

INTATRADE
 MATERIAL SAFETY DATA SHEET
 according to 1907/2006/EC, Article 31

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1. IDENTIFICATION OF SUBSTANCE AND OF THE COMPANY

Product name: **Tricarbonylnitrozylcobalt**
 Product code: EO00844
 Company: INTATRADE Chemicals GmbH
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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
 Flam. Liq. 2 H225 Highly flammable liquid and vapor.
 Acute Tox. 3 H301 Toxic if swallowed.
 Acute Tox. 3 H311 Toxic in contact with skin.
 Acute Tox. 3 H331 Toxic if inhaled.
 Carc. 2 H351 Suspected of causing cancer.

GHS label elements



Hazard pictograms
 Signal word

Danger

The substance is classified and labeled according to the Globally Harmonized System (GHS).
 Hazard statements
 H225 Highly flammable liquid and vapor.
 H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
 H351 Suspected of causing cancer.
 Precautionary statements
 P231 Handle under inert gas.
 P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P422 Store contents under inert gas.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:
 NFPA ratings (scale 0 - 4)

Health = 2
 Fire = 3
 Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = *2
 Fire = 3
 Reactivity = 0

Other hazards

Results of PBT and vPvB assessment
 PBT: Not applicable.
 vPvB: Not applicable.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization:	Substances
CAS No.	14096-82-3
Identification number(s)	EC number: 237-945-5

4. FIRST-AID MEASURES

Description of first aid measures	
General information:	Immediately remove any clothing soiled by the product. Remove breathing apparatus only after contaminated clothing have been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration.
After inhalation:	Supply fresh air or oxygen; call for doctor. In case of unconsciousness place patient stably in side position for transportation.
After skin contact:	Immediately wash with water and soap and rinse thoroughly.
After eye contact:	Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing:	Do not induce vomiting; immediately call for medical help.
Information for doctor:	Most important symptoms and effects, both acute and delayed No further relevant information available.
Indication of any immediate medical attention and special treatment needed	No further relevant information available.

5. FIRE-FIGHTING MEASURES

Extinguishing media	
Suitable extinguishing agents:	CO ₂ , extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
For safety reasons unsuitable extinguishing agents:	Water with full jet
Special hazards arising from the substance or mixture	No further relevant information available.
Advice for firefighters	
Protective equipment:	Mouth respiratory protective device.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Wear protective equipment. Keep unprotected persons away.
Environmental precautions:	Prevent seepage into sewage system, workpits and cellars.
Methods and material for containment and cleaning up:	Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.
Reference to other sections	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.
Protective Action Criteria for Chemicals	
PAC-1:	Substance is not listed.
PAC-2:	Substance is not listed.
PAC-3:	Substance is not listed.

7. HANDLING AND STORAGE

Handling:	Handle under inert gas.
Precautions for safe handling	Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care. Prevent formation of aerosols.
Information about protection against explosions and fires:	Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Keep respiratory protective device available.
Conditions for safe storage, including any incompatibilities	
Storage:	Keep cool. Store contents under inert gas.
Requirements to be met by storerooms and receptacles:	Store in a cool location.
Information about storage in one common storage facility:	Not required.
Further information about storage conditions:	Keep receptacle tightly sealed. Store in cool, dry conditions in well sealed receptacles.
Recommended storage temperature:	Store at temperatures not exceeding -18 °C. Keep cool.
Specific end use(s)	No further relevant information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems:	No further data; see item 7.
Control parameters	
Components with limit values that require monitoring at the workplace:	Not required.
Additional information:	The lists that were valid during the creation were used as basis.
Exposure controls	Personal protective equipment:
General protective and hygienic measures:	Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Store protective clothing separately. Avoid contact with the eyes and skin.
Breathing equipment:	A NIOSH approved respirator in accordance with 29 CFR 1910.134.
Protection of hands:	
Protective gloves	The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves	The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Penetration time of glove material	The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection:	Tightly sealed goggles

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	
Form:	Liquid
Color:	Dark red
Odor:	Acrid
Odor threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Undetermined.

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Boiling point/Boiling range:	50 °C (122 °F)
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not determined.
Ignition temperature:	
Decomposition temperature:	Not determined.
Auto igniting:	Not determined.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density at 20 °C (68 °F):	1.47 g/cm ³ (12.26715 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
Partition coefficient	
(n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
Organic solvents:	0.0 %
VOC content:	0.0 g/l / 0.00 lb/gl
Other information	No further relevant information available.

10. STABILITY AND REACTIVITY

Reactivity	No further relevant information available.
Chemical stability	
Thermal decomposition / conditions to be avoided:	No decomposition if used according to specifications.
Possibility of hazardous reactions	No dangerous reactions known.
Conditions to avoid	No further relevant information available.
Incompatible materials:	No further relevant information available.
Hazardous decomposition products:	No dangerous decomposition products known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	
Primary irritant effect:	
on the skin:	No irritant effect.
on the eye:	No irritating effect.
Sensitization:	No sensitizing effects known.
Additional toxicological information:	Carcinogenic categories
IARC (International Agency for Research on Cancer)	2B
NTP (National Toxicology Program)	Substance is not listed.
OSHA-Ca (Occupational Safety & Health Administration)	Substance is not listed.

12. ECOLOGICAL INFORMATION

Toxicity	
Aquatic toxicity:	No further relevant information available.
Persistence and degradability	No further relevant information available.
Behavior in environmental systems:	
Bioaccumulative potential	No further relevant information available.
Mobility in soil	No further relevant information available.

Additional ecological information:

General notes:	Not known to be hazardous to water.
Results of PBT and vPvB assessment	
PBT:	Not applicable.
vPvB:	Not applicable.
Other adverse effects	No further relevant information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods	
Recommendation:	Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Uncleaned packagings:	Recommendation: Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

UN-Number	
DOT, IMDG, IATA	UN1992
UN proper shipping name	
DOT	Flammable liquids, toxic, n.o.s.
IMDG, IATA	FLAMMABLE LIQUID, TOXIC, N.O.S.
Transport hazard class(es)	
DOT	Class 3 Flammable liquids Label 3, 6.1
IMDG	Class 3 Flammable liquids Label 3/6.1
IATA	Class 3 Flammable liquids Label 3 (6.1)
Packing group	
DOT, IMDG, IATA	II
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Warning: Flammable liquids
EMS Number:	F-E,S-D
Stowage Category	B
Stowage Code	SW2 Clear of living quarters.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT	Quantity limitations On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
IMDG	Limited quantities (LQ) 1L Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1992 FLAMMABLE LIQUIDS, TOXIC, N.O.S., 3 (6.1), II

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture	
Sara	Section 355 (extremely hazardous substances): Substance is not listed.
Section 313 (Specific toxic chemical listings):	Substance is listed.
TSCA (Toxic Substances Control Act):	Substance is not listed.
Proposition 65	Chemicals known to cause cancer: Substance is not listed.

Carcinogenic categories

Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

Chemicals known to cause developmental toxicity:

Substance is not listed.

EPA (Environmental Protection Agency)

Substance is not listed.

TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Intatrade Chemicals GmbH shall not be held liable for any damage resulting from handling or from contact with the above product.