



MATERIAL SAFETY DATA SHEET

CONOSTAN® S-12 Blended Standards

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: CONOSTAN® S-12 Blended Standards
Synonyms: Conoco MSDS CONC019
"CONOSTAN" is a registered trademark of ConocoPhillips.
Intended Use: Instrument Calibration
Chemical Family: Petroleum hydrocarbon
Responsible Party: ConocoPhillips
PO Box 2197
Houston, TX 77252
For Additional MSDSs 580-767-3078
Technical Information: 580-767-3078

The intended use of this product is indicated above. If any additional use is known, please contact us at the Technical Information number listed.

EMERGENCY OVERVIEW

24 Hour Emergency Telephone Numbers:

Spill, Leak, Fire or Accident
Call CHEMTREC

California Poison Control System: (800) 356-3129

North America: (800)424-9300

Others: (703)527-3887 (collect)

Health Hazards/Precautionary Measures: A component is a cancer hazard. A component may be harmful to the fetus. Overexposure to a component may cause damage to the nervous system, kidneys, male reproductive system, lungs and nasal cavity. Use ventilation adequate to keep exposure below recommended limits, if any. Avoid exposure during pregnancy. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Wash thoroughly after handling.

Physical Hazards/Precautionary Measures: Keep away from all sources of ignition.

Appearance: Oily, brown
Physical form: Liquid
Odor: No distinct odor

NFPA Hazard Class:

Health: 0 (Least)
Flammability: 1 (Slight)
Reactivity: 0 (Least)

HMIS Hazard Class

Health: 2* (Moderate)
Flammability: 1 (Slight)
Physical Hazard: 0 (Least)

*Indicates possible chronic health effects.

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>HAZARDOUS COMPONENTS</u>	<u>% WEIGHT</u>	<u>EXPOSURE GUIDELINE</u>		
		<u>Limits</u>	<u>Agency</u>	<u>Type</u>
Lead Compounds	<=1	0.05 mg/m3	ACGIH	TWA

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CAS# Various		0.05 mg/m3 100 mg/m3	OSHA NIOSH	TWA IDLH
Nickel Compounds CAS# 7440-02-0	<=1	(See: Nickel, Insoluble Salts (as Ni)) (See: Nickel, Soluble Salts (as Ni))		

<u>OTHER COMPONENTS</u>	<u>% WEIGHT</u>	<u>EXPOSURE GUIDELINE</u>		
		<u>Limits</u>	<u>Agency</u>	<u>Type</u>
White Mineral Oil CAS# 8042-47-5	100	(See: Oil Mist, If Generated)		

<u>REFERENCE</u>	<u>EXPOSURE GUIDELINE</u>		
	<u>Limits</u>	<u>Agency</u>	<u>Type</u>
Nickel, Soluble Salts (as Ni) CAS# None	0.1 mg/m3 1 mg/m3 10 mg/m3	ACGIH OSHA NIOSH	TWA TWA IDLH
Nickel, Insoluble Salts (as Ni) CAS# None	0.2 mg/m3 1 mg/m3 10 mg/m3	ACGIH OSHA NIOSH	TWA TWA IDLH
Oil Mist, If Generated CAS# None	5 mg/m3 10 mg/m3 5 mg/m3 2500 mg/m3 5 mg/m3	ACGIH ACGIH OSHA NIOSH NOHSC	TWA STEL TWA IDLH TWA

The following materials are present at less than 1%:

Blended Alkylaryl Sulfonates or as Indicated, Including
 Silver Compound (% as Ag)
 Aluminum Compound (% as Al)
 Chromium Compound (% as Cr)
 Copper Compound (% as Cu)
 Iron Compound (% as Fe)
 Magnesium Compound (% as Mg)
 Sodium Compound (% as Na)
 Nickel Compound (% as Ni)
 Lead Compound (% as Pb)
 Silicon Compound (% as Si)
 Tin Compound (% as Sn)
 Titanium Compound (% as Ti)

A typical concentration of the above metal compound is 1-900 ppm of each metal.

Refer to container for exact concentration.

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

1%=10,000 PPM.

All components are listed on the TSCA inventory.

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3. HAZARDS IDENTIFICATION

Potential Health Effects:

Eye: Not known to be an eye irritant.

