



PURITAN PRODUCTS

Effective Date: 07/01/15
Replaces Revision: 01/01/13

NON-EMERGENCY TELEPHONE
610-866-4225

24-HOUR CHEMTREC EMERGENCY TELEPHONE
800-424-9300

SDS – SAFETY DATA SHEET

1. Identification

Product Identifier: COBALT 6% NAPHTHENATE

Synonyms: None

Chemical Formula: Not applicable for mixtures

Recommended Use of the Chemical and Restrictions On Use: Industrial Use

Manufacturer / Supplier: Puritan Products; 2290 Avenue A, Bethlehem, PA 18017 **Phone:** 610-866-4225

Emergency Phone Number: 24-Hour Chemtrec Emergency Telephone 800-424-9300

2. Hazard(s) Identification

Classification of the Substance or Mixture:

Flammable liquids (Category 2)
Acute Toxicity, Oral (Category 4)
Acute Toxicity, Inhalation (2)
Acute Toxicity, Dermal (4)
Aspiration hazard (Category 1)
Eye irritation (Category 2A)
Reproductive Toxicity (2)

WHMIS Classification: Class B2, Flammable Liquids

Label Elements: (Reference Section 16 for WHMIS 1998 Symbols)

Signal Word: Danger



Hazard Statements:

H225: Highly flammable liquid and vapor.
H304: May be fatal if swallowed and enters airways.
H312: Harmful in contact with skin.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H336: May cause drowsiness or dizziness.
H340: May cause genetic defects.
H350: May cause cancer.
H361: Suspected of damaging fertility or the unborn child.

Precautionary Statements:

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P260: Do not breathe dust / fume / gas / mist / vapors / spray.

P280: Wear protective gloves / protective clothing / eye protection / face protection.

P284: Wear respiratory protection.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor / physician.

3. Composition / Information on Ingredients

CAS Number: Not applicable for mixtures

EC Number: Not applicable for mixtures

Ingredient	CAS Number	EC Number	Percent	Hazardous
Mixed Cobalt Carboxylates*	See below	See below	55%	Yes
Mineral Spirits	8052-41-3	232-489-3	43%	Yes
Diethylene Glycol Methyl Ether	111-77-3	203-906-6	2%	Yes

*Mixed Cobalt Carboxylates	CAS Number	EC Number	Percent	Hazardous
Cobalt Neodecanoate	27253-31-2	248-373-0	Inc. Above	Yes
Cobalt Naphthenate	61789-51-3	263-064-0	Inc. Above	Yes

4. First-aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give Oxygen. Call a physician immediately.

Ingestion: Aspiration hazard. Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If the victim is drowsy or unconscious, place on left side with head down. If possible, do not leave victim unattended. Call a physician immediately.

Skin Contact: Wash thoroughly with soap and plenty of clean water. If irritation occurs, contact a physician.

Eye Contact: Flush immediately with large amounts of water and continue flushing for 15 minutes or until irritation subsides, whichever is longer.

Note to Physician: Toxic concentrations of cobalt in urine and blood are not well defined. In the general population, the 95th percentile for cobalt concentration was 8.3 ug/l in urine (National Health and Nutrition Examination Survey III.) Chelation treatments, for example, calcium disodium edetate or dimercaprol, are controversial. Contact a poison control center for current recommendations. Individuals with polymorphism in the HLA-DP gene (presence of glutamate 69 in the beta chain) may be more susceptible to cobalt toxicity.

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

5. Fire-fighting Measures

Fire: Flash point (F): 100, minimum / Autoignition Temp (F): 445 for Mineral Spirits
 OSHA Flammability Classification: Combustible Liquid-Class II

Explosion: Upper – 8.9 / Lower – 0.7 in air, % by volume for Mineral Spirits

Fire Extinguishing Media: Dry chemical, carbon dioxide, halon, or foam. Water spray is recommended to cool or protect exposed materials or structures. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters. Halon may decompose into toxic materials. Carbon dioxide can displace Oxygen. Use caution when applying halon or carbon dioxide in confined spaces. Avoid spraying water directly into storage containers due to danger of boil-over.

Special Information: During fire, a water spray can scatter flames and should be used by experienced firefighters. Firefighters should wear self-contained breathing apparatus with a full face piece operated in the positive pressure demand mode when fighting fires. In addition, wear appropriate protective equipment as conditions warrant. Isolate damage area, keep unauthorized personnel out. Stop spill / release if it can be done with minimal risk. Move undamaged containers from danger area if it can be done with minimal risk. Water spray may be useful in minimizing or dispersing vapors. 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.

