

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## ROTOVARIO 580 352 Rich Pale Gold

Version 2.0      Revision Date: 07.12.2019      SDS Number: 102000029324      Print Date: 08.08.2020  
Date of first issue: 09.03.2018

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

#### 1.1 Product identifier

Trade name : ROTOVARIO 580 352 Rich Pale Gold  
Product code : 071909B60

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

This information is not available.

#### 1.3 Details of the supplier of the safety data sheet

Company :  
  
E-mail address of person responsible for the SDS : msds.eckart@altana.com

#### 1.4 Emergency telephone number

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

#### 2.2 Label elements

##### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :  

Signal word : Warning

Hazard statements : H302 Harmful if swallowed.

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H319 Causes serious eye irritation.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P264 Wash skin thoroughly after handling.  
P273 Avoid release to the environment.  
P280 Wear eye protection/ face protection.  
**Response:**  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P391 Collect spillage.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

Copper

### 2.3 Other hazards

Combustible Solids

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification REGULATION (EC) No 1272/2008	Concentration (% w/w)
Copper	7440-50-8 231-159-6  01-2119480154-42	Acute Tox. 4; H302 Eye Irrit. 2; H319 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 50 - <= 100
zinc powder — zinc dust (stabilised)	7440-66-6 231-175-3  01-2119467174-37	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 10 - < 20
amines, hydrogenated tallow alkyl	61788-45-2 (90640-32-7) 262-976-6	Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT RE 2; H373 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 0.1 - < 0.25

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Substances with a workplace exposure limit :			
1-methoxy-2-propanol	107-98-2 203-539-1 01-2119457435-35	Flam. Liq. 3; H226 STOT SE 3; H336	>= 10 - < 20

For explanation of abbreviations see section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- General advice : Move the victim to fresh air.  
Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.
- If inhaled : If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : Wash off immediately with soap and plenty of water.
- In case of eye contact : Immediately flush eye(s) with plenty of water.  
Remove contact lenses.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.

#### 4.2 Most important symptoms and effects, both acute and delayed

- Risks : Harmful if swallowed.  
Causes serious eye irritation.

#### 4.3 Indication of any immediate medical attention and special treatment needed

This information is not available.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

- Suitable extinguishing media : Special powder against metal fire  
Dry sand  
ABC powder
- Unsuitable extinguishing media : Water  
High volume water jet

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### 5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

### 5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Standard procedure for chemical fires.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.  
Ensure adequate ventilation.  
Use personal protective equipment.  
Avoid dust formation.

### 6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Use mechanical handling equipment.

Pick up and transfer to properly labelled containers.  
Do not flush with water.  
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Keep in suitable, closed containers for disposal.

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### 6.4 Reference to other sections

For personal protection see section 8.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Advice on safe handling : Avoid formation of respirable particles.  
Do not breathe vapours/dust.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Dispose of rinse water in accordance with local and national regulations.
- Advice on protection against fire and explosion : Keep away from heat and sources of ignition. No smoking.  
  
Avoid dust formation.
- Hygiene measures : General industrial hygiene practice.  
  
When using do not eat or drink. When using do not smoke.  
Wash hands before breaks and at the end of workday.

### 7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Keep away from sources of ignition - No smoking. Do not store near combustible materials. Keep containers tightly closed in a cool, well-ventilated place. To maintain product quality, do not store in heat or direct sunlight.  
  
Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.
- Further information on storage conditions : Protect from humidity and water.
- Advice on common storage : Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions. Do not store together with oxidizing and self-igniting products.
- Dampness : Keep in a dry, cool and well-ventilated place.
- Further information on storage stability : No decomposition if stored and applied as directed.

### 7.3 Specific end use(s)

This information is not available.

