

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** SDS
- **Article number:** 362363
- **CAS Number:** 151-21-3
- **EC number:** 205-788-1
- **Registration number** 01-2119489461-32-XXXX
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use**
 - SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
 - SU19 Building and construction work
- **Process category**
 - PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
 - PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
 - PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
 - PROC4 Chemical production where opportunity for exposure arises
 - PROC5 Mixing or blending in batch processes
 - PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
 - PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
 - PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
 - PROC13 Treatment of articles by dipping and pouring
 - PROC14 Tableting, compression, extrusion, pelletisation, granulation
 - PROC15 Use as laboratory reagent
- **Environmental release category** ERC2 Formulation into mixture
- **Application of the substance / the mixture**
 - Laboratory chemical
 - Chemical for various applications
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 - AppliChem GmbH
 - Ottoweg 4
 - D-64291 Darmstadt
- Tel.: +49 (0)6151 93570
 Fax.: +49 (0)6151 935711
 msds@applichem.com
- **Further information obtainable from:** Dept. Compliance
- **1.4 Emergency telephone number:** +49(0)6151 93570 (Inside normal business hours)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

Flam. Sol. 1	H228 Flammable solid.
Acute Tox. 4	H302 Harmful if swallowed.
Acute Tox. 4	H332 Harmful if inhaled.
Skin Irrit. 2	H315 Causes skin irritation.

(Contd. on page 2)

Trade name: SDS

(Contd. of page 1)

Eye Dam. 1 H318 Causes serious eye damage.
STOT SE 3 H335 May cause respiratory irritation.
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

• **2.2 Label elements**

• **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

• **Hazard pictograms**



GHS02 GHS05 GHS07

• **Signal word** Danger

• **Hazard statements**

H228 Flammable solid.
H302+H332 Harmful if swallowed or if inhaled.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

• **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

• **2.3 Other hazards**

• **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

• **3.1 Chemical characterisation: Substances**

• **CAS No. Description**

151-21-3 SDS

• **Identification number(s)**

• **EC number:** 205-788-1

SECTION 4: First aid measures

• **4.1 Description of first aid measures**

• **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Involve doctor immediately.

• **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

(Contd. on page 3)

Trade name: SDS

(Contd. of page 2)

- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
Immediately remove any clothing soiled by the product.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
Call a doctor immediately.
- **After swallowing:**
Rinse out mouth.
make victim drink water (maximum of 2 drinking glasses)
Seek medical treatment.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
Combustible.
Forms explosive mixtures with air on intense heating.
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
sulfur oxides (SO₂, SO₃)
)
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Avoid formation of dust.
Do not inhale dust.
Wear protective equipment. Keep unprotected persons away.
Avoid substance contact.
Ensure adequate ventilation
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Avoid generation of dusts.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Clean up affected area.
- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Thorough dedusting.

(Contd. on page 4)

Trade name: SDS

(Contd. of page 3)

- Ensure good ventilation/exhaustion at the workplace.
Any unavoidable deposit of dust must be regularly removed.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
 - **7.2 Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:**
Keep receptacles tightly sealed.
Store only in the original receptacle.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
Keep away from open flames, hot surfaces and sources of ignition.
Keep container tightly sealed.
 - **Recommended storage temperature:** +15 - +25 °C
 - **Storage class:** 4.1 B
 - **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.

• DNELs

Oral	Long-term - systemic effects, general population	24 mg/kg
Dermal	Long-term - local effects, worker	4060 mg/kg
	Long term - systemic effects, general population	2440 mg/kg
Inhalative	Long-term - systemic effects, worker	285 mg/m3
	Long-term - systemic effects, general population	85 mg/m3

• PNECs

Aquatic compartment - freshwater	0.137 mg/L
Aquatic compartment - marine water	0.0137 mg/L
Aquatic compartment - water, intermittent releases	0.055 mg/L
Aquatic compartment - sediment in freshwater	4.82 mg/kg
Aquatic compartment - sediment in marine water	0.482 mg/kg
Terrestrial compartment - soil	0.882 mg/kg
Sewage treatment plant	1084 mg/L

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 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.
Vacuum clean contaminated clothing. Do not blow or brush off contamination.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
Required when dusts are generated.
Filter P2

(Contd. on page 5)

Trade name: SDS

(Contd. of page 4)

• **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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.

• **For the permanent contact gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Value for the permeation: Level ≥ 480 min

• **As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Value for the permeation: Level ≥ 480 min

• **Eye protection:**



Tightly sealed goggles

• **Body protection:**

Use protective suit.

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

SECTION 9: Physical and chemical properties

• **9.1 Information on basic physical and chemical properties**

• **General Information**

• **Appearance:**

Form:

Solid in various forms

Colour:

Cream coloured

• **Odour:**

Characteristic

• **Odour threshold:**

Not determined.

• **pH-value:**

7.5-9

• **Change in condition**

Melting point/freezing point:

205 °C

Initial boiling point and boiling range: Undetermined.

• **Flash point:**

170 °C

• **Flammability (solid, gas):**

Highly flammable.

• **Ignition temperature:**

Decomposition temperature:

380 °C

• **Auto-ignition temperature:**

Not determined.

• **Explosive properties:**

Not determined.

