1. Identification

Product identifier

CONOSTAN® S-21 Blended Standard

Recommended use of the chemical and restrictions on use

Use of the substance/mixture

Reagents and laboratory chemicals
Only for laboratory and analysis purposes.

Uses advised against

Do not use for private purposes (household).

Details of the supplier of the safety data sheet

Details of the supplier of the safety data sheet

Company name:	AnalytiChem Services, Unipessoal, Lda
Street:	Rua de Júlio Dinis 676 7º
Place:	P-4050-320 Porto
Telephone:	+351 226002917
E-mail:	info@analytichem.com
Contact person:	SDS service department
E-mail:	SDS@analytichem.com
Internet:	www.analytichem.com
Responsible Department:	SDS service department

Supplier or manufacturer details

Company name:	AnalytiChem Canada Inc. Québec, CANADA		
Street:	21800 Clark Graham Ave		
Place:	CDN-H9X 4B6 Baie-D'Urfé		
Telephone:	+1 (800) 361-6820	Telefax:	+1 (800) 253-5549
E-mail:	info@analytichem.com		
Contact person:	SDS service department		
E-mail:	SDS@analytichem.com		
Internet:	www.analytichem.com		
Responsible Department:	AnalytiChem: EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20 EU-Germany: AnalytiChem Germany, Stempelstrasse 6, 47167 Duisburg, Germany, +49 203 51 94 – 200 EU-Netherlands: AnalytiChem Netherlands, Communicatieweg 7, 3641 SG Mijdrecht, The Netherlands, +31 297 286848 UK: AnalytiChem UK, Unit 7 Launton Business Center, Murdock Road, Bicester, OX26 4XB, England, +44 1869 355 500 USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378 Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701 Australia: ORE Research & Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333		

Emergency phone number: +1 703-741-5970 (CHEMTREC)

Further Information

No data available

2. Hazard(s) identification

Classification of the chemical

Regulation (EC) No 1272/2008

Carc. 1B; H350

Full text of hazard statements: see SECTION 16.

Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

cadmium

Signal word: Danger

Pictograms:

Hazard statements

H350	May cause cancer
EUH208	Contains nickel. May produce an allergic reaction.

Precautionary statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P280	Wear protective gloves/protective clothing and eye protection/face protection.
P308+P313	If exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

Special labeling

Restricted to professional users.

Hazards not otherwise classified

No data available

3. Composition/information on ingredients

Mixtures

Relevant ingredients

CAS No	Components			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
8042-47-5	White mineral oil, petroleum			95 - < 100 %
	232-455-8			
-	Lead compounds			< 0.5 %
	-	082-001-00-6		
	Repr. 1A, Acute Tox. 4, Acute Tox. 4, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1; H360Df H332 H302 H373 H400 H410			
7440-02-0	nickel			< 1 %
	231-111-4	028-002-00-7		
	Flam. Sol. 2, Carc. 2, Skin Sens. 1, STOT RE 1, Aquatic Chronic 3; H228 H351 H317 H372 H412			
7440-43-9	cadmium			< 1 %
	231-152-8	048-002-00-0		
	Carc. 1B, Muta. 2, Repr. 2, Acute Tox. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1; H350 H341 H361fd H330 H372 H400 H410			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Components	Quantity
	Specific Conc. Limits, M-factors and ATE		
8042-47-5	232-455-8	White mineral oil, petroleum	95 - < 100 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg		
-	-	Lead compounds	< 0.5 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); oral: ATE = 500 mg/kg Repr. 2; H361f: >= 2,5 - 100 STOT RE 2; H373: >= 0,5 - 100		
7440-43-9	231-152-8	cadmium	< 1 %
	inhalation: ATE = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists)		

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

4. First-aid measures

Description of first aid measures

General information

No data available

After inhalation

Provide fresh air.

Call a physician immediately.

After contact with skin

Wash immediately with: Water, Soap

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Observe risk of aspiration if vomiting occurs.
Call a physician immediately.

Most important symptoms and effects, both acute and delayed

Gastrointestinal complaints
Pneumonia

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Foam
Carbon dioxide (CO2)
Extinguishing powder
Water

Unsuitable extinguishing media

no restriction

Specific hazards arising from the chemical

Combustible liquids
Hazardous combustion products
In case of fire may be liberated:
Carbon dioxide (CO2)
Carbon monoxide
In case of warming:
Vapors are heavier than air, spread along floors and form explosive mixtures with air.

Special protective equipment and precautions for fire-fighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Use water spray jet to protect personnel and to cool endangered containers.
Move undamaged containers from immediate hazard area if it can be done safely.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

General advice

In case of warming:
Vapors are heavier than air, spread along floors and form explosive mixtures with air.
Take precautionary measures against static discharges.

For non-emergency personnel

Provide adequate ventilation.
Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Consult an expert
Do not breathe dust/fume/gas/mist/vapors/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment (PPE): see section 8

Environmental precautions

Do not allow to enter into surface water or drains.

