

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Trade name:

**KRONOS 4045**

EU REACH Registration number:

All components of the product are registered or exempt from registration.

UFI:

3J10-9066-400X-R2HC  
(AT, BE, DE, DK, ES, FR, IT, NL, LU, SE)**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses of the substance or mixture

Coated paper / paperboard  
Paper pulp  
Knife filler/ Surfacer  
Emulsion paint for interior use  
Road-marking paint

Uses advised against

None

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

Manufacturer/Supplier:

KRONOS INTERNATIONAL, Inc.  
Peschstrasse 5  
51373 Leverkusen, Germany  
Tel.: INT +49 214 356-0**1.4 EMERGENCY TELEPHONE NUMBER:**KRONOS INTERNATIONAL, Inc. (Germany)  
Tel.: INT + 49 214 356-4444**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

**2.2 Label elements**

Labelling according to Regulation (EC) No 1272/2008

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

Hazard pictograms



GHS07

Signal word

Warning

Hazard-determining components of labelling:

2-methyl-2H-isothiazol-3-one

Hazard statements

H317 May cause an allergic skin reaction.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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P280 Wear protective gloves / eye protection.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P333+P313 If skin irritation or rash occurs: Get medical advice/  
attention.

## 2.3 Other hazards

No further relevant information available.





**SECTION 3: Composition/information on ingredients**

## 3.2 Mixtures

Description: Titanium dioxide dispersed in water

## Dangerous components:

CAS: 2682-20-4 2-methyl-2H-isothiazol-3-one  $\geq 0.0015 - < 0.025\%$ 

-  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 2, H330
  -  Skin Corr. 1B, H314; Eye Dam. 1, H318
  -  Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=1)
  -  Skin Sens. 1A, H317
- EUH071  
Specific concentration limit: Skin Sens. 1A; H317: C  $\geq 0.0015 \%$

CAS: 2634-33-5 1,2-benzisothiazol-3(2H)-one  $\geq 0.0015 - < 0.025\%$ 

-  Eye Dam. 1, H318
  -  Aquatic Acute 1, H400
  -  Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317
- Specific concentration limit: Skin Sens. 1; H317: C  $\geq 0.05 \%$

**SECTION 4: First aid measures**

## 4.1 Description of first aid measures

General information: Remove any clothing soiled by the product.

After inhalation: Supply fresh air; consult doctor in case of symptoms.

After skin contact: Wash with water and soap and rinse thoroughly.  
If skin irritation continues, consult a doctor.After eye contact: Rinse opened eye for several minutes under running water.  
Protect unharmed eye.  
In case of persistent symptoms consult physician.After swallowing: Rinse out mouth and then drink plenty of water.  
In case of persistent symptoms consult physician.4.2 Most important symptoms  
and effects, both acute and  
delayed

No further relevant information available.

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**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:** The product is not flammable.  
 Use fire fighting measures that suit the environment.

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

No further relevant information available.

**5.3 Advice for firefighters**
**Protective equipment:** Use protective measures that suit the hazard conditions.

**SECTION 6: Accidental release measures**
**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

**6.2 Environmental precautions:**

 Do not allow to enter drainage system, surface or ground water.  
 Do not allow to enter the ground/soil.

**6.3 Methods and material for containment and cleaning up:**

 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
 Dispose of contaminated material as waste according to item 13.

**6.4 Reference to other sections**

 See Section 7 for information on safe handling  
 See Section 8 for information on personal protective equipment.  
 See Section 13 for information on disposal.

**SECTION 7: Handling and storage**
**7.1 Precautions for safe handling**

No special measures required.

**Information about protection against explosions and fires:**

 No special measures required.  
 The product is not flammable.

**7.2 Conditions for safe storage, including any incompatibilities**
**Requirements to be met by storerooms and containers:**

Recommended storage temperature between 5°C and 32°C.

**Information about storage in one common storage facility:**

Not required.

**Further information about storage conditions:**

None

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**7.3 Specific end use(s)**                      **No further relevant information available.**
**SECTION 8: Exposure controls/personal protection**
**8.1 Control parameters**
**Components with critical values that require monitoring at the workplace:**
**The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace. Not required.**
**8.2 Exposure controls**
**Individual protection measures, such as personal protective equipment  
 General protective and hygienic measures:**
**The usual precautionary measures should be adhered to in handling chemicals.**
**Breathing equipment:**
**Use breathing protection only when aerosol or mist is formed.**
**Hand protection**
**Requirements according to EN 374  
 Check protective gloves prior to each use for their proper condition.  
 Preventive skin protection by use of skin-protecting agents is recommended.**
**Material of gloves:**
**The selection of suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. If the product is used in a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.**
**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/face protection**
**Safety glasses**
**Body protection:**
**Protective work clothing.**
**SECTION 9: Physical and chemical properties**
**9.1 Information on basic physical and chemical properties**
**General Information**

<b>Colour:</b>	<b>White</b>
<b>Smell:</b>	<b>Odourless</b>
<b>Odour threshold:</b>	<b>Not applicable</b>
<b>Melting point/freezing point:</b>	<b>Not determined</b>
<b>Boiling point or initial boiling point and boiling range</b>	<b>Not determined</b>

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Flash point:	Not applicable
Decomposition temperature:	Not applicable
pH at 20°C	7.5 - 8.8
Viscosity:	
Kinematic viscosity	Not determined.
Kinematic viscosity dynamic at 20°C:	<1000 mPas
Solubility in / Miscibility with Water:	Fully miscible
Partition coefficient n-octanol/water (log value)	Not applicable
Vapour pressure:	
Density and/or relative density	
Density at 20°C:	1.8 - 2.3 g/cm <sup>3</sup>

**9.2 Other information**

Appearance:

Form: Fluid

Important information on protection of health and environment, and on safety.