Unusual Fire and Explosion Hazards: Combustible liquid. Forms combustible mixtures with air at or above the flash point. This product can accumulate static charges which can cause fire or explosion. This liquid is volatile and gives off invisible vapors. Either the liquid or vapor may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode and flash back.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental Precautions and Methods and Materials for Containment and Cleaning Up: Spilled material may be absorbed into an appropriate absorbent material. Prevent spilled material from entering sewers, storm drains, other authorized treatment drainage systems, and natural waterways. Stop spill / release if it can be done with minimal risk. Stay upwind and away from spill / release. Isolate danger and keep unauthorized personnel out. Use non-sparking tools and explosion-proof equipment. Recover by pumping (use an explosion-proof or hand pump) or with a suitable absorbent. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

Additional Action if Material is Spilled onto Surface Water Bodies: Warn occupants and shipping in surrounding and downwind areas of fire and explosion hazard and request all to stay clear. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

7. Handling and Storage

Precautions for Safe Handling and Conditions for Safe Storage, Including Any Incompatibilities: Cobalt carboxylates may cause the ignition of rags or paper goods or other oxidizable materials. Keep container closed. Handle and open containers with care. Open container slowly to relieve any pressure. Bond and ground all equipment when transferring from one vessel to another. The use of explosion-proof equipment is recommended and may be required. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Material will accumulate static charges which may cause an electrical spark (ignition source.) Use proper grounding procedures. Do NOT pressurize, cut, heat, or weld containers. Empty product containers may contain product residue. Do NOT reuse empty containers without commercial cleaning or reconditioning. "Empty" drums should be completely drained and properly bunged. All other containers should be disposed of in an environmentally safe manner and in accordance with government regulations. Do not transfer to any unlabeled container. Wash exposed skin thoroughly after handling. Do not wear contaminated clothing or shoes. Use good personal hygiene practice. For industrial use only.

Warning: Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperatures and pressures, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

Storage: Keep container(s) tightly closed. Use and store this material in a cool, dry, well-ventilated area away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Post "NO SMOKING OR OPEN FLAME." Store only in approved containers. Keep away from any incompatible material. Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

8. Exposure Controls / Personal Protection

Airborne Exposure Limits:

OSHA Permissible Exposure Limit (PEL):

Cobalt Neodecanoate: 0.1 mg/m³ (TWA), [For metal dust and fume, as Co], STEL not established

Cobalt Naphthenate: 0.1 mg/m³ (TWA), STEL not established

Mineral Spirits: 500 ppm (The manufacturer recommended exposure limit for Mineral Spirits is 100 ppm.)

Diethylene Glycol Methyl Ether: not established

ACGIH Threshold Limit Value (TLV):

Cobalt Neodecanoate: not established

Cobalt Naphthenate: not established

Mineral Spirits: 100 ppm, STEL

Diethylene Glycol Methyl Ether: not established

Ventilation System: Provide sufficient mechanical (general and / or local exhaust) ventilation to maintain exposure below TLV(S). Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved): When exposures are not adequately controlled, use respirator approved for protection from organic vapors. If workplace exposure limit(s) of product or any component is exceeded, a NIOSH approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH respirators (negative pressure type) under specified conditions (See your industrial hygienist.) Engineering or administrative controls should be implemented to reduce exposure.

Skin Protection: Wear impervious protective clothing, including boots, resistant gloves such as nitrile rubber, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and / or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: Purple color liquid

Odor: Mineral spirits odor

Odor Threshold: Not determined

pH: Not determined

Melting Point: No information found

Boiling Point / Boiling Range: > 156 – 199 C (313 - 390F) (Mineral Spirits)

Flash Point: 38C (100.4F) CC (Mineral Spirits)

Evaporation Rate (BuAC=1): Slower than ether (Mineral Spirits)

Flammability: Flammable

Upper / Lower Flammability or Explosive Limits: Upper – 8.9 / Lower – 0.7 in air, % by volume (Mineral Spirits)

Vapor Pressure (mm Hg): 2.0 at 68F (Mineral Spirits)

Vapor Density (Air=1): 4.9 (Mineral Spirits)

Relative Density: No information found

Solubility: Negligible

Partition Coefficient: n-octanol / water: No information found

Auto-ignition Temperature: 229C (445F) (Mineral Spirits)

Decomposition Temperature: No information found

Viscosity: No information found

10. Stability and Reactivity

Reactivity and / or Chemical Stability: Stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions and Conditions to Avoid: Heat, flame, ignition sources, incompatibles.

Incompatible Materials: Contact with oxidizing agents. Reducing agents.

Hazardous Decomposition Products: Carbon Dioxide, Carbon Monoxide, Various Hydrocarbons, Cobalt Oxide.