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### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Copper	7440-50-8	TWA (Fumes)	0.2 mg/m <sup>3</sup> (Copper)	GB EH40
		TWA (Dusts and mists)	1 mg/m <sup>3</sup> (Copper)	GB EH40
		STEL (Dusts and mists)	2 mg/m <sup>3</sup> (Copper)	GB EH40
zinc powder — zinc dust (stabilised)	7440-66-6	TWA (Inhalable)	10 mg/m <sup>3</sup>	GB EH40
Further information	The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m <sup>-3</sup> 8-hour TWA of inhalable dust or 4 mg.m <sup>-3</sup> 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.			
		TWA (Respirable)	4 mg/m <sup>3</sup>	GB EH40
Further information	The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m <sup>-3</sup> 8-hour TWA of inhalable dust or 4 mg.m <sup>-3</sup> 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.			
1-methoxy-2-propanol	107-98-2	STEL	150 ppm 568 mg/m <sup>3</sup>	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	100 ppm 375 mg/m <sup>3</sup>	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	100 ppm 375 mg/m <sup>3</sup>	GB EH40
Further information	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	150 ppm 560 mg/m <sup>3</sup>	GB EH40
Further information	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			

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### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Copper	Workers	Skin contact	Acute systemic effects	273 mg/kg
	Workers	Inhalation	Acute systemic effects	20 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	137 mg/kg
	Consumers	Skin contact	Acute systemic effects	273 mg/kg
	Consumers	Inhalation	Acute systemic effects	20 mg/m <sup>3</sup>
	zinc powder — zinc dust (stabilised)	Workers	Inhalation	Long-term systemic effects
	Workers	Skin contact	Long-term systemic effects	83 mg/kg
	Consumers	Ingestion	Long-term systemic effects	0.83 mg/kg
	Consumers	Skin contact	Long-term systemic effects	83 mg/kg
	Consumers	Inhalation	Long-term systemic effects	2.5 mg/m <sup>3</sup>
1-methoxy-2-propanol	Workers	Inhalation	Acute local effects	553.5 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	183 mg/kg
	Workers	Inhalation	Long-term systemic effects	369 mg/m <sup>3</sup>
	Consumers	Ingestion	Long-term systemic effects	33 mg/kg
	Consumers	Skin contact	Long-term systemic effects	78 mg/kg
	Consumers	Inhalation	Long-term systemic effects	43.9 mg/m <sup>3</sup>

### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Copper	Soil	65.5 mg/kg
	Fresh water	0.0078 mg/l
	Fresh water sediment	87 mg/kg
	Marine water	0.0052 mg/l
	Marine sediment	676 mg/kg
	STP	0.230 mg/l
zinc powder — zinc dust (stabilised)	Fresh water	0.0206 mg/l
	Fresh water sediment	117.8 mg/kg
	Marine water	0.0061 mg/l
	Soil	35.6 mg/kg
	Marine sediment	56.5 mg/kg
1-methoxy-2-propanol	Fresh water	10 mg/l
	Marine water	1 mg/l

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	STP	100 mg/l
	Fresh water sediment	41.6 mg/kg
	Marine sediment	4.17 mg/kg
	Soil	2.47 mg/kg
	periodical release	100 mg/l

### 8.2 Exposure controls

#### Personal protective equipment

Eye protection : Safety glasses

Wear face-shield and protective suit for abnormal processing problems.

Hand protection  
Material

: Solvent-resistant gloves (butyl-rubber)

Remarks

: Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). The exact break through time can be obtained from the protective glove producer and this has to be observed. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Recommended preventive skin protection Skin should be washed after contact. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection

: Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection

: Use suitable breathing protection if workplace concentration requires.  
Equipment should conform to EN 14387

#### Environmental exposure controls

Water

: The product should not be allowed to enter drains, water courses or the soil.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance : Pasty solid



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Colour : gold

Odour : characteristic

Odour Threshold : No data available

pH : No data available

Freezing point : No data available

Boiling point/boiling range : 120 °C

Flash point : 35 °C

Evaporation rate : No data available

Flammability (solid, gas) : Combustible Solids

Self-ignition : No data available

Auto-ignition temperature : No data available

Smoldering temperature : No data available

Decomposition temperature : No data available

Explosive properties : No data available

Oxidizing properties : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : No data available

Bulk density : No data available

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

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Decomposition temperature : No data available

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Flow time : No data available

### 9.2 Other information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No decomposition if stored and applied as directed.