Methods and material for containment and cleaning up

For containment

Cover drains.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Collect in closed and suitable containers for disposal.
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear breathing apparatus if exposed to vapors/dusts/aerosols.

Reference to other sections

Safe handling: see section 7
Personal protection equipment (PPE): see section 8
Disposal: see section 13

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Read label before use. Handle and open container with care.
When using do not eat, drink, smoke, sniff. Keep container tightly closed.
Use personal protection equipment. Use extractor hood (laboratory).
Do not breathe vapor or spray.
Provide adequate ventilation.

Advice on protection against fire and explosion

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharges.
In case of warming:
Vapors are heavier than air, spread along floors and form explosive mixtures with air.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.
The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of the protective agents should be clarified with their suppliers.

Further information on handling

Take off immediately all contaminated clothing and wash it before reuse.
Draw up and observe skin protection programme.
Wash hands and face before breaks and after work and take a shower if necessary.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store in a well-ventilated place.
Keep container tightly closed.
Store in a place accessible by authorized persons only.

Hints on joint storage

TRGS 510

Further information on storage conditions

Keep cool. Protect from sunlight.

Specific end use(s)

Laboratory chemicals

8. Exposure controls/personal protection

Control parameters

Exposure limits

CAS No	Substance	ppm	mg/m³		Category	Origin
7440-43-9	Cadmium (as Cd)	-	0.005		TWA (8 h)	PEL
7440-43-9	Cadmium (total particulate)	-	0.01		TWA (8 h)	ACGIH-2025
7440-43-9	Cadmium dust (as Cd)				as low as possible	REL
-	Mineral oil, excluding metal working fluids (inhalable fraction); Pure, highly and severely refined		5		TWA (8 h)	ACGIH-2025
7440-02-0	Nickel elemental (inhalable fraction)		1.5		TWA (8 h)	ACGIH-2025
7440-02-0	Nickel metal and other compounds (as Ni)	0.015	-		TWA (8 h)	REL
7440-02-0	Nickel, metal and insoluble compounds (as Ni)	-	1		TWA (8 h)	PEL
8012-95-1	Oil mist (mineral)	-	5		TWA (8 h)	REL
		-	10		STEL (15 min)	REL
8012-95-1	Oil mist, mineral	-	5		TWA (8 h)	PEL

Biological Exposure Indices (BEI-ACGIH)

CAS No	Substance	Determinant	Value	Test material	Sampling time
7440-02-0	NICKEL	Nickel	5 µg/L	urine	Post-shift at end of workweek
7440-43-9	CADMIUM	Cadmium (creatinine)	5 µg/g	urine	Not critical

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
8042-47-5	White mineral oil, petroleum			
Worker DNEL, long-term		inhalation	systemic	160 mg/m³
Worker DNEL, long-term		dermal	systemic	220 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	35 mg/m³
Consumer DNEL, long-term		dermal	systemic	93 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	40 mg/kg bw/day

Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment

Eye/face protection

goggles

Face protection umbrella

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Take off immediately all contaminated clothing and wash it before reuse.
Wash hands and face before breaks and after work and take a shower if necessary.
Draw up and observe skin protection programme.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation
The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. A respiratory protection program that meets OSHA's 29 CFR 1910.134 requirements must be followed whenever workplace conditions warrant a respirator's use.

Thermal hazards

No data available

Environmental exposure controls

Do not allow to enter into surface water or drains.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	Liquid
Color:	brown
Odor:	like: Hydrocarbons
Odour threshold:	No data available
Melting point/freezing point:	No data available
Boiling point or initial boiling point and boiling range:	>315 °C
Flammability:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	>210 °C
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH-Value:	No data available
Viscosity / kinematic:	70 mm²/s
Water solubility:	No data available

Solubility in other solvents

No data available

Dissolution rate:	No data available
Partition coefficient n-octanol/water:	No data available
Dispersion stability:	No data available
Vapor pressure:	No data available
Vapor pressure:	No data available
Density (at 15,6 °C):	0,6-0,9 g/cm³
Relative density:	No data available
Bulk density:	No data available

Relative vapour density:	No data available
Particle characteristics:	No data available

Other information

Information with regard to physical hazard classes

Explosive properties

In case of warming:

Vapors are heavier than air, spread along floors and form explosive mixtures with air.

Sustained combustibility:	No data available
Self-ignition temperature	
Solid:	No data available
Gas:	No data available

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	100%
Solid content:	No data available
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
	No data available
Viscosity / dynamic:	No data available
Flow time:	No data available

Further Information

No data available

10. Stability and reactivity

Reactivity

In case of warming:

Vapours may form explosive mixtures with air.

Chemical stability

The product is stable under storage at normal ambient temperatures.