(Contd. on page 6)

Trade name: SDS

(Contd. of page 5)

- | | |
|---|--|
| · Explosion limits: | |
| Lower: | Not determined. |
| Upper: | Not determined. |
| · Vapour pressure: | Not applicable. |
| · Density: | Not determined. |
| · Bulk density at 20 °C: | 500-700 kg/m ³ |
| · Relative density | Not determined. |
| · Vapour density | Not applicable. |
| · Evaporation rate | Not applicable. |
| · Solubility in / Miscibility with water at 20 °C: | 150 g/l |
| · Partition coefficient: n-octanol/water: | Not determined. |
| · Viscosity: | |
| Dynamic: | Not applicable. |
| Kinematic: | Not applicable. |
| · 9.2 Other information | No further relevant information available. |

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No dangerous reactions known.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Heating
- **10.3 Possibility of hazardous reactions** Reacts with strong oxidising agents.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
Exothermic reactions with:
strong oxidants
- **10.6 Hazardous decomposition products:** In the event of fire: See chapter 5

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed or if inhaled.
- **LD/LC50 values relevant for classification:**
Quantitative data on the toxicological effect of this product are not available.

· Components	Type	Value	Species
Oral	LD50	1288 mg/kg (rat)	
Dermal	LD50	>2000 mg/kg (rabbit)	

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **After inhalation:** Irritant to skin and mucous membranes.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause respiratory irritation.

(Contd. on page 7)

Trade name: SDS

(Contd. of page 6)

- **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.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**


Type of test	Effective concentration	Method	Assessment
EC50	>100 mg/l (Aquatic plants) 1-10 mg/l (Aquatic Invertebrata)		
EC0	>100 mg/l (micro-organisms)		
LC50	10-100 mg/l (fish)		

- **12.2 Persistence and degradability** The product is easily biodegradable.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Chemicals must be disposed of in compliance with the respective national regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:**
Disposal must be made according to official regulations.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

· 14.1 UN-Number	
· ADR, IMDG, IATA	UN1325
· 14.2 UN proper shipping name	
· ADR, IMDG, IATA	FLAMMABLE SOLID, ORGANIC, N.O.S. (SDS)
· 14.3 Transport hazard class(es)	
· ADR, IMDG, IATA	
	
· Class	4.1 Flammable solids, self-reactive substances and solid desensitised explosives.
· Label	4.1

(Contd. on page 8)

Trade name: SDS

(Contd. of page 7)

· 14.4 Packing group · ADR, IMDG, IATA	II
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category	Warning: Flammable solids, self-reactive substances and solid desensitised explosives. 40 F-A,S-G B
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 1325 FLAMMABLE SOLID, ORGANIC, N.O.S. (SDS), 4.1, II

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 40
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Dept. Compliance
- **Contact:** Mr. Th. Stöckle
- **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Sol. 1: Flammable solids – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

(Contd. on page 9)

Trade name: SDS

(Contd. of page 8)

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

- * **Data compared to the previous version altered.**

Annex: Exposure scenario

- **Short title of the exposure scenario** Formulation and packing/repacking of substances and mixtures
- **Sector of Use** SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
- **Process category**
 - PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
 - PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
 - PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
 - PROC4 Chemical production where opportunity for exposure arises
 - PROC5 Mixing or blending in batch processes
 - PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
 - PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
 - PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
 - PROC13 Treatment of articles by dipping and pouring
 - PROC14 Tableting, compression, extrusion, pelletisation, granulation
 - PROC15 Use as laboratory reagent
- **Environmental release category** ERC2 Formulation into mixture
- **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
- **Conditions of use**
- **Duration and frequency** 5 workdays/week.
- **Physical parameters**
- **Physical state** Solid
- **Concentration of the substance in the mixture** Raw material.
- **Other operational conditions**
- **Other operational conditions affecting environmental exposure** No special measures required.
- **Other operational conditions affecting worker exposure**
 - Avoid contact with eyes.
 - Avoid contact with the skin.
 - Avoid breathing particles.
 - Take precautionary measures against static discharge.
 - Keep away from sources of ignition - No smoking.
- **Other operational conditions affecting consumer exposure** No special measures required.
- **Other operational conditions affecting consumer exposure during the use of the product**
Not applicable.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures** No special measures required.
- **Technical protective measures**
 - Provide explosion-proof electrical equipment.
 - Ensure that suitable extractors are available on processing machines
- **Personal protective measures**
 - Do not inhale dust / smoke / mist.
 - Avoid contact with the skin.
 - Avoid contact with the eyes.
 - Tightly sealed goggles
 - Required when dusts are generated.
 - Filter P2

(Contd. on page 10)

Trade name: SDS

(Contd. of page 9)

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Measures for consumer protection** Ensure adequate labelling.

- **Environmental protection measures**

- **Water** No special measures required.

- **Disposal measures** Ensure that waste is collected and contained.

- **Disposal procedures**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Waste type** Partially emptied and uncleaned packaging

- **Exposure estimation**

- **Worker (dermal)**

The exposure estimation was carried out in accordance with ECETOC TRA.

The calculated value is smaller than the DNEL.

- **Worker (inhalation)**

The exposure estimation was carried out in accordance with ECETOC TRA.

The calculated value is smaller than the DNEL.

- **Consumer** Not relevant for this Exposure Scenario.

- **Guidance for downstream users** No further relevant information available.

GB