Skin: Not known to be a skin irritant. No harmful effects from skin absorption have been reported.

Inhalation (Breathing): No harmful effects reported.

Ingestion (Swallowing): No harmful effects reported from ingestion.

Signs and Symptoms: Effects of overexposure may include irritation of the nose and throat, irritation of the digestive tract and diarrhea.

Cancer: No information available on the cancer hazard of this material. However, a component is a possible cancer hazard (see Sections 11 and 15).

Target Organs: No data available for this material. Overexposure to a component may cause injury to the nervous system, kidney, male reproductive system, lungs and nasal cavity (see Section 11).

Developmental: No data available for this material. A component is a potential hazard to the fetus (see Section 11).

Other Comments: This material contains nickel compounds of unknown composition. Metallic nickel and certain nickel compounds may cause an allergic skin reaction with repeated contact, as well as an allergic (asthma-like) response in the lungs from breathing the material. In general, nickel compounds may be irritating to the eyes, skin, nose, throat, lungs, and digestive tract. They are not thought to be absorbed through unbroken skin. Soluble nickel compounds may cause coughing, nausea, vomiting, diarrhea, abdominal pain, bronchitis, chest pain, and pneumonitis (inflammation of the lungs) if ingested or inhaled. Metallic nickel and insoluble nickel salts are generally considered to have low acute toxicity if ingested.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders and respiratory (asthma-like) disorders.

4. FIRST AID MEASURES

Eye: If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

Skin: First aid is not normally required. However, it is good practice to wash any chemical from the skin.

Inhalation (Breathing): First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air. Seek immediate medical attention.

Ingestion (Swallowing): First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

Note To Physicians: Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

5. FIRE FIGHTING MEASURES

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Flammable Properties: Flash Point: >410°F/>210°C (COC)
OSHA Flammability Class: Not regulated
LEL/UEL%: No Data
Autoignition Temperature: No Data

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk.

Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Spilled material may be absorbed into an appropriate absorbent material.

Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).

7. HANDLING AND STORAGE

Handling: Do not wear contaminated clothing or shoes. Use good personal hygiene practices.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additional engineering controls may be required.

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Personal Protective Equipment (PPE):

Respiratory: A NIOSH certified air purifying respirator with a Type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2).

Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a NIOSH approved self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode if there is potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin: The use of gloves impervious to the specific material handled is advised to prevent skin contact and possible irritation (see manufacturers literature for information on permeability). Examples of approved materials are nitrile, neoprene.

Eye/Face: While contact with this material is not expected to cause irritation, the use of approved eye protection to safeguard against potential eye contact is considered good practice.

Other Protective Equipment: A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

Suggestions for the use of specific protective materials are based on readily available published data. Users should check with specific manufacturers to confirm the performance of their products.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Appearance: Oily, brown

Physical State: Liquid

Odor: No distinct odor

pH: not applicable

Vapor Pressure (mm Hg): Negligible

Vapor Density (air=1): Not applicable

Boiling Point/Range: >599°F / >315°C

Freezing/Melting Point: No Data

Solubility in Water: Negligible

Specific Gravity: 0.6-0.9

Percent Volatile: Negligible

Evaporation Rate (nBuAc=1): Negligible

Viscosity: 70 cSt@40°C

Bulk Density: 6.25 lbs/gal

Flash Point: >410°F / >210°C (COC)

Flammable/Explosive Limits (%): No Data

10. STABILITY AND REACTIVITY

Stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions To Avoid: Avoid all possible sources of ignition (see Sections 5 and 7).

Materials to Avoid (Incompatible Materials): Avoid contact with strong oxidizing agents.

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Hazardous Decomposition Products: Combustion can yield carbon, nitrogen and sulfur oxides and some metallic oxides.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Lead Compounds (CAS# Various)

Carcinogenicity: Chronic oral ingestion of various inorganic lead compounds resulted in increased renal tumors in laboratory animals. Lead and inorganic lead compounds have been identified as carcinogens by NTP, IARC and OSHA. Organic lead compounds have not been identified as a carcinogen by NTP, IARC, or OSHA.

