Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 02.07.2011 *Revision: 06.01.2013*

* 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name RX3**
- **Article number:** 74120/74121
- **CAS Number:**
6153-56-6
- **EINECS Number:**
205-634-3
- **Index number:**
607-006-00-8
- **REACh-Registration number** 01-2119534576-33
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** Basic chemical (without special defined application)

- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bungard Elektronik GmbH & Co. KG Rilkestraße 1 51570 Windeck
Telefax +49 2292/6175
Telefon +49 2292/5036
E-Mail: info@bungard.de
Internet:www.bungard.de
- **Emergency telephone number:**
Poison Control Center, Mainz
Tel. 00 49 / 61 31 / 19 240

* 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Eye Dam. 1 H318 Causes serious eye damage.
Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H312 Harmful in contact with skin.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Xn; Harmful
R21/22: Harmful in contact with skin and if swallowed.
Xi; Irritant
R41: Risk of serious damage to eyes.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**

GHS05 GHS07

- **Signal word** Danger
- **Hazard statements**
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H318 Causes serious eye damage.

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- ***Precautionary statements***

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P264	Wash thoroughly after handling.
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.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

- ***Other hazards*** Risk of dust explosion
- ***Results of PBT and vPvB assessment***
- ***PBT:*** Not applicable.
- ***vPvB:*** Not applicable.

3 Composition/information on ingredients

- ***Chemical characterization: Substances***
- ***CAS No. Designation:***
6153-56-6 oxalic acid

- ***Identification no(s):***
- ***EINECS no.:*** 205-634-3
- ***Index number:*** 607-006-00-8

4 First aid measures

- ***Description of first aid measures***
- ***General advice:***
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- ***After inhalation***
After inhaling the product-dust, breathe in plenty of fresh air.
Consult a doctor.
Keep warm, position comfortably.
- ***After skin contact***
Remove contaminated clothing immediately. Wash affected areas with plenty of water und soap. If irritation continues, contact a doctor.
- ***After eye contact*** Rinse immediately opened eye for several minutes under running water. Then consult doctor.
- ***After swallowing***
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; instantly call for medical help.
- ***Information for doctor***
- ***Most important symptoms and effects, both acute and delayed***
Inhalation of dust may cause irritation of respiratory tracts.

5 Firefighting measures

- ***Extinguishing media***
- ***Suitable extinguishing agents***
CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

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- ***Special hazards arising from the substance or mixture***
  Formation of formic acid and carbon dioxide in case of fire or thermal decomposition. Formation of carbon monoxide and carbon dioxide in case of fire.
- ***Advice for firefighters***
- ***Protective equipment:*** *Wear full protective suit with self-contained breathing apparatus.*
- ***Additional information***
  Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- ***Personal precautions, protective equipment and emergency procedures***
  Wear protective equipment. Keep unprotected persons away.
  Keep away from ignition sources. Take affected persons out of danger area.
- ***Environmental precautions:***
  Do not allow to enter drainage system, surface or ground water.
  Damp down dust with water spray jet.
  If large amounts are released, the authorities must be informed.
- ***Methods and material for containment and cleaning up:***
  Pick up mechanically and rinse the remainder with water. Avoid dust development. Place in suitable container and send to be recycled or disposed (taking item 13 into account).
- ***Reference to other sections***
  See Section 8 for information on personal protection equipment.

7 Handling and storage

- ***Handling***
- ***Precautions for safe handling***
  Avoid contact with eyes and skin.
  Prevent formation of dust.
  Provide suction extractors if dust is formed.
  Ensure good ventilation/exhaustion at the workplace.
- ***Information about protection against explosions and fires:***
  Organic solids: dust can form an explosive mixture with air.