11. Toxicological Information

Acute Toxicity: There is no specific data for this product. The following information exists for Cobalt powder: Cobalt has not been shown to be carcinogenic to humans. The National Toxicological Program (NTP) does not recognize cobalt as an animal or human carcinogen. The International Agency for Research on Cancer (IARC) classifies cobalt as "possibly carcinogenic" to humans (Class 2B) based on animal studies. Refer to the IARC website (www.iarc.fr) for most recent information. ACGIH has given Cobalt and Cobalt Inorganic Compounds a rating of A3, animal carcinogen. ACGIH states that available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Workers with occupational asthma arising from cobalt powder are sensitized as may be demonstrated by a positive bronchoprovocation challenge test with cobalt chloride. However, this test is not widely available and should only be performed by physicians experienced in the procedure. Cobalt-related asthma may include early, late and dual reactions. The late reaction may appear up to 48 hours after exposure. Improvement typically occurs with cessation of exposure, such as weekends and vacations. Patch test and intra-dermal skin tests do not discriminate patients with cobalt-related asthma from controls in the general population. Cobalt-induced allergic contact dermatitis is characterized by erythematous papules occurring commonly on the hands. The prevalence of this condition in the workplace may be 10 - 15%. Most cobalt-related rashes begin in the first year of employment where cobalt is used. Risk factors include prior nickel sensitization and irritant dermatitis. 25% of nickel-sensitive individuals develop cobalt allergy compared with 5% of the general population. Sensitization to nickel and cobalt result from co-exposure rather than cross-reactivity. The diagnosis of cobalt sensitivity may be made by patch testing. However, the diagnosis of cobalt sensitivity is complicated by the fact that nickel contamination of cobalt patch tests may produce false positive skin tests for cobalt in patients who are highly sensitive to nickel.

Emergency Overview: PURPLE LIQUID WITH MILD SOLVENT ODOR. COMBUSTIBLE LIQUID. KEEP AWAY FROM HEAT AND ALL SOURCES OF IGNITION. MAY CAUSE SENSITIZATION BY SKIN CONTACT WHICH MAY PRODUCE ALLERGIC CONTACT DERMATITIS. MAY CAUSE SENSITIZATION BY INHALATION WHICH MAY PRODUCE OCCUPATIONAL ASTHMA. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. ASPIRATION HAZARD IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE.

Potential Health Effects:

Inhalation: Although no data exists for this product, Cobalt metal powder is a known allergen that produces characteristic symptoms of asthma, such as wheezing, dry cough, and labored breathing. Usually the asthma symptoms appear 4-6 hours after exposure and often worsen again later in the same day. Even later asthma reactions to inhaled Cobalt may occur up to 48 hours after exposure. Improvement typically occurs when Cobalt exposure ceases, e.g. weekends, vacations. Other Cobalt-containing compounds such as hard metal dust, but not Cobalt powder itself, are associated with subacute fibrosis alveolitis and chronic diffuse interstitial pulmonary fibrosis. Causes mild respiratory irritation. Symptoms are more typically seen at air concentrations exceeding the recommended exposure limits. Symptoms of exposure may include irritation (nose, throat, respiratory tract) and central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness, possible death.) Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage (sometimes referred to as Solvent or Painter's syndrome.) Intentional misuse by deliberately concentrating and inhaling this material may be harmful or fatal.

Ingestion: May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation and central nervous system depression. Swallowing small amounts during handling is not likely to cause harmful effects; swallowing large amounts may be harmful. Symptoms may include gastrointestinal irritation (nausea, vomiting, diarrhea,) central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness.) This material can enter the lungs during swallowing or vomiting and cause lung inflammation and / or damage. Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death.

Skin Contact: Based on data for Cobalt metal powder, may cause allergic contact dermatitis if there is prior sensitization. Most rashes associated with Cobalt occur on the hands and appear within the first year of occupational exposure to Cobalt. Exposure may cause skin irritation. Prolonged or repeated exposure may dry the skin. Symptoms may include redness, burning, drying and cracking, and skin damage. Pre-existing skin disorders may be aggravated by exposure to this material. May cause skin defatting with prolonged exposure.

Eye Contact: May cause eye irritation.

Chronic Exposure:

Mineral Spirits:

Excessive inhalation may cause dizziness, drowsiness, headache, nausea and irritation of the nose, throat and respiratory tract. Repeated contact may cause dermatitis. Aspiration into lungs may cause chemical pneumonitis.

Cobalt compounds:

May cause respiratory sensitization and an allergic skin rash. They are mildly irritating to the eyes and if ingested may cause vomiting, diarrhea and a sensation of hotness. Excessive inhalation and / or ingestion of cobalt salts may effect kidney, lungs and thyroid. IARC states that cobalt compounds are possibly carcinogenic to humans.

Aggravation of Pre-existing Conditions: Acute and chronic respiratory disorders, skin disorders, liver and kidney disorders.

Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System:) No data available.

Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System:) No data available.

Germ Cell Mutagenicity: May affect the genetic material in germ cells (sperm and eggs.)

Reproductive Toxicity: No data available.

Teratogenicity: No data available.

Aspiration Hazard: Aspiration hazard.

Numerical Measures of Toxicity: Cancer Lists: NTP Carcinogen

Ingredient	Known	Anticipated	IARC Category
Cobalt Neodecanoate (27253-31-2)	No	No	None
Cobalt Naphthenate (61789-51-3)	No	No	None
Mineral Spirits (8052-41-3)	No	No	None
Diethylene Glycol Methyl Ether (111-77-3)	No	No	None

12. Ecological Information

Ecotoxicity: No information found.

Persistence and Degradability: No information found.

Bioaccumulative Potential: No information found.

Mobility in Soil: No information found.

Other adverse effects: No information found.

13. Disposal Considerations

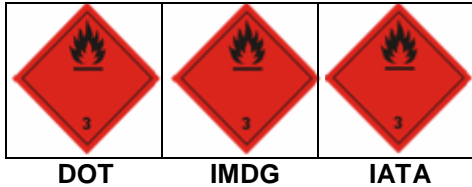
As local regulations may vary, all waste must be disposed / recycled / reclaimed in accordance with federal, state, and local environmental control regulations. This product is a RCRA hazardous waste if discarded in the produced form due to ignitibility. Empty containers must be handled with care due to material residue. Empty containers should be completely drained, properly bunged and shipped to a drum re-conditioner.

14. Transport Information

UN Number: UN1993

UN Proper Shipping Name: FLAMMABLE LIQUID, N.O.S.

Packing Group: III



Land Transport ADR/RID and GGVS/GGVE (Cross Border / Domestic)

Transport Hazard Class(es): 3

Maritime Transport IMDG/GGVSea

Transport Hazard Class(es): 3

Marine Pollutant: No

Air Transport ICAO-TI and IATA-DGR

Transport Hazard Class(es): 3

Transport in Bulk (According to Annex II of MARPOL 73/78 and the IBC Code:) Not Applicable

Special Precautions for User: No additional information

15. Regulatory Information

Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
Cobalt Neodecanoate (27253-31-2)	Yes	Yes	Yes	Yes
Cobalt Naphthenate (61789-51-3)	Yes	Yes	Yes	Yes
Mineral Spirits (8052-41-3)	Yes	Yes	Yes	Yes
Diethylene Glycol Methyl Ether (111-77-3)	Yes	Yes	Yes	Yes

Chemical Inventory Status – Part 2

Ingredient	Korea	Canada		Phil.
		DSL	NDSL	
Cobalt Neodecanoate (27253-31-2)	Yes	Yes	No	Yes
Cobalt Naphthenate (61789-51-3)	Yes	Yes	No	Yes
Mineral Spirits (8052-41-3)	Yes	Yes	No	Yes
Diethylene Glycol Methyl Ether (111-77-3)	Yes	Yes	No	Yes

Federal, State & International Regulations - Part 1

Ingredient	SARA 302		SARA 313	
	RQ	TPQ	List Chemical	Catg.
Cobalt Neodecanoate (27253-31-2)	No	No	Yes	N096
Cobalt Naphthenate (61789-51-3)	No	No	Yes	N096
Mineral Spirits (8052-41-3)	No	No	Yes	No
Diethylene Glycol Methyl Ether (111-77-3)	No	No	Yes	No

Federal, State & International Regulations - Part 2

Ingredient	RCRA		TSCA
	CERCLA	261.33	8(d)
Cobalt Neodecanoate (27253-31-2)	Yes	No	No
Cobalt Naphthenate (61789-51-3)	Yes	No	No
Mineral Spirits (8052-41-3)	No	No	No
Diethylene Glycol Methyl Ether (111-77-3)	No	No	No

Chemical Weapons Convention: No		TSCA 12(b): No		CDTA: No
SARA 311/312:	Acute: Yes	Chronic: Yes	Fire: Yes	Pressure: No
Reactivity: No		Mixture / Liquid		

California Proposition 65: This material may contain the following chemicals which are known to the State of California to cause cancer or birth defects and are subject to the requirements of California Proposition 65:

- Toluene (108-88-3) Birth Defect
- Benzene (71-43-2) Cancer, Birth Defect

Clean Air Act S112 Hazardous Air Pollutants:

- Cobalt Compounds. Benzene (71-43-2). Toluene (108-88-3)

16. Other Information

Effective Date: 07/01/15 – Added WHMIS 2015 Compliance, added WHMIS 1998 Symbols and TDG

Replaces Revision: 01/01/13 – GHS Compliant, 02/08/11 – Initial Release

WHMIS 1998 Symbols - Reference



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