Target Organ(s): Chronic exposure to organic lead compounds is associated with toxicity of the hematopoietic, vascular, male reproductive, and nervous systems, and of the kidney. Hematological effects include anemia, decreased hemoglobin, and increased urinary porphyrins. Vascular effects are manifested as high blood pressure. Neurotoxic effects may involve both sensory and motor neurons and may include encephalopathy and peripheral neuropathy. Kidney damage is characterized by nephropathy, interstitial fibrosis, and tubular damage. Effects on the male reproductive system may include decreased sperm count and motility, and testicular atrophy.

Developmental: Administration of certain organic lead compounds during pregnancy has caused developmental toxicity (neurobehavioral effects) in laboratory animals.

Nickel Compounds (CAS# 7440-02-0)

Carcinogenicity: There is sufficient evidence in humans for the carcinogenicity of nickel sulfate and for nickel compounds (sulfides and oxides) encountered in nickel refining. There is sufficient evidence in animals for the carcinogenicity of metallic nickel, nickel monoxides, nickel hydroxides and crystalline nickel sulfides, and limited evidence in animals for other nickel compounds (eg alloys, arsenides, and nickel carbonyl). Occupational exposure has been associated with cancer of the lung and nasal cavity. Nickel and nickel compounds have been identified as carcinogens by NTP and IARC.

Target Organ(s): Chronic exposure to nickel and certain nickel compounds can cause rhinitis, sinusitis, allergies and cancer of the nasal sinus cavities and lungs. Nasal polyps, perforation of the nasal septum and chronic pulmonary irritation have also been reported. There is limited evidence from laboratory animal studies that nickel sulfate and nickel chloride can adversely affect the male reproductive system.

Developmental: Administration of nickel acetate during pregnancy has resulted in birth defects in sheep, hamsters and mice. Developmental defects affecting primarily the eyes were noted in laboratory animals exposed to nickel carbonyl via inhalation during pregnancy. Administration of soluble inorganic salts of nickel during pregnancy resulted in limited evidence of developmental toxicity. Increased fetal death, decreased litter size, and reduced fetal weights were noted, but only at concentrations that also compromised the health status of the mothers. There is inconclusive evidence for the developmental toxicity of insoluble inorganic salts (eg oxides and sulfides).

Mutagenicity: Testing of various nickel compounds has produced positive results in assays for gene mutation, chromosomal aberration, and DNA damage in both bacterial and mammalian cells.

12. ECOLOGICAL INFORMATION

Not evaluated at this time

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13. DISPOSAL CONSIDERATIONS

This material, if discarded as produced, is not a RCRA "listed" hazardous waste. However, it should be fully characterized for toxicity prior to disposal (40 CFR 261). Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. Along with properly characterizing all waste materials, consult state and local regulations regarding the proper disposal of this material.

Container contents should be completely used and containers should be emptied prior to discard. Container rinsate could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

14. TRANSPORT INFORMATION

DOT Shipping Description: Not regulated

Note: Material is unregulated unless in container of 3500 gal or more then provisions of 49 CFR Part 130 apply for land shipment.

IMDG: Not regulated

IATA: Not regulated

15. REGULATORY INFORMATION

EPA SARA 311/312 (Title III Hazard Categories):

Acute Health: No
Chronic Health: Yes
Fire Hazard: No
Pressure Hazard: No
Reactive Hazard: No

SARA 313 and 40 CFR 372:

This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372:

Component	CAS Number	Weight %
Lead Compounds	Various	<=1
Nickel Compounds	7440-02-0	<=1

California Proposition 65:

Warning: This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

Component	Effect
Lead and Lead Compounds	Cancer
Nickel and Certain Nickel Compounds	Cancer

Carcinogen Identification:

This material has not been identified as a carcinogen by NTP, IARC, or OSHA. See Section 11 for carcinogenicity information of individual components, if any.

EPA (CERCLA) Reportable Quantity:

RQ #1 Nickel Compounds
1 lb equal to 100 lb, (16 gal), of this material.

Canada - Domestic Substances List: Listed

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This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION**Issue Date: 09/26/03****Previous Issue Date: 06/06/00****Revised Sections: New Format****MSDS Number: 775230****Status: Final****Disclaimer of Expressed and Implied Warranties:**

The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. **HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE.** No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.