- ***Conditions for safe storage, including any incompatibilities***
- ***Storage*** *Keep containers tightly closed. Store in cool, dry conditions.*
- ***Requirements to be met by storerooms and containers:***
  Keep container tightly closed and dry
  Observe official regulations on storage and handling of water harzardous substances
- ***Information about storage in one common storage facility:***
  Do not store together with alkalis (caustic solutions).
  Store away from oxidizing agents.
- ***Further information about storage conditions:***
  Keep container tightly sealed.
  Store under dry conditions.
- ***Storage class*** *11 (VCI - Konzept, 2007)*

8 Exposure controls/personal protection

- ***Additional information about design of technical systems:*** *In case of dust development, suction is needed.*

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- ***Control parameters***
- ***Components with critical values that require monitoring at the workplace:*** *Not required.*

- ***DNELs***		
Dermal	*DNEL (population)*	*0.35 mg/cm² (Acute - local effects)*
		1.14 mg/kg bw/day (Long-term - systemic effects)
	DNEL (worker)	*0.69 mg/cm² (Acute - local effects)*
		2.29 mg/kg bw/day (Long-term - systemic effects)
Inhalative	*DNEL (population)*	*1.14 mg/m³ (Long-term - systemic effects)*
	DNEL (worker)	*4.03 mg/m³ (Long-term - systemic effects)*

- ***PNECs***	
PNEC aqua	*0.1622 mg/l (freshwater)*
	0.01622 mg/l (marine water)
	1.622 mg/l (intermittent releases)

- ***Additional information:*** *The lists that were valid during the compilation were used as basis.*

- ***Exposure controls***
- ***Personal protective equipment***
- ***General protective and hygienic measures***

Keep away from food, beverages and fodder.
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
Do not inhale dust. Prevent formation of dust.

- ***Breathing equipment:*** *Breathing protection to be used where a build-up of dust occurs.*
- ***Recommended filter device for short term use:***

Filter P1
Take care of limitations and rules for the use of breathing protection equipment (BGR 190).

- ***Protection of hands:***

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

- ***Material of gloves***

Nitrile rubber, NBR
Chloroprene rubber, CR
Natural rubber, NR
PVC gloves

- ***Penetration time of glove material***

Note information regarding permeation rate, penetration times and the degradation supplied by the manufacturer of gloves just as workplace-specific conditions.
Change gloves if notice sign of disenchantment.

- ***Eye protection:*** *Tightly sealed safety glasses.*
- ***Body protection:***

Standard protective working clothes, chemical resistant safety-shoes or wellingtons. If skin contact is possible, wear impenetrable protective clothing.

9 Physical and chemical properties

- ***Information on basic physical and chemical properties***
- ***General Information***
- ***Appearance:***

Form: *Crystalline*

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Trade name Oxalsäure krist.

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Colour:	*White*
- ***Smell:***	*Odourless*
- ***pH-value (50 g/l) at 20°C:***	*~ 0.7*
- ***Change in condition***	
Melting point/Melting range:	*101.5°C*
Boiling point/Boiling range:	*150°C*
- ***Flash point:***	*Product is non-flammable nor potentially explosive*
- ***Inflammability (solid, gaseous)***	*Product is not inflammable.*
- ***Ignition temperature:***	
Decomposition temperature:	*101.5°C*
- ***Danger of explosion:***	*Organic solids: dust can form an explosive mixture with air.*
- ***Density at 20°C***	*1.01 g/cm3*
- ***Settled apparent density at 20°C***	*ca. 900 kg/m3*
- ***Solubility in / Miscibility with***	
Water at 20°C:	*102 g/l*
- ***Other information***	
molecular weight (weight average/Mw):	*126,07 g/mol*

10 Stability and reactivity

- ***Reactivity***
- ***Chemical stability***
- ***Thermal decomposition / conditions to be avoided:***
To avoid thermal decomposition do not overheat.
Formation of formic acid and carbon dioxide in case of thermal decomposition.
- ***Possibility of hazardous reactions*** *Risk of dust explosion if enriched with fine dust in presence of air*
- ***Incompatible materials:*** *Bases, strong oxidizing agents, alkaline metals, steel.*
- ***Hazardous decomposition products:***
Formation of carbon monoxide and carbon dioxide in case of fire. Formation of formic acid in case of thermal decomposition.

