFORMATION

	Health	Fire	Reactivity	Additional Information
Suggested NFPA Rating	2	0	0	
Suggested HMIS Rating	2	0	0	G G = Safety glasses, gloves, dust & vapor respirator

Reason for revision: Updated transport information. Supersedes MSDS dated: January 8, 2003
Product Use: Fire Suppressant

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