### 10.2 Chemical stability

No decomposition if stored and applied as directed.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Stable under recommended storage conditions.  
No decomposition if stored and applied as directed.

### 10.4 Conditions to avoid

Conditions to avoid : Do not allow evaporation to dryness.  
No data available

### 10.5 Incompatible materials

### 10.6 Hazardous decomposition products

Thermal decomposition : Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Harmful if swallowed.

#### Product:

Acute oral toxicity : Acute toxicity estimate: 675.51 mg/kg  
Method: Calculation method

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### Components:

#### **Copper:**

Acute oral toxicity : Assessment: The component/mixture is moderately toxic after single ingestion.

#### **zinc powder — zinc dust (stabilised):**

Acute oral toxicity : (Rat): > 2,000 mg/kg  
Acute inhalation toxicity : LC50 (Rat): 5.41 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

#### **amines, hydrogenated tallow alkyl:**

Acute oral toxicity : LD50 (Rat): > 2,000 - 5,000 mg/kg  
Method: OECD Test Guideline 401

#### **1-methoxy-2-propanol:**

Acute oral toxicity : LD50 (Rat): 4,016 mg/kg  
Acute inhalation toxicity : LC50 (Rat): > 25.8 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

#### **Skin corrosion/irritation**

Not classified based on available information.

#### **Product:**

Remarks: May cause skin irritation in susceptible persons.

### Components:

#### **Copper:**

Remarks: May cause skin irritation in susceptible persons.

#### **amines, hydrogenated tallow alkyl:**

Result: Skin irritation

Remarks: May cause skin irritation in susceptible persons.

#### **Serious eye damage/eye irritation**

Causes serious eye irritation.

#### **Product:**

Remarks: Eye irritation

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### Components:

#### **Copper:**

Result: Eye irritation

#### **amines, hydrogenated tallow alkyl:**

Result: Irreversible effects on the eye

Remarks: May cause irreversible eye damage.

### **Respiratory or skin sensitisation**

#### **Skin sensitisation**

Not classified based on available information.

#### **Respiratory sensitisation**

Not classified based on available information.

#### **Germ cell mutagenicity**

Not classified based on available information.

#### **Carcinogenicity**

Not classified based on available information.

#### **Reproductive toxicity**

Not classified based on available information.

#### **STOT - single exposure**

Not classified based on available information.

#### **STOT - repeated exposure**

Not classified based on available information.

### Components:

#### **amines, hydrogenated tallow alkyl:**

Target Organs: Liver, Gastrointestinal tract, Immune system

Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

#### **Aspiration toxicity**

Not classified based on available information.

### Components:

#### **amines, hydrogenated tallow alkyl:**

May be fatal if swallowed and enters airways.

### **Further information**

#### Product:

Remarks: No data available

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### Components:

#### **Copper:**

Remarks: No data available

#### **zinc powder — zinc dust (stabilised):**

Remarks: No data available

#### **amines, hydrogenated tallow alkyl:**

Remarks: Solvents may degrease the skin.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

##### **Copper:**

M-Factor (Short-term (acute) : 10  
aquatic hazard)

##### **Ecotoxicology Assessment**

Short-term (acute) aquatic : Very toxic to aquatic life.  
hazard

Long-term (chronic) aquatic : Very toxic to aquatic life with long lasting effects.  
hazard

##### **zinc powder — zinc dust (stabilised):**

##### **Ecotoxicology Assessment**

Short-term (acute) aquatic : Very toxic to aquatic life.  
hazard

Long-term (chronic) aquatic : Very toxic to aquatic life with long lasting effects.  
hazard

##### **amines, hydrogenated tallow alkyl:**

M-Factor (Short-term (acute) : 10  
aquatic hazard)

M-Factor (Long-term : 10  
(chronic) aquatic hazard)

##### **Ecotoxicology Assessment**

Short-term (acute) aquatic : Very toxic to aquatic life.  
hazard

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Long-term (chronic) aquatic hazard : Very toxic to aquatic life with long lasting effects.

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

#### Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

### 12.6 Other adverse effects

#### Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life with long lasting effects.

#### Components:

##### **Copper:**

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life with long lasting effects.