11 Toxicological information

- ***Information on toxicological effects***
- ***Acute toxicity:***

- ***LD/LC50 values that are relevant for classification:***		
Oral	*LD50*	*> 375 mg/kg (rat)*
Dermal	*LD50*	*> 2000 mg/kg (rab)*

- ***Primary irritant effect:***
- ***on the skin:*** *Slight irritant*
- ***on the eye:***
Strong irritant with the danger of severe eye injury.
Slight irritant
- ***Sensitization:*** *No sensitizing effect known.*
- ***Other information (about experimental toxicology):*** *Slight irritant effect to the respiratory organs.*

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- ***Subacute to chronic toxicity:*** *Bacteriological mutagenicity: ames-test: negatively*
- ***Additional toxicological information:*** *After inhalation: danger of kidney damage (precipitation of calcium oxalate).*

12 Ecological information

- ***Toxicity***

- ***Aquatic toxicity:***	
EC 50 / 48 h	*162.2 mg/l (Daphnia)*
LC 50 / 96 h	*160 mg/l (Fish)*

- ***Type of test Effective concentration Method Assessment***
Pseudomonas Putida 41 mg/l 16 h EC 50
Daphnia magna 61 mg/l 24 h EC 50
Leucicus idus 160 mg/l 48 h LC 50
- ***Persistence and degradability***
Readily biodegradable
The product is easily degradable.
(DBO5/DTHO = 48 - 89%) slightly bioaccumulative
- ***Behaviour in environmental systems:***
- ***Bioaccumulative potential***
Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
- ***Ecotoxical effects:***
- ***Remark:*** *Hamful effect on fish, plankton and other waterorganism by pH shift possible.*
- ***Additional ecological information:***
- ***General notes:***
Do not allow to enter drainage system, surface or ground water.
Water hazard class 1 (Assessment by list): slightly hazardous for water.
- ***Results of PBT and vPvB assessment***
- ***PBT:*** *Not applicable.*
- ***vPvB:*** *Not applicable.*

13 Disposal considerations

- ***Waste treatment methods***
The following advice is related to new material and not to any processed products.In case of a mixture with other products other disposal methods may become necessary. If in doubt seek advice from product supplier or from local authorities.
- ***Recommendation***
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
A used product should be recycled or used in other contexts, otherwise be handed over to an appropriate disposal site.
- ***Waste disposal key number:***
Since 01/01/99 the waste code numbers have not only been product-related but are also essentially application-related. The valid waste code number of the application can be obtained from the European waste catalogue.

- ***Uncleaned packagings:*** *Disposal must be made according to official regulations.*
- ***Recommendation:*** *Other containers: After complete emptying and cleaning, send to be reconditioned or recycled.*

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* 14 Transport information

- ***Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)***
- ***ADR/RID-GGVS/E Class:*** -

- ***Maritime transport IMDG/GGVSea:***
- ***IMDG/GGVSea Class:*** -

- ***Air transport ICAO-TI and IATA-DGR:***
- ***ICAO/IATA Class:*** -

- ***UN "Model Regulation":*** -
- ***Special precautions for user*** *Not applicable.*

- ***Transport/Additional information:*** *Not dangerous according to the above specifications.*

15 Regulatory information

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

- ***National regulations***

- ***Information about limitation of use:*** *Employment restrictions concerning young persons must be observed.*
- ***Water hazard class:***
Water hazard class 1 (self assessment according to German VwVwS (Regulations for water-hazardous substances): slightly hazardous for water.
- ***Chemical safety assessment:*** *A Chemical Safety Assessment has not been carried out.*

16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- ***Department issuing data specification sheet:*** *see item 1: Informing departement*
- ***Abbreviations and acronyms:***
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)
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
- **** Data compared to the previous version altered.***