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

1.1 Product identifier
   Trade name : SYMIC C221
   Material number : 035653MJ0

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 : ECKART GmbH
             Guentersthal 4
             91235 Hartenstein
   Telephone : +499152770
   Telefax : +499152777008
   E-mail address of person responsible for the SDS : msds.eckart@altana.com

1.4 Emergency telephone number
   GBK Gefahrgut Büro GmbH, Ingelheim, Germany:
   From outside US: (001) 352-323-3500
   (First call in English, response in your language is possible)
   US & Canada (toll free): 1-800-5355-053

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
   Classification (REGULATION (EC) No 1272/2008)
   Not a dangerous substance according to GHS.
   Classification (67/548/EEC, 1999/45/EC)
   Not a hazardous substance or mixture.

2.2 Label elements
   Labelling (REGULATION (EC) No 1272/2008)
   Not a dangerous substance or mixture according to the Globally Harmonised System (GHS).

   Additional Labelling:
2.3 Other hazards

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.
No information available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No. EC-No. Registration number</th>
<th>Classification (67/548/EEC)</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluorphlogopite</td>
<td>12003-38-2 234-426-5</td>
<td></td>
<td></td>
<td>&gt;= 50 - &lt;= 100</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice: No hazards which require special first aid measures.
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 with soap and water.
In case of eye contact: Remove contact lenses.
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

This information is not available.

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: This information is not available.
- Unsuitable extinguishing media: This information is not available.

5.2 Special hazards arising from the substance or mixture
This information is not available.

5.3 Advice for firefighters
- Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.
- Further information: Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
- Personal precautions: Avoid dust formation.

6.2 Environmental precautions
This information is not available.

6.3 Methods and material for containment and cleaning up
- Methods for cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
This information is not available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
- Advice on safe handling: For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.
- Advice on protection against fire and explosion: Normal measures for preventive fire protection.
- Hygiene measures: General industrial hygiene practice.
7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Electrical installations / working materials must comply with the technological safety standards.

Advice on common storage: No materials to be especially mentioned.

Other data: Keep in a dry place. No decomposition if stored and applied as directed.

7.3 Specific end use(s)

This information is not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

### Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis (Version Date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluorphlogopite (Mg₃K[AlF₂O(SiO₃)₃])</td>
<td>12003-38-2</td>
<td>TWA</td>
<td>2.5 mg/m³ (Fluorine)</td>
<td>2000/39/EC (2000-06-16)</td>
</tr>
<tr>
<td>Fluorphlogopite (Mg₃K[AlF₂O(SiO₃)₃])</td>
<td>12003-38-2</td>
<td>TWA</td>
<td>2.5 mg/m³ (Fluorine)</td>
<td>GB EH40 (2007-08-01)</td>
</tr>
<tr>
<td>Further information</td>
<td>Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>titanium dioxide</td>
<td>13463-67-7</td>
<td>TWA (Inhalable)</td>
<td>10 mg/m³</td>
<td>GB EH40 (2011-12-01)</td>
</tr>
<tr>
<td>Further information</td>
<td>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⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>titanium dioxide</td>
<td>13463-67-7</td>
<td>TWA (Respirable)</td>
<td>4 mg/m³</td>
<td>GB EH40 (2011-12-01)</td>
</tr>
<tr>
<td>Further information</td>
<td>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⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Further information

For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust. 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⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

titanium dioxide  
13463-67-7  
TWA (Respirable dust)  
4 mg/m³  
GB EH40 (2011-12-01)

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

<table>
<thead>
<tr>
<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>titanium dioxide</td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – local</td>
<td>10 mg/m³</td>
</tr>
</tbody>
</table>
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SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

SYMIC C221

Version 1.0
Revision Date: 07.11.2016
SDS Number: 102000025058
Print Date: 19.11.2018
Date of first issue: 07.11.2016

| (13463-67-7) | Consumers | Ingestion | long term – systemic effects | 700 mg/kg |

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

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>titanium dioxide (13463-67-7)</td>
<td>Soil</td>
<td>100 mg/kg</td>
</tr>
<tr>
<td>Fresh water</td>
<td>0.127 mg/l</td>
<td></td>
</tr>
<tr>
<td>Fresh water sediment</td>
<td>1000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Marine water</td>
<td>1 mg/l</td>
<td></td>
</tr>
<tr>
<td>Marine sediment</td>
<td>100 mg/kg</td>
<td></td>
</tr>
<tr>
<td>STP</td>
<td>100 mg/l</td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses

Hand protection : This information is not available.

Skin and body protection : This information is not available.

Respiratory protection : This information is not available.

Environmental exposure controls : This information is not available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : powder

Colour : No data available

Odour : odourless

Odour Threshold : No data available

pH : No data available

Freezing point : No data available

Boiling point/boiling range : No data available

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Auto-flammability : No data available

Upper explosion limit : No data available

Lower explosion 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

Ignition temperature : No data available
Decomposition temperature: No data available
Viscosity, dynamic: No data available
Viscosity, kinematic: No data available
Flow time: No data available
Explosive properties: No data available
Oxidizing properties: No data available

9.2 Other information
No data available

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.
Dust may form explosive mixture in air.

10.4 Conditions to avoid
Conditions to avoid: No data available

10.5 Incompatible materials
Materials to avoid: This information is not available.

10.6 Hazardous decomposition products
Contact with water or humid air: This information is not available.
Thermal decomposition: This information is not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Further information

Product:
Remarks: No data available

Components:
12003-38-2:
Remarks: No data available
SECTION 12: Ecological information

12.1 Toxicty
   No data available

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: Remarks: No data available

   **Components:**
   12003-38-2:
   Additional ecological information: Remarks: No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods
   **Product:** In accordance with local and national regulations.
   **Contaminated packaging:** Empty containers should be taken to an approved waste handling site for recycling or disposal. In accordance with local and national regulations.
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

SYMIE C221

SECTION 14: Transport information

14.1 UN number
14.2 UN proper shipping name
14.3 Transport hazard class(es)
14.4 Packing group
14.5 Environmental hazards
14.6 Special precautions for user

Remarks: Not classified as dangerous in the meaning of transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

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).

15.2 Chemical safety assessment
This information is not available.

SECTION 16: Other information

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 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; 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.

GB / EN