##### **zinc powder — zinc dust (stabilised):**

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life with long lasting effects.

##### **amines, hydrogenated tallow alkyl:**

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life with long lasting effects.

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## SECTION 13: Disposal considerations

European Waste Catalogue : 12 01 04 - non-ferrous metal dust and particles

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European Waste Catalogue : 12 01 04 - non-ferrous metal dust and particles  
European Waste Catalogue : 10 03 21 - other particulates and dust (including ball-mill dust) containing hazardous substances  
European Waste Catalogue : 10 03 21 - other particulates and dust (including ball-mill dust) containing hazardous substances

### 13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.  
In accordance with local and national regulations.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.  
In accordance with local and national regulations.

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## SECTION 14: Transport information

### 14.1 UN number

ADR : UN 3077  
IMDG : UN 3077  
IATA : UN 3077

### 14.2 UN proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(Copper metal powder)  
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(Copper metal powder)  
IATA : Environmentally hazardous substance, solid, n.o.s.  
(Copper metal powder)

### 14.3 Transport hazard class(es)

ADR : 9  
IMDG : 9  
IATA : 9

### 14.4 Packing group

ADR  
Packing group : III  
Classification Code : M7

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Hazard Identification Number : 90  
Labels : 9

### IMDG

Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Remarks : IMDG Code segregation group 7 - Heavy metals and their salts

### IATA (Cargo)

Packing instruction (cargo aircraft) : 956  
Packing instruction (LQ) : Y956  
Packing group : III  
Labels : Class 9 - Miscellaneous dangerous substances and articles

### IATA (Passenger)

Packing instruction (passenger aircraft) : 956  
Packing instruction (LQ) : Y956  
Packing group : III  
Labels : Class 9 - Miscellaneous dangerous substances and articles

## 14.5 Environmental hazards

### ADR

Environmentally hazardous : yes

### IMDG

Marine pollutant : yes

### IATA (Passenger)

Environmentally hazardous : yes

### IATA (Cargo)

Environmentally hazardous : yes

## 14.6 Special precautions for user

Remarks : For single packagings  $\leq 5L / 5 \text{ kg}$ , or combination packagings containing inner packagings  $\leq 5L / 5 \text{ kg}$  net per inner packaging, SV375 ADR, 2.10.2.7 IMDG-Code, A197 IATA-DGR may be applied.  
For single packagings  $\leq 5L / 5 \text{ kg}$ , or combination packagings containing inner packagings  $\leq 5L / 5 \text{ kg}$  net per inner packaging, SV375 ADR, 2.10.2.7 IMDG-Code, A197 IATA-DGR may be applied.

## 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.



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### SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable

#### 15.2 Chemical safety assessment

### SECTION 16: Other information

#### Full text of H-Statements

H226 : Flammable liquid and vapour.  
H302 : Harmful if swallowed.  
H304 : May be fatal if swallowed and enters airways.  
H315 : Causes skin irritation.  
H318 : Causes serious eye damage.  
H319 : Causes serious eye irritation.  
H336 : May cause drowsiness or dizziness.  
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.

#### Full text of other abbreviations

Acute Tox. : Acute toxicity  
Aquatic Acute : Short-term (acute) aquatic hazard  
Aquatic Chronic : Long-term (chronic) aquatic hazard  
Asp. Tox. : Aspiration hazard  
Eye Dam. : Serious eye damage  
Eye Irrit. : Eye irritation  
Flam. Liq. : Flammable liquids  
Skin Irrit. : Skin irritation  
STOT RE : Specific target organ toxicity - repeated exposure  
STOT SE : Specific target organ toxicity - single exposure  
2000/39/EC : Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values  
GB EH40 : UK. EH40 WEL - Workplace Exposure Limits  
2000/39/EC / TWA : Limit Value - eight hours  
2000/39/EC / STEL : Short term exposure limit  
GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)  
GB EH40 / STEL : Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## ROTOVARIO 580 352 Rich Pale Gold

Version	Revision Date:	SDS Number:	Print Date: 08.08.2020
2.0	07.12.2019	102000029324	Date of first issue: 09.03.2018

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number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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