



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: **4,4'-Bipyridine**
Product code: IS03110
Company: INTATRADE Chemicals GmbH
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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 GHS06 skull and crossbones
Acute Tox. 3 H301 Toxic if swallowed.
Acute Tox. 3 H311 Toxic in contact with skin.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC T; Toxic
R25: Toxic if swallowed.
Xn; Harmful
R21: Harmful in contact with skin.

Label elements

Labelling according to Regulation (EC) No 1272/2008 The substance is classified and labelled according to the CLP regulation.



GHS06

Hazard pictograms

Signal word

Danger

Hazard statements

H301 Toxic if swallowed.
H311 Toxic in contact with skin.

Precautionary statements

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P361 Remove/Take off immediately all contaminated clothing.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P321 Specific treatment.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS-No.: 553-26-4
EC-No.: 209-036-3

4. FIRST AID MEASURES

General information	Instantly remove any clothing soiled by the product. In case of irregular breathing or respiratory arrest provide artificial respiration.
After inhalation	Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. Seek immediate medical advice.
After skin contact	Instantly wash with water and soap and rinse thoroughly. Seek immediate medical advice.
After eye contact	Rinse opened eye for several minutes under running water. Then consult doctor.
After swallowing	Do not induce vomiting; instantly call for medical help. Seek immediate medical advice.

5. FIREFIGHTING MEASURES

Suitable extinguishing agents	Use carbon dioxide, extinguishing powder or foam. Water may be ineffective but may be used for cooling exposed containers.
Special hazards arising from the substance or mixture	Can be released in case of fire: Carbon monoxide and carbon dioxide Nitrogen oxides (NO _x) Hydrogen cyanide (HCN)
Advice for firefighters	Protective equipment: Wear self-contained breathing apparatus. Wear full protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation
Environmental precautions:	Do not allow material to be released to the environment without proper governmental permits.
Methods and material for containment and cleaning up:	Dispose of 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 information on disposal.

7. HANDLING AND STORAGE

Handling	
Precautions for safe handling	Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation/exhaustion at the workplace.
Information about protection against explosions and fires:	Keep ignition sources away - Do not smoke.
Conditions for safe storage, including any incompatibilities	
Storage	
Requirements to be met by storerooms and containers:	No special requirements.
Information about storage in one common storage facility:	Store away from oxidizing agents.
Further information about storage conditions:	Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Store in a locked cabinet or with access restricted to technical experts or their assistants.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Control parameters	Components with critical values that require monitoring at the workplace: Not required.
Additional information:	No data
Exposure controls	Personal protective equipment
General protective and hygienic measures	The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin.
Breathing equipment:	Use breathing protection with high concentrations.
Eye protection:	Face protection Safety glasses
Body protection:	Protective work clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	
Form:	Crystalline
Colour:	White
Smell:	Pungent
Odour threshold:	Not determined.
pH-value (4.5 g/l) at 20°C:	11
Change in condition	
Melting point/Melting range:	111-114°C
Boiling point/Boiling range:	304-305°C
Sublimation temperature / start:	Not determined
Flash point:	Not applicable
Inflammability (solid, gaseous)	Not determined.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Self-inflammability:	Not determined.
Danger of explosion:	Product is not explosive.
Critical values for explosion:	
Lower:	Not determined
Upper:	Not determined
Steam pressure:	Not applicable.
Density	Not determined
Relative density	Not determined.
Vapour density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water at 20°C:	4.5 g/l
Segregation coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not applicable.
kinematic:	Not applicable.
Other information	No further relevant information available.

10. STABILITY AND REACTIVITY

Reactivity	Chemical stability
Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.
Possibility of hazardous reactions	No dangerous reactions known

Incompatible materials: Water/moisture
Oxidizing agents
Hazardous decomposition products: Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Hydrogen cyanide (prussic acid)

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity: LD/LC50 values that are relevant for classification:
Oral LD50 172 mg/kg (rat)
Dermal LD50 400-800 mg/kg (rabbit)

Primary irritant effect:
on the skin: The product is not skin irritating.
on the eye: May cause irritation

Sensitization: No sensitizing effect known.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
Danger by skin resorption.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12. ECOLOGICAL INFORMATION

Toxicity

Acquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Behaviour in environmental systems:

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Additional ecological information:

General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
Do not allow material to be released to the environment without proper governmental permits.

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: Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)

ADR/RID-GGVS/E Class: 6.1 (T2) Toxic substances.

Kemler Number: 60

UN-Number: 2811

Packaging group: III

Label: 6.1

UN proper shipping name: 2811 TOXIC SOLID, ORGANIC, N.O.S. (4,4'-Bipyridine)

Limited quantities (LQ) LQ9

Transport category	2
Tunnel restriction code	E
Maritime transport IMDG/GGVSea:	
IMDG/GGVSea Class:	6.1
UN Number:	2811
Label	6.1
Packaging group:	III
Marine pollutant:	No
Correct technical name:	TOXIC SOLID, ORGANIC, N.O.S. (4,4'-Bipyridine)

Air transport ICAO-TI and IATA-DGR:	
ICAO/IATA Class:	6.1
UN/ID Number:	2811
Label	6.1
Packaging group:	III
Correct technical name:	TOXIC SOLID, ORGANIC, N.O.S. (4,4'-Bipyridine)

UN "Model Regulation":	UN2811, TOXIC SOLID, ORGANIC, N.O.S., 6.1, III
Special precautions for user	Warning: Toxic substances.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

15. REGULATORY INFORMATION

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

Labelling according to Regulation (EC) No 1272/2008	The substance is classified and labelled according to the CLP regulation.
Hazard pictograms	GHS06
Signal word	Danger
Hazard statements	H301 Toxic if swallowed. H311 Toxic in contact with skin.
Precautionary statements	P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P361 Remove/Take off immediately all contaminated clothing. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P321 Specific treatment. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
National regulations	
Information about limitation of use:	Employment restrictions concerning young persons must be observed. For use only by technically qualified individuals.
Water hazard class:	Water hazard class 1 (Self-assessment): slightly hazardous for water.
Chemical safety assessment:	A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

Warranty

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.