Possibility of hazardous reactions

Oxidising agent

Conditions to avoid

Heat

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Incompatible materials

No data available

Hazardous decomposition products

in case of fire, see:

SECTION 5: Fire fighting measures

Further information

No data available

11. Toxicological information

Information on toxicological effects

Toxicocinetics, metabolism and distribution

No data available

Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 50 mg/l; ATE (inhalation dust/mist) > 12,5 mg/l

CAS No	Components				
	Exposure route	Dose	Species	Source	Method
8042-47-5	White mineral oil, petroleum				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1987)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rabbit	Study report (1987)	OECD Guideline 402
-	Lead compounds				
	oral	ATE 500 mg/kg			
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			
7440-43-9	cadmium				
	inhalation vapour	ATE 0,5 mg/l			
	inhalation dust/mist	ATE 0,05 mg/l			

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.
slightly irritant but not relevant for classification.
Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).
May cause respiratory irritation.

Sensitizing effects

Based on available data, the classification criteria are not met.
Contains nickel. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

May cause cancer (cadmium)
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure

Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Route(s) of Entry

No data available

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

Information on other hazards

Endocrine disrupting properties

No data available

Other information

No data available

Further information

Gastrointestinal complaints

Pneumonia

12. Ecological information

Ecotoxicity

Based on available data, the classification criteria are not met.

CAS No	Components						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
8042-47-5	White mineral oil, petroleum						
	Acute fish toxicity	LC50 mg/l	> 10000	96 h	Lepomis macrochirus	REACh Registration Dossier	Method: other: procedure as detailed in
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna	Study report (2008)	OECD Guideline 202

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Partition coefficient n-octanol/water

CAS No	Components	Log Pow
8042-47-5	White mineral oil, petroleum	> 6

Mobility in soil

No data available

Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

Other adverse effects

Do not allow to enter into surface water or drains.

Further information

Avoid release to the environment.

13. Disposal considerations

Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Send to a physico-chemical treatment facility under observation of official regulations.
Do not allow to enter into surface water or drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.
Waste codes/waste designations according to EWC/AVV

14. Transport information

Land transport (ADR/RID)

UN number or ID number:	No dangerous good in sense of this transport regulation.
UN proper shipping name:	No dangerous good in sense of this transport regulation.
Transport hazard class(es):	No dangerous good in sense of this transport regulation.
Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

UN number or ID number:	No dangerous good in sense of this transport regulation.
UN proper shipping name:	No dangerous good in sense of this transport regulation.
Transport hazard class(es):	No dangerous good in sense of this transport regulation.
Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

UN number or ID number:	No dangerous good in sense of this transport regulation.
UN proper shipping name:	No dangerous good in sense of this transport regulation.
Transport hazard class(es):	No dangerous good in sense of this transport regulation.
Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

UN number or ID number:	No dangerous good in sense of this transport regulation.
UN proper shipping name:	No dangerous good in sense of this transport regulation.
Transport hazard class(es):	No dangerous good in sense of this transport regulation.
Packing group:	No dangerous good in sense of this transport regulation.

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

Special precautions for user

No dangerous good in sense of this transport regulation.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No dangerous good in sense of this transport regulation.

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):

cadmium

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 23, Entry 27, Entry 63, Entry 75

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions:	Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing. Observe employment restrictions for women of child-bearing age.
Water hazard class (D):	3 - highly hazardous to water

16. Other information

Abbreviations and acronyms

Flam. Sol. 2: Flammable solids
Acute Tox. 2: Acute toxicity
Acute Tox. 4: Acute toxicity
Skin Sens. 1: Skin sensitisation
Muta. 2: Germ cell mutagenicity
Carc. 1B: Carcinogenicity
Carc. 2: Carcinogenicity
Repr. 1A: Reproductive toxicity
Repr. 2: Reproductive toxicity
STOT RE 1: Specific target organ toxicity repeated or prolonged exposure
STOT RE 2: Specific target organ toxicity repeated or prolonged exposure
Aquatic Acute 1: Acute aquatic hazard
Aquatic Chronic 1: Chronic aquatic hazard
Aquatic Chronic 3: Chronic aquatic hazard

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008

Classification	Classification procedure
Carc. 1B; H350	Calculation method

Relevant H statements (full text)

H228	Flammable solid
H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H330	Fatal if inhaled
H332	Harmful if inhaled
H341	Suspected of causing genetic defects
H350	May cause cancer
H351	Suspected of causing cancer
H360Df	May damage the unborn child; suspected of damaging fertility
H361fd	Suspected of damaging fertility; suspected of damaging the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
EUH208	Contains nickel. May produce an allergic reaction.

Other data

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.
The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.
The receiver of our product is singularly responsible for adhering to existing laws and regulations.
Provide appropriate information, instructions and training to users.

Identified uses

No	Short title	LCS	SU	PC	PROC	ERC	AC	TF	Specification
1	PC21	-	-	21	15	-	-	-	
2	PROC15	-	-	-	15	-	-	-	

LCS: Life cycle stages
SU: Sectors of use
PC: Product categories
PROC: Process categories
ERC: Environmental release categories
AC: Article categories
TF: Technical functions

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)