Self-flammability:

Product is not selfigniting.

Explosive properties:

Product is not explosive.

Solvent content:

Water:

≤ 31 %

Solids content:

≥ 69 %

Change in condition:

Evaporation rate

Not determined.

**Information with regard to physical hazard classes**

Explosives not applicable

Flammable gases not applicable

Aerosols not applicable

Oxidising gases not applicable

Gases under pressure not applicable

Flammable liquids not applicable

Flammable solids not applicable

Self-reactive substances and mixtures

not applicable

Pyrophoric liquids not applicable

Pyrophoric solids not applicable

Self-heating substances and mixtures

not applicable

Substances and mixtures, which emit flammable gases in contact with water

not applicable

Oxidising liquids not applicable

Oxidising solids not applicable

Organic peroxides not applicable

Corrosive to metals not applicable

Desensitised explosives not applicable

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**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	No further relevant information available.
<b>10.2 Chemical stability</b> Thermal decomposition / Conditions to be avoided:	No decomposition under normal use conditions
<b>10.3 Possibility of hazardous reactions</b>	No dangerous reactions known
<b>10.4 Conditions to avoid</b>	No further relevant information available.
<b>10.5 Incompatible materials:</b>	No further relevant information available.
<b>10.6 Hazardous decomposition products:</b>	No dangerous decomposition products known

**SECTION 11: Toxicological information**
**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

<b>Acute toxicity</b> LD/LC50 values that are relevant for classification:	Based on available data, the classification criteria are not met. The ATE (Acute Toxicity Estimate) of the mixture is calculated based on the formula proposed in chapter 3.1.6.1 of Regulation (EC) No 1272/2008.
Oral ATE >2000 mg/kg	
Dermal ATE(mix) >2000 mg/kg	
Inhalative ATE(mix) >5 mg/m <sup>3</sup>	
<b>Skin corrosion/irritation</b>	Based on available data, the classification criteria are not met.
<b>Serious eye damage/irritation</b>	Based on available data, the classification criteria are not met.
<b>Respiratory or skin sensitisation</b>	May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>STOT-single exposure</b>	Based on available data, the classification criteria are not met.
<b>STOT-repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information**

<b>12.1 Toxicity</b>	Based on the composition it can be assumed that the mixture dose not pose any risk for the aquatic environment.
<b>12.2 Persistence and degradability</b>	Not relevant for inorganic substances.

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- 12.3 Bioaccumulative potential Accumulation of the product is not to be expected.
- 12.4 Mobility in soil The product is immobile in soil.
- 12.5 Results of PBT and vPvB assessment  
 PBT: Not applicable  
 vPvB: Not applicable
- 12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.
- 12.7 Other adverse effects No further relevant information available.

**SECTION 13: Disposal considerations**

- 13.1 Waste treatment methods  
 European waste catalogue Waste code number according to origin of waste
- Uncleaned packagings:  
 Recommendation: Disposal according to official regulations

**SECTION 14: Transport information**

- 14.1 UN number or ID number  
 ADR/RID/ADN, ADN, IMDG, IATA not applicable
- 14.2 UN proper shipping name  
 ADR/RID/ADN not applicable  
 ADN, IMDG, IATA not applicable
- 14.3 Transport hazard class(es)  
 ADR/RID/ADN, ADN, IMDG, IATA Class not applicable
- 14.4 Packing group  
 ADR/RID/ADN, IMDG, IATA not applicable
- 14.5 Environmental hazards Not applicable.
- 14.6 Special precautions for user Not applicable
- 14.7 Maritime transport in bulk according to IMO instruments Not applicable

**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 None of the ingredients is listed.
- REGULATION (EC) No  
 1907/2006 ANNEX XVII Conditions of restriction: 3

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**DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

**REGULATION (EU) 2019/1148****Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

**Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

**Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

**Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

**15.2 Chemical Safety Assessment**

Substances of very high concern (SVHC) according to REACH, Article 57

The product is not listed as SVHC, it does not contain any substances of very high concern.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

**SECTION 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.

**Carcinogenicity:** In February 2006 IARC concluded, "There is inadequate evidence in humans for the carcinogenicity of titanium dioxide." Based on rat inhalation studies IARC concluded that there is "sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide," IARC's overall evaluation was that "Titanium dioxide is possibly carcinogenic to humans (Group 2b)". This conclusion was based on IARC's guidelines which require such a classification if two or more independent studies in one species carried out at different times or in different laboratories or under different protocols show evidence of tumours.

Department issuing data specification sheet:

Global Quality Management

Contact:

KRONOS INTERNATIONAL, Inc.  
Tel.: INT + 49 214 356-0  
e-mail: MSDS@kronosww.com

Date of previous version:

23.02.2023

Version number of previous version:

8.10

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 relatif au transport international 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

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GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 2: Acute toxicity – Category 2

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1A: Skin sensitisation – Category 1A

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

**\* Data compared to the previous  
version altered.****Amended according to Regulation (EU) no 2020/878**

EU